August 2022

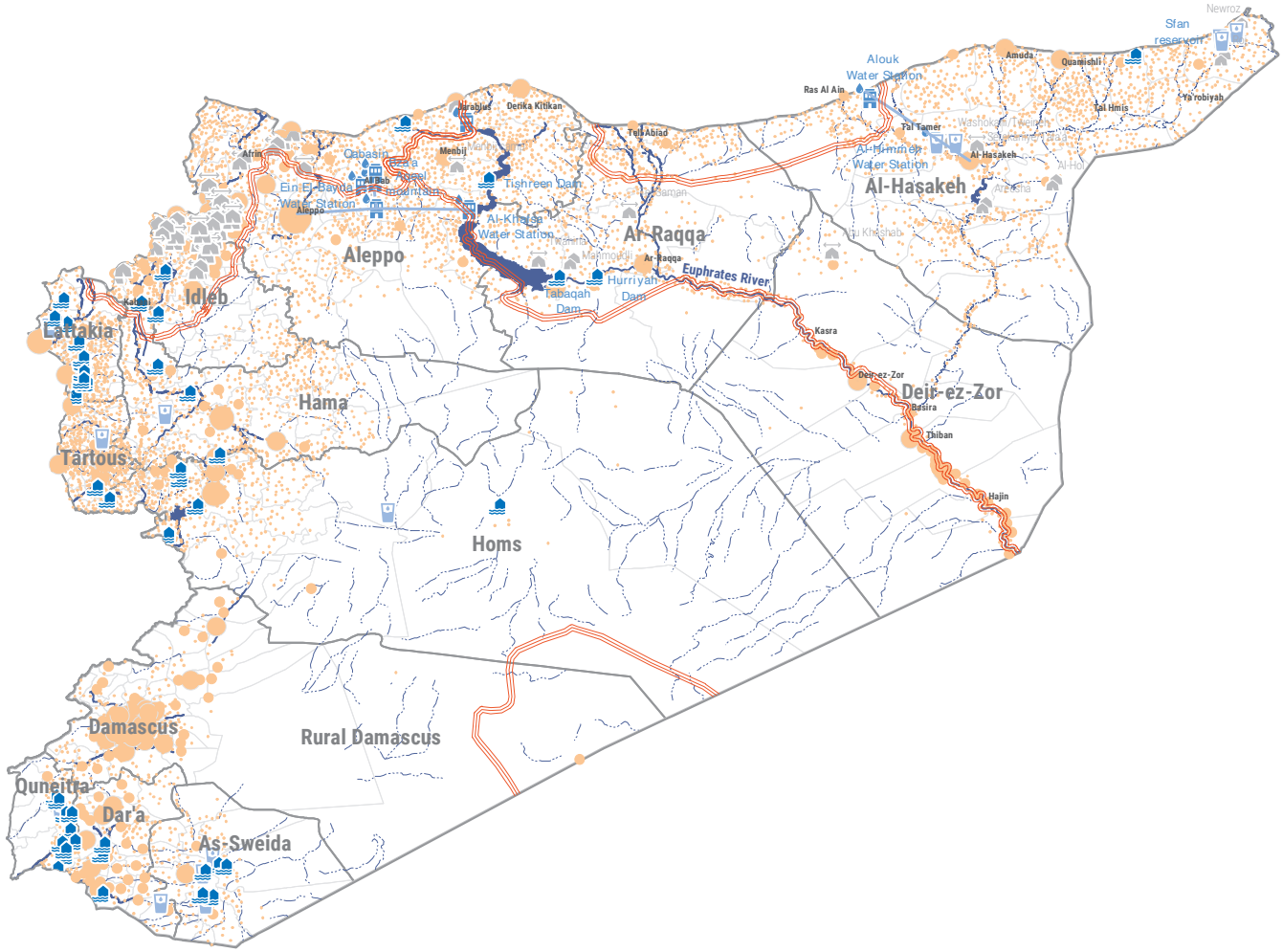
CRITICAL RESPONSE AND FUNDING REQUIREMENTS

Response to the Water Crisis in Syria

Credit: @UNHCR/ Aleppo/ 2021

Reference Map

Population and Water Infrastructure*



Population

1,000 - 10,000 · 10,000 - 30,000 · 30,000 - 500,000 · 500,000 - 1,000,000 · > 1,000,000

Legend

Formal camp · Informal site · International boundary · Governorate boundary · Approximate lines of control

Dam · Water pumping station · Reservoir** · Lake · Water supply line · Perennial river · Intermittent river

** The boundaries and names shown and the designations used on this map do not imply official endorsment or acceptance by the United Nations.*

*** Data source for the dams and reservoirs for GoS areas is Open Street Maps.*

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Executive Summary

Climatic induced and human-caused shocks affecting natural resources, particularly water, continue to intensify and exacerbate the humanitarian situation in Syria. Insufficient and poorly distributed rainfall, severe drought conditions combined with low water levels in the Euphrates River and damaged water infrastructure have not only reduced access to water for drinking and domestic use for millions of Syrians, but also triggered substantial harvest and income losses, an increase in water-borne diseases and malnutrition rates and additional protection risks, especially for women and girls.

In September 2021, the UN and its partners presented a response plan to mitigate the impact of the water crisis in northern and north-east Syria which requested US$200 million to assist up to 3.4 million of the over five million people estimated to be affected by the water crisis in northern Syria between September 2021 and February 2022. Under the auspices of the 2022-2023 Syria Humanitarian Response Plan, this updated water response plan presents the most recent needs based on latest forecasts and is a continuation of the earlier plan presented in 2021. It covers the needs from all response modalities/areas[1] for Syria, aims to assist 5 million people until December 2022 and requests $226.2 million.

According to the World Meteorological Organization (WMO)[2] , Syria is affected by a severe and long-term drought, with poor vegetation conditions reflecting persistence of drier-than-normal precipitation seasons. Water deficits has been exacerbated by the unusual dry conditions during the rainy season (October–May), but also by abnormally high temperatures. Climate change is causing temperatures to rise, exacerbating the drought and increasing evaporation from soils, water reservoirs and rivers, as well as transpiration and water demand from plants, which was forecasted to continue into the hot and dry season from July to September.

More than eleven years into the crisis in Syria, water systems suffer collapse and damage affecting communities' access to safe drinking water and water for irrigation. According to a June 2022 water mapping assessment, a critical three per cent of all populated communities do not have sufficient access to their primary water source in the last 30 days. According to population estimates,[3] more than 850,000 people had access to their primary water source for only 1-2 days in June.

A further 24 per cent of populated communities reported that they rarely had sufficient access to their primary water source, meaning that an estimated 6.9 million people only had access to their primary water source between 2-7 days per month.[4] Water insufficiency is forcing households to resort to negative coping mechanisms, such as changing hygiene practices or increasing household debt to afford water costs.[5] The lack of availability of water leaves affected communities, in particular women and girls, more vulnerable to sexual exploitation and abuse by humanitarian and non-traditional actors involved in providing humanitarian assistance and who seek to take advantage of the imbalance of power over resources.

In addition to the structural damage to water networks and the growing economic crisis leading to unaffordable water costs, Syria is one of the water-scarce countries in in the MENA region[6] with an average of 675 m^3 of available water resources per capita. Water scarcity, as outlined in this plan, is exacerbated by the following climatic and human-caused factors:

- low water levels of the Euphrates River since January 2021, following low water flows into the Syrian portion of the river and the principal water reservoirs in north-east Syria;
- a severe and long-term drought, with poor vegetation conditions and below-average precipitations during the 2021/2022 winter season;[7]
- continuous recurring shutdowns and reduced operational capacity of the Alouk water station;
- disruptions and shortages in power supply that affect the water supply systems' performance.

The water scarcity situation described in this plan has implications for most humanitarian interventions, and affects food production and food security, especially given the increasing frequency and intensity of extreme weather events caused by climate change. Water scarcity has affected crops and agricultural livelihoods, worsening access to food and contributed to driving up the price of food and commodities. The water crisis further exacerbates dire conditions for the 12 million people facing acute food insecurity and increases the risk of 1.9 million people slipping into food insecurity.

[1] *The term 'response modalities' refers to following three: 'Syria Humanitarian Country Team (HCT) Coordinated Response' to designate humanitarian assistance delivered from areas controlled by the Government of Syria, including to Northeast Syria; 'Syria Cross-Border Humanitarian Liason Group (HLG) Coordinated Response' to designate humanitarian assistance delivered cross-border from Türkiye, including that provided by UN as authorized by UN Security Council resolutions 2449 (2018), 2504 (2020), 2533 (2020), 2585 (2021), and 2642(2022) or from areas of Northwest Syria controlled by non-state armed groups; 'Northeast Syria (NES) NGO Forum Coordinated Response' to designate humanitarian assistance delivered by NGOs crossborder from Iraq or from areas of Northeast Syria controlled by local authorities.*

[2] *WMO update for the Whole of Syria.*

[3] *June 2022 data*

[4] *HNAP, Water Access Mapping, June 2022*

[5] *WoS WASH assessment 2022: https://www.humanitarianresponse.info/en/operations/whole-of-syria/wash*

[6] *FSA sector*

[7] *World Meteorological Organization (WMO)*

The right to water and sanitation under International Law

Under International Human Rights Law (IHRL), the right to water is recognized as part of the right to an adequate standard of living. The human right to water is indispensable for leading a life in human dignity. It is a prerequisite for the realization of other human rights. Access to safe, affordable and reliable drinking water and sanitation services are basic human rights. They are indispensable to sustaining healthy livelihoods and maintaining people's dignity. International human rights law entails specific obligations related to access to safe drinking water. These obligations require States to ensure everyone's access to a sufficient amount of safe drinking water for personal and domestic uses, defined as water for drinking, personal sanitation, washing of clothes, food preparation, and personal and household hygiene. These obligations also require States to progressively ensure access to adequate sanitation, as a fundamental element for human dignity and privacy, but also to protect the quality of drinking-water supplies and resources.

In Syria the right to water is further protected by the application of relevant International Humanitarian Law (IHL) norms. International humanitarian law protects certain categories of persons and objects. While this body of law does not mention the right to water, it contains various norms aimed at ensuring that persons not or no longer taking part in hostilities are not denied food or access to it. Moreover, IHL obligations binding parties to the conflict are to be implemented immediately and not progressively. Such rules include the special protection of objects indispensable to the survival of the civilian population, such as foodstuffs, agricultural areas for the production of foodstuffs, crops, livestock, drinking water installations and supplies and irrigation works, the prohibition of starvation as a method of warfare, as well as rules on access and the delivery of humanitarian assistance when the civilian population is in need.

Consolidated funding requirements

The total funding required to implement a multi-sectoral response that reaches all people targeted under this plan is $322.4 million, including $96.2 million already received. The current funding gap for the implementation of a comprehensive response is almost $226.2 million.

SECTOR	SYRIA HCT	NES NGO FORUM	SYRIA CROSS-BORDER (HLG)	TOTAL
Early Recovery and Livelihoods	$4,461,248	$4,003,110	$2,560,000	$11,024,358
Education	$2,829,323	$2,354,500	$440,950	$5,624,773
Food Security and Agriculture	$68,284,421	$22,140,000	$11,389,695	$101,814,116
Health	$1,000,000	$1,980,000	$1,230,000	$4,210,000
Nutrition	$23,965,473	$6,300,000	$28,111,693	$58,377,166
Protection	$1,318,600	$478,200	-	$1,796,800
WASH	$14,600,000	$3,719,000	$25,000,000	$43,319,000
Total	**$116,459,065**	**$40,974,810**	**$68,732,338**	$226,166,213

Scope of plan

Activities under this plan seek to address the immediate needs stemming from the multi-dimensional water crisis and highlight response priorities across all areas of the response and sectors involved. This plan will only focus on water scarcity and its related impact in Syria. It will not cover broader climate-related events, needs and responses.

It should be seen as an update to the previous response plan published in September 2021.[8] All activities and funding requirements are within the programmatic scope and budget of the 2022 HRP.

Activities under this plan should start between July-December 2022 and may have an immediate or longer-term impact depending on their nature. Some activities will aim to make people more resilient to water scarcity, while other activities will focus on responding to the current emerging needs of people in Syria.

In line with the above planning parameters, through activities laid out in this plan humanitarian partners aim to assist up to 5 million of the over 7 million people estimated to be currently affected by the water crisis in Syria during the period of September to December 2022.

[8] *Water Crisis in Northern and north-east Syria, September 2021: https://reliefweb.int/report/syrian-arab-republic/water-crisis-northern-and-northeast-syria-immediate-response-and-funding*

Part I: Overall Needs and Response Priorities

1.1 Response priorities

Under this plan, seven sectors will continue to implement and scale up critical response activities until the end of 2022, aiming to assist a total of **5 million** people across Syria.

Immediate Priorities by Humanitarian Partners (until December 2022):

WASH

Ensure access to safe water through the following interventions:

- providing emergency water trucking to **2.2 million people**;
- repairing and rehabilitating water systems improving access to water for **6.9 million people**;
- providing chlorine to **69 water tanker filling stations**;

Food Security and Agriculture

Respond to immediate food assistance and livelihood support needs of an estimated **1.38 million food insecure people** by:

- providing protection food rations to an estimated **1.38 million** food insecure people;
- supporting approximately **168,861 farmers** through the distribution of agriculture inputs (wheat, fertilizers, etc.);
- supporting **72,761 livestock breeders** through provision of animal feed distribution and fodder production;
- rehabilitating water pumping sets (i.e. for irrigation) in the most severely affected locations, including training of affected farmers on irrigation management and water conservation techniques;

Nutrition

Urgent provision of integrated malnutrition prevention and treatment services to reach **895,899 people in need**, including 268,770 pregnant and lactation women (PLW) and 627,129 nutritionally vulnerable children in Syria by:

- providing **779,925** boys and girls (6 - 59 months) with micronutrient supplements (micronutrient powder (MNP) etc.) for four months;
- providing **408,289 PLW** with micronutrients and folate;
- providing treatment to **1,361 of boys and girls (0 - 59 months)** with severe acute malnutrition and medical complications and treatment to **78,906 boys and girls (6 - 59 months)** and **59,081 PLW** with moderate acute malnutrition;
- strengthening early detection, referral pathways, treatment and follow up for severe and moderate acute malnutrition among children below 5 years and PLW.

Health

Scale up the surveillance system in most affected areas through enrolling **500 health facilities** into Early Warning, Alert and Response Systems/Networks (EWARS/N), deploying an additional **24 trained Rapid Response Teams** (RRTs) and building the capacity of **1,000 healthcare workers** on the case management protocols and clinical management of cases including malnutrition.

Early Recovery and Livelihoods

- Mitigate and prevent livelihood and income loss through vocational and skills training opportunities for an estimated **50,000 people** and creating **3,500 long and short-term work opportunities**, with a specific focus on vulnerable groups including women, people with disabilities, female headed households and young people. Rehabilitation of basic electricity networks through the provision of 105 solar systems.
- Providing **8,500 children with severe disabilities** with cash transfer and case management to improve their livelihoods and access to essential services.

Protection

Implement specific services as well as training and awareness raising initiatives to respond to and mitigate significant protection needs and risks across the affected population, including by:

- strengthening community-based referral pathways and capacity of community focal points to promote access of women and girls to life-saving services;
- reaching **120,900 beneficiaries** with awareness raising interventions on different protection issues, including on prevention of family separation, child labor, forced/early marriage, violence against children, gender-based violence (GBV) and explosive ordnance risk education to enhance knowledge and prevent and mitigate protection risks.

Education

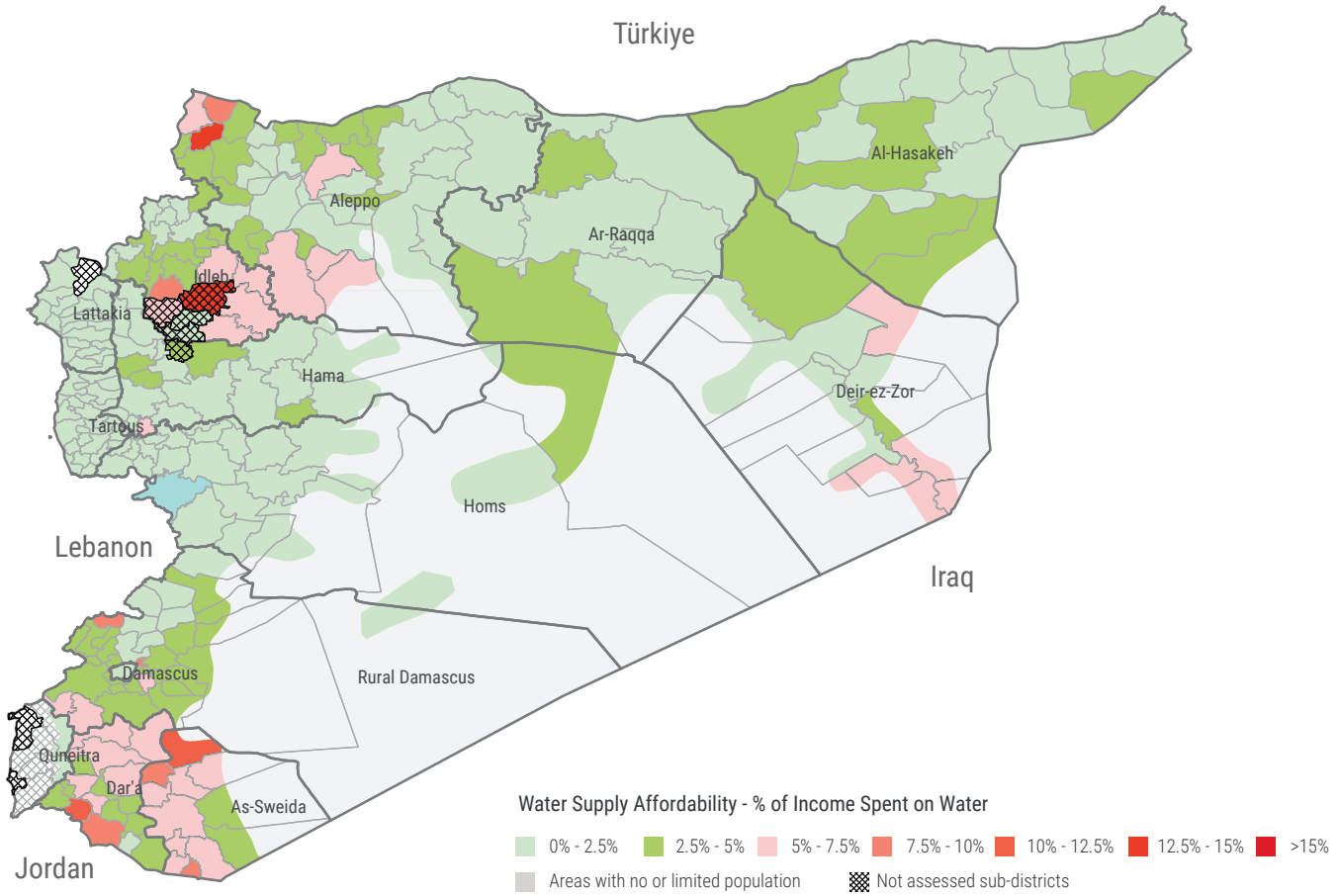
- Create gender-sensitive and disability-sensitive WASH facilities in **880 schools** or learning spaces to benefit **268,781 children**.
- Disinfect/sanitize **113 schools** or learning spaces.

1.2 Overview of Needs and Crises

Water systems

In Syria, a combination of water trucking and water networks provide people in communities with their daily water consumption. Water networks are unable to provide full water quantities to the population due to the lack of stable power supply, the high cost of diesel to operate the power generating systems and fixed budgets. Faced with acute shortages in safe, public drinking water, vulnerable households must increasingly rely on costly water supplied by private vendors who truck potentially unsafe water to neighborhoods and communities. The 2022 Whole of Syria – WASH sector assessment shows that the main reason for households' inability to meet their water needs is the high cost of water. The percentage of income spent on water varies across governorates in Syria with 35 per cent of households spending more than five per cent of their monthly income on water. Households in sub-districts in north-west Syria (Idleb and Aleppo), southern Syria (Dar'a and As-sweida) and some sub-districts in Deir-ez-Zor and Damascus are the most affected. Overall, due to intermittent water supply in 2022, 35 per cent of households used diverse sources of water compared with 19.4 per cent at the same time last year. Unaffordable water is leaving vulnerable households, including food insecure households, with less money to spend on other essential goods and services, including food, housing, health services and education.[9]

Water Supply Affordability - percentage of income spent on water



Source : WASH sector

[9] *WoS WASH assessment 2022: https://www.humanitarianresponse.info/en/operations/whole-of-syria/wash*

According to a recent WASH household survey (February 2022), water treatment and distribution networks continued to degrade – 46 per cent of Syrians now rely on often unsafe alternatives to piped water, up from 37 per cent in 2021.[10] In camps and camp-like settings, water trucking remains the main delivery modality. In north-west Syria, 284 camps, or 21 per cent of the total number of camps, are connected to water networks, with half a million IDPs accessing water through water networks. The WASH sector aims to connect as many IDP camps as possible to existing nearby water networks, to ensure a more cost-effective and sustainable supply of safe drinking water.[11]

The seven largest drinking water systems in Syria account for about 80 per cent of the country's total supply to approximately 9.5 million people. Since the onset of hostilities in 2011, all but one suffered direct damages, while enduring years of inadequate operations and maintenance. The lack of materials to repair these complex systems and the loss of skilled technical staff to maintain and repair them is threatening their future, with massive costs to replace and potential devastating impact on Syrians' lives.[12] When assessing water treatment at household-level, the 2022 WASH assessment showed that 55 per cent of households across Syria reported that they do not differentiate between drinking water and non-drinking water, while only nine per cent of households practice household-level water treatment and another five per cent rely on costly bottled water as a source for drinking water.[13]

Furthermore, electricity shortages affect the functionality of water systems with detrimental impact on the production and distribution of drinking water in the country. Severe electricity shortages can cripple entire water systems, as water production depends on diverse pumping mechanisms required to extract water from groundwater, rivers, or springs. Electricity also affects water distribution, which depends on pumping systems able to carry water to individual households. Throughout 2020 and 2021, electricity shortages led to severe drops in water pumping capacity across Syria's water networks, many of which operated for only a few hours per week. In some rural areas, where the living situation is at its worst, people are forced to buy drinking water at very high prices with often no insurance about its quality, where the cost per cubic meter reaches 12,000 SYP and water reaching households once every 15 days.[14]

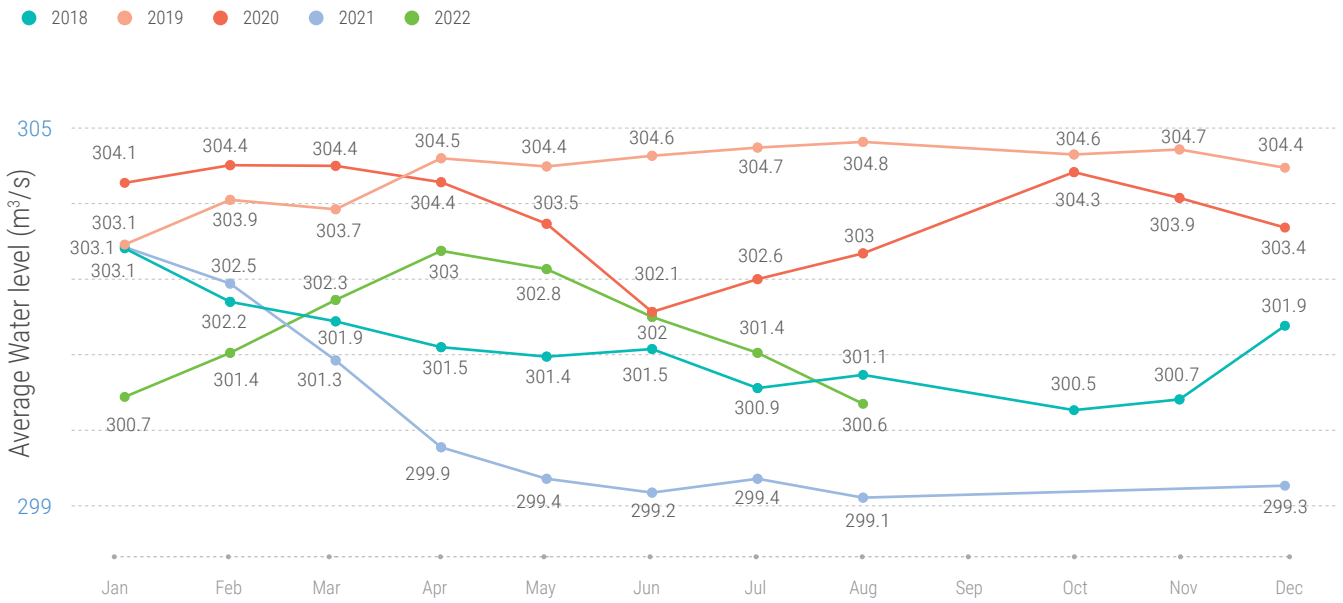
In north-west Syria, 41 per cent of the water systems in Aleppo and Idleb are non-functional due to lack of operational parts and more are at risk of stopping due to lack of funding, while 38 per cent require light rehabilitation. In 40 per cent of the operating systems, there is no chlorination due to lack of dosing pumps. On a positive note, solar energy was introduced as main and mixed power supply to many water systems in north-west Syria, powering over 26 per cent of the operational water systems. This could increase the efficiency of water systems across north-west Syria and increase reliance on safe water via networks.

Euphrates River

The Euphrates River, including its tributaries, associated freshwater lakes and canals, is the single most important source of drinking water for an estimated 5.5 million people in the Governorates of Ar-Raqqa, Aleppo (including Aleppo city and its environs) and Deir-ez-Zor (including Deir-ez-Zor city and its environs).

Average of water level by month and year (TABQA)

2018-2022



[10] *WASH Household Survey – February 2022*
[11] *WASH Sector Sitrep*
[12] *HNO 2022*
[13] *WoS WASH assessment 2022: https://www.humanitarianresponse.info/en/operations/whole-of-syria/wash*
[14] *2022: Access to Electricity and Humanitarian Needs*

The water flow rates in the Euphrates River, including its associated freshwater lakes and canals continue to be substantially lower than historical levels and the minimum flow level of 500 cubic meters per second agreed between Syria and Türkiye in 1987, with direct humanitarian impact on the people in north-east Syria.[15] Although reported water levels have fluctuated over the past months in 2022, they remain below the historical average. The low water levels in the entire Euphrates River have significantly curtailed the amount of water that can be pumped directly from the dams and at the various water stations along the river, impacting water provision to millions of people across the region. Low water levels have also led to a reduction of electricity generated by both the Tishreen and Tabqa dams, which are the primary sources of electricity for an estimated three million people (across multiple lines of control) in the region.

All the communities along the Euphrates discharge their sewage into the river. Al Balikh River joins Euphrates after Raqqa city, representing 40 per cent of the total flow and its water contains high turbidity and high presence of chemicals products. Low rainfall and a reduced flow exacerbate these problems as the increase of concentration of biological and chemicals contaminants will impact the overall water quality. As a result, water will need further and more complex treatment, challenged by low capacity of the water station and the lack of power supply.

Below-average precipitations and high temperatures

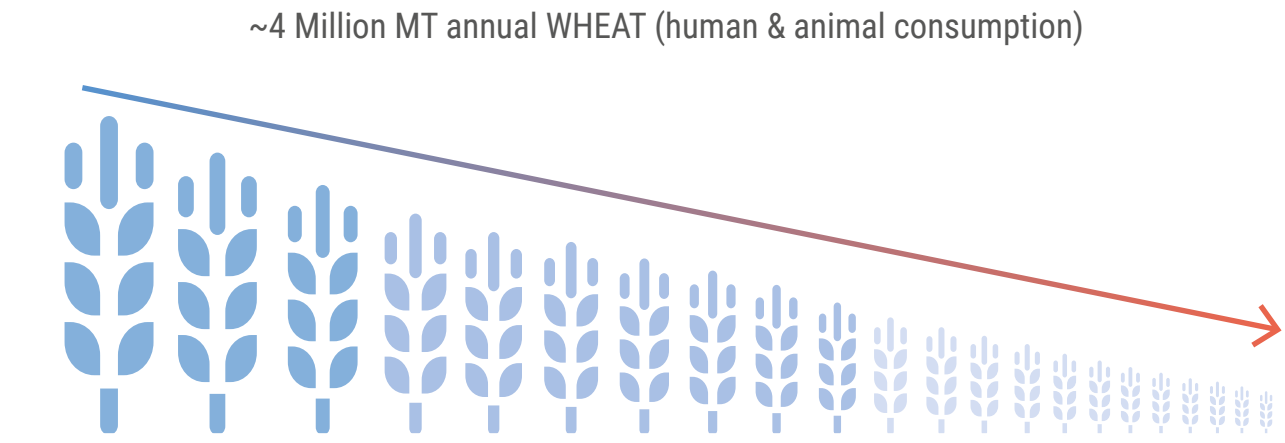
Water reserves for the current season have decreased compared to the previous season across all governorates, except for coastal governorates. In Al-Hasakeh, Aleppo, Central and southern governorates, the current water reserves have decreased by 24 per cent, 10 per cent, 12 per cent and 6 per cent respectively compared to last season.[16]

The low rainfall and drought, combined with increased cost of harvesting (75-100 per cent increase) are having a devastating impact on agricultural production in Syria. The planted area with wheat and barley in 2021/2022 season declined by 20 per cent compared to the previous season, as well as the planted area with legumes declined by 24 per cent. The losses suffered by farmers last season and the delay in rainfall at the beginning of the current season have delayed sowing in most areas, especially rain-fed areas, as well as, the high prices of production inputs especially fertilizers, which limited their use as required.[17]

The outlook for the October-December period suggests increased likelihood of below-average precipitation towards the end of 2022 and above-average temperatures, which will further exacerbate the water crisis, and lead to a deterioration of the drought situation and its devastating humanitarian impact in Syria.

Trends in wheat producton[18]

4.1M MT	2.2M MT	1.28M MT	tbc MT
(2002-2011)	(2019/2020)	(2020/2021)	(2021/2022)



[15] *REACH report May 2022: https://reliefweb.int/report/syrian-arab-republic/research-terms-reference-humanitarian-situation-overview-water-crisis-0*
[16] *FSA sector*
[17] *FSA sector*
[18] *According to Ministry of Agriculture and Agrarian Reform (MAAR), the total area planted with Wheat in 2021/2022 was 1.2 million hectares (decreased by 25 per cent compared to 2021)*

Alouk and Al-Khafsa water stations

The Alouk water station remains a critical source of water in north-east Syria, providing drinking water to 460,000 people, most of them living in Al-Hasakeh and Tal Tamer sub-districts including Al-Hol and Roj camps. Since November 2019, the water station has ceased operations on multiple occasions due to disruptions. Humanitarian actors have responded to the crisis through emergency water trucking operations during the periods of non-operation, but these efforts have only been able to provide the bare minimum of water needed for survival. Currently, there are no viable technical alternatives to the Alouk station. In 2022, the Alouk water station has continued to be operational only sporadically, and when operational functions only with under 50 per cent of its capacity,[19] impacting up to one million people, including 100,000 people in Al Hol and other IDP camps and settlements.

The limited operational capacity of the Alouk water station is causing significant delays in water supply. Currently, it takes an average of 13 days to supply water to all neighbourhoods in Al-Hasakeh city and the water station is operational for six days a week. There are major response gaps impeding the provision of water trucking to the southern districts, affecting access to safe water for 200,000 people. A technical maintenance project[20] for the water station is planned to be launched, meanwhile, continuing water trucking during summer is an urgent necessity.[21]

Up until 2017, around 185,000 people in Al Bab sub-district of Aleppo Governorate were supplied with water from Al-Khafsa water station, located on the Euphrates River, via Ein El-Bayda water pumping station. When control of Al-Khafsa sub-district shifted in 2019, the water supply from Al-Khafsa water station was interrupted. The water available from wells is often reported to be of poor quality and meets only a small portion people's water needs. This situation forces people to depend on local private and public water sources, including water-trucking by humanitarian actors.

By the end of 2018, ten borewells were realized and connected to Ar-Raee and Sosyan water tanks to cover the critical minimum domestic water needs in the sub-district. Ten additional borewells were established and subsequently connected to the water tanks located in Ar-Raee, Sosyan and Qabasin in 2019 and 2020. This intervention mitigated the situation without properly solving the problem.

Unless water pumping from Ein El-Bayda can be resumed, the water crisis will continue in Al Bab sub-district, leaving its residents with unsafe water trucking. As part of the humanitarian community's ongoing efforts to ensure unhindered access to safe drinking water for the residents of Al Bab, consultations are underway to allow a technical assessment of the Ein El-Bayda water pumping station.[22]

[19] *WASH working group north-east Syria: Microsoft Power BI*
[20] *OCHA Türkiye: According to the Government of Türkiye, there were 179 cross-line missions conducted by technicians in 2021 and 105 missions this year, making a total of 284 cross-line missions for technicians since the beginning of last year.*
[21] *ibid*
[22] *ibid*

Part II: Needs and Response by Sector

2.1 Water and Sanitation and Hygiene (WASH)

Needs and Response

Critical need

In addition to the dire humanitarian situation created by years of conflict, water quality[23] and availability in Syria have deteriorated while water demand has increased. Last year, in north-east Syria, 51 pumping stations, relying on the Euphrates River water for the delivery of drinking water to the surrounding populations, were adapted to work with a lower water level and quality raw water, while many pumping stations across Syria remain in need of interventions,[24] as the river's level remains low.[25]

Electricity shortages remain the root cause for the underperformance or cessation of water supply systems which is mostly related to the significant shortages of fuel for power plants (and water supply systems backup generators where they exist), and to the reduced Euphrates River flow that drastically diminished the hydroelectric potential of the dams. Power outages are common across many rural and urban areas with electricity being available only for a few hours a day.[26] This impacts the functionality of water systems, leading to restricted pumping hours and bypassing of water treatment systems, increasing the quantity of (often raw) water pumped to the networks at the expense of water quality.

Communities impacted by the water crisis, who are not reached with humanitarian response, are forced to decrease quantities of their needed daily water consumption compromising people's usual hygiene practices and drinking water habits. This, together with the use of unsafe water from private boreholes, storage or unregulated private water trucking would result in an increase of the morbidity of water related diseases, higher malnutrition rates affecting especially children and PLW and a reduced ability to meet other basic needs, because of the increased percentage of income spent to buy water. Moreover, the lack of access to safe water impacts disproportionally women's and girls' health and reproductive health, while poor hygiene conditions in schools can affect girls' attendance.

The water crisis is placing vulnerable population groups, such as IDPs living in camps or informal settlements, people relying on Alouk and Al Khafsa water stations, at higher risk. As an example, in north-west Syria, about 73 per cent of people in camps and 63 per cent in communities rely on water trucking as their source of water. Over 150,000 IDPs in camps and informal settlements require urgent water services, with 70 per cent of the camps lack enough water storage capacity for one day and with almost 65 per cent of people with disabilities having no access to communal water facilities resulting in additional risks.

Response priorities

Around seven million people have faced a gap in accessing safe water resources as they had to adapt to the water scarcity crisis. Therefore, it's important to provide funding to support the provision of life-saving WASH services while developing long-term durable responses.

Considering climate change's impact on water availability in the region, the WASH sector will continue the same intervention strategy of the past year, focusing on more resilient and durable solutions, when possible, in order to allow the infrastructures to operate and adapt to similar future drought conditions, thereby reducing the need for periodic interventions. Shortage of electricity coupled with poor operation and maintenance regime constitute one of the key bottlenecks to drinking water production. Drawing on lessons from 2021 Water Crisis, and within the framework of enhancing resilience among communities and drinking water production facilities, it is critical that drinking water supply (and associated electricity and or renewable energy options) are prioritized. The scope of intervention covers rehabilitation of water pumping stations, augmentation of power supply to water pumping stations via direct connection of water pumping stations to electricity power supply not subject to electricity outage; promotion of renewable energies – solar systems -, and/or promotion of hybrid solutions. Any planned rehabilitation should be combined with associated support to operation and maintenance, including electricity systems (e.g., procurement of transformer as applicable etc.), and capacity building of key technical staff. It is noted that the proposed interventions also contribute to early recovery efforts undertaken by the WASH sector. The WASH sector will prioritize increasing and/or restoring the capacity of drinking water systems that can be affected by the low level of the Euphrates River, for the water stations that are at risk and didn't receive any intervention last year or the intervention was not completed.

[23] *Example: the concentration of nitrates in some boreholes water in north-east Syria increased recently.*
[24] *See under "response priorities" for more details*
[25] *In July 2022, Water level at Tabqa dam was 302 m (Height above sea level) while dead level is 298m. Water level at Tishreen dam was 322 m while dead level is at 320 m*
[26] *Humanitarian Situation Overview in Syria (HSOS), REACH. For example, for north-east Syria 2-4 hours reported for August 2021, 5-6 hours for September 2021, while for north-west Syria 7-8 hours for June-September 2021.*

Alternative Water Supply Options for Al Bab Residents

In addition to the ongoing efforts to obtain effective supply from Al-Khafsa through Ein El-Bayda pumping station, efforts have been made to explore alternative solutions to ensure unhindered access to safe drinking water for the affected populations of Al Bab:

US$ 420K

Cost of operation and maintenance for six-months. *It is important to note that the operational cost is estimated primarily to support the cost of fossil fuel, electricity, chlorine and disinfectant material.

US$ 4.2M

Cost of construction and operations costs for six months

The first alternative aims to strengthen ongoing water supply from local water sources with additional borewells to counter the impact of drought. This augmentation intends to continue supplying at least 40 liters per capita per day. The augmentation work will include building a groundwater tank, equipping both borewells with submersible pumps, connecting the wells to the groundwater tank, provision of horizontal pumps and connection to the main pumping lines, and installation of electrical panels with both submersible and horizonal pumps .

The second alternative aims to provide relatively durable water supply the Euphrates River in Jarablus via Ghandorah and Sandi through a 65-kilometer pipeline at a rate of 100 liter per capita per day. This comprises the construction of boosting and pumping stations in Jarablus and Ghandorah, and transmission pipelines to connect the source to the water tank in Tal Battal.

Simultaneously, the safety of water being delivered by water stations and private tankers must be monitored. Therefore, the sector will continue to provide additional stock of chlorine and aluminum sulphate (for flocculation and settling processes) to the various Water Departments for the water stations, and through support to water trucking filling stations with the chlorination and water quality control, based on needs. The sector does not plan to engage in direct water trucking assistance to local communities, except as a last resort.

Nevertheless, regular water trucking for informal IDP settlements and camps in Al Hasakeh and north-west Syria areas will continue.

The WASH sector will closely coordinate and collaborate with Nutrition, Health and Education to ensure a more integrated and effective response to mitigate the negative consequence of water scarcity, including but not limited to hygiene promotion, IPC, WASH in Health centres and schools. The scope of work planned by the WASH sector is presented in the table hereunder:

ACTIVITY	INDICATOR	TARGET (BY RESPONSE MODALITIES/ AREAS)			MEANS OF VERIFICATION	IMPLEMENTATION TIMELINE	LINK TO HRP STRATEGIC OBJECTIVES (SO)
		HCT	NESF	HLG			
Repair and rehabilitation of water systems and needs related to improving of electricity situation at stations.	Estimated # of people benefitting from water systems' rehabilitation	4,300,000[27]	1,140,000	1,500,000	4WS	July-Dec 2023 for HCT July-September 2022 for XB & NESF: July to December 2022	SO1/SO3
Maintenance of water systems	# of water systems maintained	-	240,000	40	4WS	July- September 2022 for XB & NESF July to December 2022	SO1/SO3
Emergency water trucking	# people with safe access to water	-	200,000	2,000,000	4WS	July- September 2022 for XB & NESF: July to December 2022	SO1
Support to ensure continued access to safe water in HCFs and Schools	#Number of HCS and schools with improved access to safe water.	-	75	-	4WS	NES forum July-December 2022	SO1/SO3
Support to Water trucking filling stations (chlorination, WQ monitoring)	# of water filling points supported with chlorine and wQ monitoring	-	69	-	4WS	NES forum July-December 2022	SO1
Provision of chlorine for water stations	Estimated # of people with improved access to water due to provision of water disinfectants	-	1,500,000	-	4WS	NES forum July-December 2022	SO1

[27] *Approx. 40 resilience focused activities are proposed across 11 governorates. The estimated cost for the proposed interventions is $14.6 million, and for an estimated population of 4.3 million people*

Financial requirements (July- December 2022)

SECTOR BUDGET	TOTAL REQUIREMENTS (US$)	AVAILABLE FUNDING (US$)	FUNDING GAP (US$)
Syria HCT	$14,600,000	$0	$14,600,000
NES NGO Forum	$4,077,000	$ 358,000 [28]	$3,719,000
Syria cross-border HLG	$25,000,000[29]	$0	$25,000,000
Total	**$43,677,000**	**$358,000**	**$42,977,000**

[28] *The available fund is only for Alouk water station.*
[29] *Based on an updated gap analysis by north-west Syria WASH Cluster. July 2022.*

2.2 Early Recovery and Livelihoods (ERL)

Needs and Response

Critical needs

In Al-Hasakeh Governorate, the livelihood of the inhabitants depends largely on agriculture and livestock. The ongoing crisis and the lack of rainfall has led to operational difficulties in 214 wells to the point of complete or partial shutdown. Consequently, people must travel long distances to reach the water they need for themselves and their livestock.

Beyond agriculture, access to safe and affordable drinking water is a growing concern across many governorates in Syria due to the complete damage of deep wells and drinking water networks. In coastal areas, where the rainfall is considered good at (800-1,200) mm per year, 60 per cent of rainfall ends up in the sea due to the lack of investment in water conservation systems.

In Tartous Governorate, among 190 generating stations, 24 are out of service while the rest need maintenance. In the countryside of Tartous, drinking water is cut off for long periods, and in some villages, it is available only one hour per day forcing residents to depend on water trucking to meet their essential water needs. Al-Sen spring mainly feeds Latakia Governorate with 80 per cent drinking water. The losses through the network are about 60 per cent as the pumps and electrical panels in some stations are corroded.

In Hama and Homs Governorates, the lack of basic services, particularly water, is affecting return movements in some locations. People who return to water scarce areas, are resorting to unsafe

water, for example by boiling river water without filtration and purification, raising risks of exposure to waterborne diseases.

In Homs Governorate, people are depending on water trucking to fill their tanks and meet their daily needs. They are unable to start any livestock breeding projects or agriculture projects due to the absence of water. In addition, water networks are not reaching Rukban families' tents settled in Farqalas sub-district.

Against this background, the severity and complexity of early recovery needs remain extensive since the publication of the previous water response plan in September 2021. The Syria crisis has resulted in the loss of jobs and livelihoods opportunities which are urgently needed and has placed increased pressure on essential services and infrastructure in need of rehabilitation.

Response priorities

It is important to provide alternative (to the agriculture sector) job opportunities for seasonal workers, until the agriculture sector requires their services again. Vocational trainings should be considered as a first step to increase the possibility for jobless people to find job opportunities not linked with the agriculture production. ERL interventions will also focus on activities that address the most urgent needs. This will be mainly income-generating support, restoration of basic services, promote usage of renewable energy and other sustainable non-agricultural livelihoods opportunities. Therefore, the sector has identified the following activities for the planned intervention:

ACTIVITY	INDICATOR	TARGET (BY RESPONSE MODALITIES/AREAS)			MEANS OF VERIFICATION	IMPLEMENTATION TIMELINE	LINK TO HRP STRATEGIC OBJECTIVES (SO)
		HCT	NESF	HLG			
Rehabilitation of basic electricity networks	# solar systems distributed and installed (1 KVA per HH)	55	10	40	4WS	July-September	SO3
Rehabilitation of sewage networks	# Km of sewage repaired	5	3	12	4WS	July-September	SO3
Rehabilitation of water stations	# of water stations rehabilitated	3	15	7	4WS	July-September	SO3
Provide vocational and skills training opportunities	# of individuals benefiting from vocational or business trainings	35,000	5,000	10,000	4WS	July-September	SO3

ACTIVITY	INDICATOR	TARGET (BY RESPONSE MODALITIES/AREAS)			MEANS OF VERIFICATION	IMPLEMENTATION TIMELINE	LINK TO HRP STRATEGIC OBJECTIVES (SO)
		HCT	NESF	HLG			
Create long and short-term work opportunities	# of jobs created during the rehabilitation of public and private infrastructure	1,500	1,000	1,000	4WS	July-September	SO3
Provide market-based modalities of assistance to vulnerable households	# of children with severe disabilities provided with cash transfer and case management to improve their livelihoods and access to essential services	7,000	500	1,000	4WS	July-September	SO3

Financial requirements (July- December 2022)

SECTOR BUDGET	TOTAL REQUIREMENTS (US$)	AVAILABLE FUNDING (US$)	FUNDING GAP (US$)
Syria HCT	$5,851,381	$1,390,133	$4,461,248
NES NGO Forum	$11,210,531	$7,207,421	$4,003,110
Syria Cross-border HLG	$3,600,000	$1,040,000	$2,560,000
Total	**$20,661,912**	**$9,637,554**	**$11,024,358**

2.3 Education

Needs and Response

Critical needs

A household water sanitation and hygiene (WASH) survey captured student satisfaction with WASH facilities in their school.[30] The survey asked adults with school aged children attending school if their children reported any issues with their school's WASH facilities.[31] As illustrated in the table below students highlighted a wide range of WASH issues. Schools lacked toilets and sinks, and schools with available facilities lacked water and soap and were most often unclean. Prolonged and more severe water crisis conditions can result in students and school personnel not having water to drink or water to use for hygiene proposes. Additionally, due to electricity and diesel shortages some schools use water-based cooling systems without which schools become sweltering. Inappropriate school WASH conditions contribute to unsafe setting that exacerbate risks to public health; and result in learning environments that impede the ability of students to focus on learning and teachers' ability to focus on teaching particularly given WASH conditions at their homes are most likely affected by the water crisis. These conditions may also have negative social-emotional and protection implications that contribute towards children dropping out of school or other harmful conditions for children. Water scarcity compounds the urgency to address systemically unmet WASH needs and necessitates greater investments to ensure the availability and functionality of WASH in schools. The available data indicates that the 2022-2023 school year, like previous years, will start in September with many schools remaining without sufficient water and without WASH facilities.

Prevalence of complaints by governorate

AREA	AL-HASAKEH	ALEPPO	AR-RAQQA	AS-SWEIDA	DAMASCUS	DAR'A	DEIR-EZ-ZOR	HAMA	HOMS	IDLEB	LATTAKIA	QUNEITRA	RURAL DAMASCUS	TARTOUS
No functioning toilets	11%	42%	27%	14%	0%	20%	22%	21%	1%	7%	1%	9%	2%	6%
No functioning handwashing facilities	33%	35%	20%	25%	0%	19%	36%	10%	7%	7%	5%	21%	2%	13%
No water to flush the toilet	61%	32%	23%	41%	0%	48%	36%	3%	5%	15%	0%	8%	2%	16%
No water and no soap to wash hands	44%	30%	15%	61%	0%	21%	22%	4%	5%	7%	7%	6%	1%	13%
No water to wash hands	11%	2%	0%	1%	0%	13%	8%	1%	1%	7%	4%	4%	1%	4%
No soap to wash hands	24%	27%	29%	15%	22%	17%	53%	67%	72%	33%	82%	52%	7%	67%
Not enough facilities, too crowded	22%	16%	22%	1%	3%	29%	20%	12%	48%	28%	53%	26%	5%	38%
Toilets are not safe (No door lock bolt)	16%	25%	22%	1%	39%	17%	20%	11%	10%	9%	41%	34%	38%	22%
Toilets are not safe (Bothered on the way or at the facility)	0%	0%	0%	0%	0%	0%	2%	0%	0%	3%	0%	5%	0%	0%
Lack of privacy, no separation between boys' and girls' facilities	11%	29%	15%	0%	77%	2%	33%	10%	1%	4%	0%	4%	72%	0%
Lack of ability to get to the toilet without assistance	0%	1%	0%	0%	0%	1%	1%	0%	0%	1%	0%	0%	0%	0%
Toilets unclean	84%	91%	84%	92%	100%	76%	79%	97%	94%	77%	76%	73%	95%	96%

[30] *Education sector analysis, 2022 Humanitarian Needs Analysis*

[31] *It is important to note that it was adults who were asked, not the children themselves and that the perceptions of satisfaction with WASH facility conditions may be influenced by the prevailing living conditions and related WASH expectations.*

Response priorities

Most households with school-aged children attending school, feel that improving the physical conditions of schools, including WASH facilities, is a key priority to improve education services.[32] In line with community priorities and preferences, the sector continues to prioritize expanding and improving school WASH infrastructure. The multi-pronged support to WASH in schools combines a range of interventions to enable a safe and conducive learning environment. Some of these include improving the functionality of WASH facilities in schools, increasing the availability of water through water trucking, connecting schools to a functional water source and expanding water storage capacity, latrine repair and rehabilitation, age-appropriate hygiene promotion with the provision of related consumables to promote/enable improved practices, disinfecting and sanitizing learning facilities among others.

In addition to funding going into the response, additional funds are required to conduct in-depth needs assessments on WASH facilities in schools, particularly in Ras Al-Ain-Tell Abiad (RAATA) and other areas where there is less information available on needs.

As schools are part of the communities they serve, the Education and WASH sectors will continue to play a complementary role when identifying needs and capacities and when responding to WASH in schools. And will use each sectors' expertise to enable a sound response. The Education sector advocates to donors, implementers and other stakeholders that WASH-in-school interventions are prioritized because of unmet needs and highlights that many schools continue to operate with no WASH facilities.

ACTIVITY	INDICATOR	TARGET (BY RESPONSE MODALITIES/AREAS)			MEANS OF VERIFICATION	IMPLEMENTATION TIMELINE	LINK TO HRP STRATEGIC OBJECTIVES (SO)
		HCT	NESF	HLG			
Repair and rehabilitation of WASH facilities in schools/ learning spaces	# of schools or learning spaces benefitting from gender-sensitive and disability-sensitive WASH facilities	617	220	43	4WS	Jan-Dec	SO1, SO2, SO3
	# of children benefitting from gender-sensitive and disability-sensitive WASH facilities	173,341	88,440	7,000	4WS	Jan-Dec	SO1, SO2, SO3
Emergency water trucking	# of people benefiting from school water trucking	950	2,400	7,000	4WS	Jan-Dec	SO1, SO2, SO3
Health and Hygiene interventions	# of children (5-17 years, girls/boys) benefiting from health and hygiene awareness raising	-	15,000	11,000	4WS	Jan-Dec	SO1, SO2, SO3
Disinfection and/ or sanitization of schools/learning spaces	# of schools or learning spaces disinfected or sanitized	-	70	43	4WS	Jan-Dec	SO1, SO2, SO3

Financial requirements (July- December 2022)

SECTOR BUDGET	TOTAL REQUIREMENTS (US$)	AVAILABLE FUNDING (US$)	FUNDING GAP (US$)
Syria HCT	$2,829,323	$0	$2,829,323
NES NGO Forum	$2,354,500	$0	$2,354,500
Syria cross-border HLG	$440,950	$0	$440,950
Total	**$5,624,773**	**$0**	**$5,624,773**

[32] *Education Sector Analysis, 2022 Humanitarian Needs Overview*

2.4
Food Security and Agriculture (FSA)

Needs and Response

Critical needs

The water scarcity has affected the agricultural production, food security and nutrition patterns. The issue is further compounded by an ongoing fuel shortage, making matters significantly more complicated considering that reduced availability of electricity is inextricably linked with food insecurity. This situation has contributed to widespread irregular food consumption patterns and a lack of dietary diversity among vulnerable Syrian households, altogether contributing to an increased level of malnutrition and food insecurity severity.

The current hydrological/water crisis including the erratic rainfall and the high costs of clean water have exacerbated food insecurity by further inhibiting the diversity of food consumption. With the decreased purchasing power, households are spending a larger portion of their income to cover water needs, leaving less money for other necessities such as food. This in turn may lead to malnutrition as the most vulnerable households may worsen the diversity of the consumed food and not meeting the minimum dietary standards.

In terms of food production, the erratic rainfall experienced over the past two consecutive agricultural seasons, has resulted in a hydrological crisis in Syria, adversely affecting both rainfed and irrigated crops especially wheat. The water crisis has significantly impacted crop yields, livestock production systems including fodder production and reduced access and availability of irrigation water for crops in all response areas. The water crisis continues to evolve amid vast irrigation facilities that remain damaged and dysfunctional.

The southern parts of Syria witnessed an increase of illegal ground and surface water withdrawals, deterioration of water quality, inefficient water use, and reported over-exploitation of aquifers. The water demands in affected areas have increased and water supply services have changed and been impacted by the degradation of the irrigation networks, 50 per cent of which are damaged, and correlated impact on the economic structure. With a deficit of 1.53 b.m3/year, four water basins out of the seven, face water shortage, includes five governorates (Damascus, Rural Damascus, Qunietra and Dar'a), Livestock feed was available across the monitored markets except soybean meal which was available only in Rural Damascus, Dar'a and Aleppo governorates. Barley grain and cattle feed witnessed a slight increase in the average price (7 per cent m-o-m). Wheat bran, wheat straw, other crop residues and poultry feed for egg production, witnessed a slight decrease (8, 6, 5 and 6 percent m-o-m respectively). The prices dropped slightly to 1,124 SYP per kg for wheat bran, 570 SYP per kg for wheat straw, 891 SYP per kg for crop residues and 2,527 SYP per kg for poultry feed. This decrease could be due to increased supply following the commencement of the harvesting season.

Food insecurity in north-east Syria is now at its highest since the onset of the crisis in Syria. In north-east Syria, households struggle particularly with the high cost of food paired with low purchasing power. Households are unable to afford essential food items. Low wheat harvests in 2021 and 2022 due to the drought have strongly contributed to this. Thus, with low rainfall continuing into the current agricultural season and considering the global surge in food prices, it is likely that this situation will worsen over the course of 2022. Households are adopting many coping strategies centered around borrowing money and reducing expenditure. More extreme coping strategies are also employed, such as skipping meals and reducing meal sizes.

In north-west Syria, the Food Security and Livelihoods (FSL) Cluster and partners have identified eight sub-districts[33] with damaged irrigation infrastructure.

Response priorities

Conflict, displacement, severe economic shocks, and more intense and frequent extreme weather events have intensified food insecurity and impacted households' coping capacities and livelihoods. Those dependent on agriculture have seen their productive assets depleted, limiting their ability to engage in a "journey towards self-reliance" and therefore rely less on external aid. This in turn influences population movements from rural areas towards areas with increased livelihood opportunities and supplies. More importantly, the food security crisis in Syria cannot be reversed or addressed without adequately addressing the contextual drivers and challenges impacting food production in the long-term.

With the outlined needs resulting from the water crisis, drought-like conditions and climatic change, the Food Security sector believes that there is a need to "close-the-food gap" through an increased focus on opportunities that strengthen the ability of families to become self-sufficient and more resilient.

[33] *Ras Al Ain, Tell Abiad, Suluk, Ein Issa, Jarablus, Ghandorah, Afrin and Mhambal*

ACTIVITY	INDICATOR	TARGET (BY RESPONSE MODALITIES/AREAS)			MEANS OF VERIFICATION	IMPLEMENTATION TIMELINE	LINK TO HRP STRATEGIC OBJECTIVES (SO)
		HCT	NESF	HLG			
Provision of Protection Food Rations (FRs)	# of farmers/livestock breeder received food basket	354,635	1,009,000	12,761	HLG: 5WS , OMI	July to December 2022	SO1
Wheat Seed, Distribution of Agriculture Inputs (Wheat, fertilizers, etc.)	# of cultivated ha # of farmers supported by agriculture inputs	70,000	3	12	HLG: 5WS , OMI	July to December 2022	SO1
Supporting asset protection through animal feed distribution and fodder production.	# Of livestock breeders supported # Of livestock heads supported by fodder	25,000	15	7	HLG: 5WS , OMI	July to December 2022	SO1
Vegetable production package (seed, tools, modern irrigation networks, etc.)	# Of farmers supported by agriculture inputs # Of cultivated ha	30,000	5,000	10,000	HLG: 5WS , OMI	July to December 2022	SO1
Rehabilitating water pumping sets (i.e. for irrigation), in severely effected locations to adapt with the water crisis, including training of affected farmers on irrigation management and water conservation techniques.	# of irrigation projects / infrastructure habilitated	7	1,000	1,000	HLG: 5WS , OMI	July to December 2022	SO2
	# of farmers benefiting from rehabilitated irrigation projects or infrastructure	165,550	-	-	HLG: 5WS	July to December 2022	SO2
	# of wells rehabilitated in Dar'a and Badia region	32	-	-	HLG: 5WS	July to December 2022	SO2
Rehabilitation of Irrigation canals, targeting locations severely affected by water crisis.	Length of water canals rehabilitated (i.e. in kilometers)	100	-	-	HLG: 5WS	July to December 2022	SO2
Training and awareness raising on Climate Smart Agriculture (CSA).	# Of farmers benefited benefiting from CSA the awareness sessions and technical advisory	30,000	-	12,761	HLG: 5WS , OMI	July to December 2022	HLG: SO2-SO3

Financial requirements (July- December 2022)

SECTOR BUDGET	TOTAL REQUIREMENTS (US$)	AVAILABLE FUNDING (US$)	FUNDING GAP (US$)
Syria HCT	$68,284,421	$0	$68,284,421
NES NGO Forum	$47,760,000	$25,620,000	$22,140,000
Syria cross-border HLG	$24,075,495	$12,685,800	$11,389,695
Total	**$140,119,916**	**$38,305,800**	**$101,814,116**

2.5 Health

Needs and Response

Critical needs

The water crisis in northern Syria has an impact on public health, posing numerous health risks and endangering the lives of millions of people. Diseases caused by contaminated water, poor sanitation and hygiene are among the leading causes of morbidity and mortality in the population, particularly in conflict zones such as Syria. The lack of access to water and sanitation has a significant impact on the health of the population, particularly vulnerable groups including women, children, and the elderly, as well as IDPs in both formal and informal camps. In addition to other water-borne infections, acute diarrhea is the most common direct health impact of low water accessibility and availability. Furthermore, it contributes to the development of mental illnesses such as stress and anxiety.

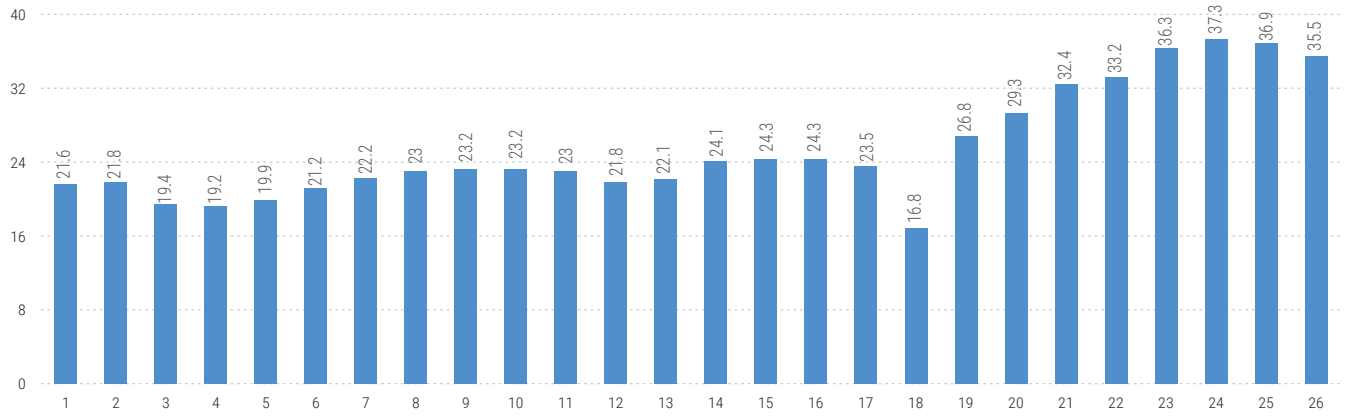
The water crisis has been compounded by other aggravating factors such as a lack of access and food availability, resulting in an increase in the prevalence of malnutrition in many of Syria's impacted areas, particularly in north-east Syria. As a result, according to WHO surveillance via the Early Warning, Alert and Response System/ Network (EWARS/N), a total of 661,925 acute diarrhea (AD) cases have been reported for the epidemiological weeks of 1 - 26 (Jan – end of June 2022), 211,464 (44 per cent) of which were reported in the last five weeks (21-26). Majority of the cases were reported from Aleppo (24 per cent), Deir-ez-Zor (20 per cent), Idleb (20 per cent) and Al-Hasakeh (18 per cent).

The epidemiological data demonstrated that acute diarrhea is among the top two leading causes of morbidity among different age groups. Until June 2022, 59 per cent of the reported AD cases are among children under five years and 41 per cent of AD cases are among above 5 years.

In general, the number of waterborne diseases (WBD)-reported cases has steadily increased since the water crisis began in April 2021, with a four per cent increase in 2022 compared to the same period epi weeks of 2021 (see graph above). During the same reporting period total of 83,686 leishmaniosis cases and 7,453 of acute bloody diarrhea were reported through EWARS/EWARN.

Acute Diarreah by EPI week (Jan-Jun 2022)

in Thousands



GOVERNORATE	ACUTE DIARRHEA *Jan - Jun 2021*	ACUTE DIARRHEA *Jan – Jun 2022*	CHANGE (%)
Aleppo	163,333	156,539	-4.20%
Al-Hasakeh	109,903	110,144	0.2%
Ar-Raqqa	60,854	71,071	16.8%
As-Sweida	1,274	948	-25.6%
Damascus	11,172	7,869	-29.6%
Dar'a	5,988	6,551	9.4%
Deir-ez-Zor	113,785	145,289	27.7%
Hama	7,232	4,220	-41.6%
Homs	3,902	4,376	12.1%
Idleb	130,783	126,614	-3.2%
Lattakia	4,513	11,195	148.1%
Quneitra	2,455	1,875	-23.6%
Rural Damascus	11,538	8,585	-25.6%
Tartous	6,053	6,649	9.8%
Grand Total	**632,785**	**661,925**	**4.6%**

Response priorities

In addition to regular coordination, supervision and monitoring, the Health sector will prioritize enhancing the prevention, control, and response to water-borne diseases including cholera. The sector will focus on the management of severe acute malnutrition with medical complications and scale up the surveillance system in the affected areas through enrolling 500 health facilities into EWARN/S and deploying additional 24 trained RRTs. The sector will moreover prioritize the prepositioning of medical supplies in the high-risk areas.

The sector will work on building the capacity of 1000 healthcare workers on the case management protocols and clinical management of cases including malnutrition. The sector will further enhance infection prevention and control measures through distribution of IEC materials, training of HCWs and provision of IPC materials. Finally, the health sector plan to strengthen Risk Communication and Community Engagement (RCCE) activities in the affected areas.

ACTIVITY	INDICATOR	TARGET (BY RESPONSE MODALITIES/AREAS)			MEANS OF VERIFICATION	IMPLEMENTATION TIMELINE	LINK TO HRP STRATEGIC OBJECTIVES (SO)
		HCT	NESF	HLG			
Prepositioning of medical supplies in the high-risk areas	# of HFs received treatment course / medicines and supplies	100	100	-	4Ws	Jul – Dec 2022	SO1
	# of cholera kits in partners' warehouse	-	-	5	4Ws	Jul – Dec 2022	SO2
	# of treated diarrhea cases	15,000 severe diarrhea cases 95,000 mild diarrhea cases	-	-	4Ws	Jul – Dec 2022	SO3
Expand provision of basic health services provided in health facilities in the high-risk areas	# of new health facilities supported with essential services package	20	25	14	Line listing and 4Ws	Jul – Dec 2022	N/A
Deploy mobile health teams and RRTs to the affected communities to provide basic services of outbreak response	# of mobile teams / RRTs deployed	10 MTs Ands 12 RRTs	10 MTs	14 MTs	4Ws	Jul – Dec 2022	SO2 SO3
Enhance IPC measures in the affected areas including decontamination and cleaning materials	# of PPE/IPC items procured and distributed	15	500,000	-	4Ws	Jul – Dec 2022	SO1
	# of HFs covered	-	100	28	4Ws	Jul – Dec 2022	SO1
Water Quality monitoring (Sample collection, testing and reporting) for Water facilities, Water sources and wastewater • Purchasing Portable water quality testing DelAgua Kits • Purchasing Portable water quality testing DelAgua Kits consumables • Purchasing wastewater kits consumables • Distribution of chlorine tables on households at areas of high risk of WBD outbreaks	# of water sources monitored	-	-	600	Water testing reports –WASH reports	Jul – Dec 2022	N/A
	# of wastewater tests	-	-	160	Water testing reports –WASH reports	Jul – Dec 2022	N/A
	# of DelAgua kits	-	-	20	Water testing reports –WASH reports	Jul – Dec 2022	N/A
	# DelAgua kits consumables	-	-	800 kits	Water testing reports –WASH reports	Jul – Dec 2022	N/A
	# of labs supported with supplies and reagents	4	-	-	Water testing reports –WASH reports	Jul – Dec 2022	N/A
	# of households supported with chlorine tablets	20,000	-	-	Water testing reports –WASH reports	Jul – Dec 2022	N/A

ACTIVITY	INDICATOR	TARGET (BY RESPONSE MODALITIES/AREAS)			MEANS OF VERIFICATION	IMPLEMENTATION TIMELINE	LINK TO HRP STRATEGIC OBJECTIVES (SO)
		HCT	NESF	HLG			
Vector- Borne diseases (Leishmaniosis) - Indoor Residual Spraying (IRS)	# of campaigns conducted	2	-	4	Campaign reports	Jul – Dec 2022	N/A
	#of households reached	-	-	40,000			
Conduct mass media health education campaigns focused on hygiene practices (hand washing, sanitation, water storage, food handling, personal hygiene and menstrual hygiene management), tailored to vulnerable groups e.g. PLW, PWD, the elderly in high risk areas	# of campaigns conducted	2	2	4	Monitoring and campaigns reports	Jul – Dec 2022	N/A
Provide RCCE training to the Community Health workers/community leaders, Volunteers, and other stakeholders	# of community leaders/ persons trained	200	300	500	Awareness campaign/ sessions reports	Jul – Dec 2022	SO3
Training health workers on WBD (AD, AWD) preparedness, case definition, diagnosis and management protocols	# of health workers trained	300	500	500	Training reports/4Ws	Jul – Dec 2022	SO3
	# of training session held	-	-	13	Training reports/4Ws	Jul – Dec 2022	SO3
Regular health sector coordination meetings, inter-hub meetings and Inter-sectoral coordination meetings	# of meetings attended per month	2	2	4	Minutes of the meetings	Jul – Dec 2022	N/A
Enhance supportive supervision and monitoring through bi-weekly or monthly field monitoring visits - Produce regular Sitreps	# of field visits conducted	6	6	6	Visit reports and published SitReps	Jul – Dec 2022	N/A
Enhance supportive supervision and monitoring through bi-weekly or monthly field monitoring visits - Produce regular Sitreps	# of field visits conducted	6	6	6	Visit reports and published SitReps	Jul – Dec 2022	N/A

Financial requirements (July- December 2022)

SECTOR BUDGET	TOTAL REQUIREMENTS (US$)	AVAILABLE FUNDING (US$)	FUNDING GAP (US$)
Syria HCT	$2,100,000	$1,100,000	$1,000,000
NES NGO Forum	$1,980,000	$0	$1,980,000
Syria cross-border HLG	$1,230,000	$0	$1,230,000
Total	**$5,310,000**	**$1,100,000**	**$4,210,000**

2.6 Nutrition

Needs and Response

Critical needs

Scarcity of water and availability of safe, chlorinated water at household level has created major risks for appropriate hygiene practices including compromised maternal, infant, and young child feeding and care practices. This situation increases the burden on women and girls who must secure clean and safe water. Where the north-west and north-east Syria are concerned, the dire water insufficiency has had direct implications on children and women nutritional status. Nutrition surveillance data indicate that diarrhea is one of the leading causes of child malnutrition in these locations. The July 2022 north-west Syria surveillance report survey indicate a deteriorating nutrition situation with Global Acute Malnutrition (GAM) levels of 5.0 per cent (3.3 - 7.5 95 per cent C.I). The Severe Acute Malnutrition (SAM) Prevalence rate by MUAC increased from 0.8 per cent in 2021 to 1.3 per cent in 2022 whilst the prevalence of SAM by Weight for Height Z Score (WHZ) increased from 0.4 per cent in 2021 to 0.9 per cent in 2022, indicative of a worsening nutrition situation. SAM is the worst form of malnutrition; children having SAM stand a 10-12 per cent imminent risk of malnutrition related deaths compared to their normal peers. Existing evidence shows that 50 per cent of undernourishment is associated with recurrent onsets of diarrhea. Undernourished children are more susceptible to repeated bouts of enteric infections and, hence, are at greater risk of dying from diarrhea and other diseases, including respiratory infections.

For children under 5, the probability of dying from diarrheal disease is 10 times higher if the child is affected by severe acute malnutrition. Diarrhea promote disease spread especially acute diarrheal infections creating a vicious cycle with malnutrition by decreasing the child's appetite and importantly, the ability to absorb essential nutrients. The SMART survey data in north-west Syria indicated that diarrhea is a leading cause of child malnutrition; over 50 per cent of children identified with severe and moderate wasting suffer from diarrhea; the highest levels ever reported in Syria. Similarly in north-east Syria, the June 2022 SMART survey results paint a worrisome picture; malnutrition among Pregnant and Lactating Women (PLWs) has risen, it is particularly worrying in Deir-ez-Zor governorate reaching up to 20.5 per cent, a situation described as emergency level. The prevalence of combined GAM among children in Kisreh (Deir-ez-Zor) was found at 12 per cent and 9 per cent in Shadadah (Al-Hasakeh), a situation described as serious in nutrition severity ranking scale.

Response priorities

There is an urgent need to scale up the provision of integrated malnutrition prevention and treatment services to reach 895,899 people in need, including 268,770 PLWs and 627,129 nutritionally vulnerable children in Syria by prioritizing the below four critical needs;

- Vulnerable pregnant and lactating women and caretakers of children aged below 2 years have improved access to quality infant and young child feeding services -including skilled counselling and support through both community and facility-based platforms.
- Protect, support, and improve access and consumption of safe, timely, age appropriate, and nutritionally balanced diets among vulnerable households having children aged below 2 years, pregnant and lactating women including through micro-nutrient supplementation and use of cash voucher assistance.
- Strengthen early detection, referral pathways, treatment and follow-up for severe and moderate acute malnutrition among children below 5 years, pregnant and lactating women.
- Strengthen nutrition surveillance and improve the evidence base on malnutrition needs across Syria.

The nutrition sector will scale up provision of integrated malnutrition preventive and treatment life-saving nutrition service delivery to reach 895,899 people in need, including 268,770 PLWs and 627,129 children aged below 5 years. Proven, simple interventions exist to prevent undernutrition and diarrhea, even in settings that are challenged by poor sanitation, lack of hygiene, and unsafe drinking water. Good hygiene practices, particularly handwashing with soap, serve as vital secondary barriers to the spread of diarrheal, respiratory and possibly other infectious diseases as they prevent pathogens from reaching the domestic environment and food, and their subsequent ingestion. Consequently, integration with WASH response will entail geographical convergence where hygiene promotion-including the issue of hygiene/ baby kits will be integrated in nutrition education and Maternal Infant and Young Child Nutrition (MIYCN) counselling sessions to curb occurrence of water-borne diseases and improve the safety of young children feeding and care environments. Moreover, this will support COVID-19 infection prevention and control measures. The Nutrition sector will continue to advocate to the WASH sector to mainstream nutrition vulnerability and promote nutrition outcomes in services providing safe drinking water and sanitation facilities-particularly for family having PLWs and children under the age of two to further curb diarrhea cases among children.

ACTIVITY	INDICATOR	TARGET (BY RESPONSE MODALITIES/AREAS)			MEANS OF VERIFICATION	IMPLEMENTATION TIMELINE	LINK TO HRP STRATEGIC OBJECTIVES (SO)
		HCT	NESF	HLG			
Provision of maternal, infant and young child feeding skilled counselling and support to vulnerable pregnant and Lactating Women and caretakers of children aged below 2 years through both community and facility-based platforms.	# of pregnant women and caregivers of children under 24 months of age counseled as one on one on appropriate IYCF-E and maternal nutrition	477,308	39,673	165,469	4WS	July to December 2022	SO2
	# of PLWs, caretakers of children U2 who receive hygiene promotion messages at community level	-	54,322	342,563	4WS	342,563	SO2
Protect, support, and improve access and consumption of safe, timely, age appropriate, and nutritionally balanced diets among vulnerable households having children aged below 2 years and PLWs	# of boys and girls (6 - 59 months) who received micronutrient supplements (micronutrient powder (MNP) etc.) for four months.	333,412	-	446,513	4WS	July to December 2022	SO2
	# of PLWs who received micronutrients, including iron folate and Micronutrient	246,000	-	162,289	4WS	July to December 2022	SO2
	# of PLWS receiving CVA with a nutrition objective	-	-	62,154	4WS	July to December 2022	SO2
Strengthen early detection, referral pathways, treatment and follow up for severe and moderate acute malnutrition among children below 5 years and PLWs.	# of boys and girls (6 - 59 months) with uncomplicated severe acute malnutrition reached with treatment	421	2611	12,575	4WS	July to December 2022	SO1
	# of boys and girls (0 - 59 months) with severe acute malnutrition and medical complications reached with inpatient treatment	47	392	922	4WS	July-December 2022	SO1
	# of boys and girls (6 - 59 months) with moderate acute malnutrition reached with treatment	1,537	13,054	64,315	4WS	July-December 2022	SO1
	# of PLWs with moderate acute malnutrition reached with treatment	1,978	6,723	50,380	4WS	July-December 2022	SO1
Strengthen technical capacities for service delivery and improve the evidence base on malnutrition needs across Syria.	# of health and nutrition staff trained in IYCF-E	300	210	702	4WS	July-December 2022	SO3
	# of health and nutrition staff trained in Community Management of Acute Malnutrition including the inpatient care guidelines.	300	234	272	4WS	July-December 2022	SO3
	# of Districts covered with nutrition surveillance	7	32	9	4WS	July-December 2022	SO3

Financial requirements (July- December 2022)

SECTOR BUDGET	TOTAL REQUIREMENTS (US$)	AVAILABLE FUNDING (US$)	FUNDING GAP (US$)
Syria HCT	$54,536,975	$30,571,502	$23,965,473
NES NGO Forum	$7,300,000	$1,300,000	$6,300,000
Syria cross-border HLG	$43,363,025	$15,251,332	$28,111,693
Total	**$105,200,000**	**$47,122,834**	**$58,377,166**

2.7 Protection and Areas of Responsibilities (AoR)

Needs and Response

Critical needs

Over the past years, the combined effects of a deteriorating economic situation and the seasonal water crisis have affected the ability of people to meet their basic needs. As a result, resort to harmful coping mechanisms have been soaring, impacting women and children the most. Women and children have also been particularly exposed to heightened protection risks, including GBV, when forced to walk several kilometers to fetch water. The water crisis has led many families to leave their areas of origin to seek humanitarian assistance in camps. These new arrivals have put more pressure on the sites that are already congested, and increased protection risks engendered by lack of privacy and psychological distress.

This year's water crisis is expected to further exacerbate the risks of forced and early marriage, as well as intimate partner and domestic violence and harassment especially against women and girls. The number of cases of sexual exploitation and abuse risks increasing because of growing difficulties in accessing services and water. Hygiene conditions are set to worsen, making menstrual hygiene management more arduous. Lack of proper menstrual hygiene represents a deterrent for women and girls to access jobs and educational opportunities and further limits their freedom of movement. Children are likely to be at a heightened risk of abuse, exploitation, violence and neglect, as well as child labor, including its worst forms. Psychosocial distress is anticipated to continue to rise. As water level lowers, exposed explosive ordnance -including around sanitation infrastructure- will threaten larger parts of the population along the Euphrates River. A likely increase in displacement will compound vulnerabilities and render access to information and protection services more complicated. Protection risks must be tackled at the earliest possible stage, to avoid cumulative impact if left unaddressed.

Furthermore, the water crisis exacerbates the risks of sexual exploitation and abuse by humanitarian and non-traditional actors involved in providing humanitarian assistance and who seek to take advantage of the imbalance of power over resources. It is therefore essential that all actors involved ensure that preventative and mitigating measures are in place to protect against sexual exploitation and abuse (SEA), that informal and formal reporting channels are safe and appropriate to receive SEA allegations, and that assistance and support is available for SEA survivors in collaboration with Protection and GBV service providers.

Response priorities

The Protection sector and AoRs will focus on mainstreaming protection and GBV risk mitigation measures in the response to the water crisis, including training of humanitarian workers and first-line responders on protection mainstreaming and GBV risk mitigation, safe and confidential referral and support for child protection and GBV survivors and explosive ordnance risk education. Protection monitoring will continue to be provided to detect increased reliance on harmful coping mechanisms and will be expanded into new areas where displacements are reported. Additionally, needs assessments will be conducted to complement the protection monitoring and fill the remaining information gaps. The sector in collaboration with the PSEA network, will also support the establishment and provision of PSEA support services across the response (tools for preventative and mitigating measures, complaint mechanisms including PSEA hotlines, and PSEA awareness and training).

Quality protection services responding to growing protection needs will be scaled up. This will include case management, psychosocial support, legal services, parental counselling, and alternative care arrangement. Complementary distribution of items (e.g. dignity kits, risk reduction kits, material assistance, in-kind or cash/vouchers, etc.) will be delivered to meet emerging needs. Community-led initiatives which focus on social cohesion and stress the inclusion of the most vulnerable, especially people with disabilities, vulnerable groups, women, children and the elderly will be implemented. The protection response capacity will be strengthened with mobile teams deployed to provide emergency protection services to the affected population.

The reach of awareness-raising sessions will be increased and cover various protection issues, including on prevention of family separation, child labor, early/forced marriage, violence against children, GBV, menstrual hygiene management (MHM), explosive ordnance risk education, and information on safe access of vulnerable people to available basic (including water and WASH facilities) and specialized services to enhance knowledge and prevent and mitigate protection risks.

ACTIVITY	INDICATOR	TARGET (BY RESPONSE MODALITIES/AREAS)			MEANS OF VERIFICATION	IMPLEMENTATION TIMELINE	LINK TO HRP STRATEGIC OBJECTIVES (SO)
		HCT	NESF	HLG			
Train humanitarian workers and first-line responders on protection mainstreaming and GBV risk mitigation, identification and support for CP cases and GBV survivors, mine risk education and PSEA, including ToT	# of humanitarian actors and protection service providers trained	General Protection: 200 CP AoR: 120 GBV AoR: 100 MA AoR: 60	GP: 580 GBV AoR: 100	-	4WS	July-December	SO2
Organize awareness sessions on different protection issues, including on prevention of family separation, child labour, forced/early marriage violence against children, GBV, PSEA, explosive ordnance risk education and share information on available basic and specialized services, to enhance knowledge and prevent and mitigate protection risks, dissemination of information on MHM, safe access to water and WASH facilities.	# of awareness-raising interventions conducted	GP: 50,000 CP AoR: 12,000 GBV AoR: 3,600 MA AoR: 43,800	GBV AoR: 2,500 MA AoR: 9,000	-	4WS	July-December	SO2
Implement community-led initiatives. The initiatives will stress the inclusion of the most vulnerable, focusing on people with disabilities, vulnerable groups, women, children and the elderly.	# of community-based initiatives and community-based protection structures supported	GP: 45	-	-	4WS	July-December	SO2
Provision of Protection, GBV and CP services (case management, coordination and referrals, legal services, supporting community-based structures, PSS, parental care)	# of people reached with individual assistance for specific protection needs	CP AoR: 5,200 GBV AoR: 2,300	GP: 1,200 CP: 780 GBV AoR: 9,000	-	4WS	July-December	SO2
Distribution of items/material assistance (such as, but not limited to, dignity kits, risk reduction kits, material assistance in-kind or cash/vouchers) based on assessments and feedback from beneficiaries	# of items distributed	GBV AoR: 8,000	GP: 2,300 GBV AoR: 3,000	-	4WS	July-December	SO2
Conduct regular monitoring of protection and vulnerability risks to identify needs, gaps and harmful coping mechanisms	# of people reached with protection monitoring	GP: 5,000	GP: 3,000	-	4WS	July-December	SO2
Promote safe and inclusive access of women and girls to WGSS (static or mobile) or Protection Mobile Units (e.g transportation services)	% of population reached by GBV prevention and empowerment activities	-	GBV AoR: 10% of the population in the most affected communities (88,000 individuals)	-	4WS	July-December	SO2
Strengthen community-based referral pathways and capacity of community focal points to promote access of women and girls to life-saving services	% of population with strengthened referral pathways	-	GBV AoR: 10% of the population in the most affected communities (88,000 individuals)	-	4WS	July-December	SO2

ACTIVITY	INDICATOR	TARGET (BY RESPONSE MODALITIES/AREAS)			MEANS OF VERIFICATION	IMPLEMENTATION TIMELINE	LINK TO HRP STRATEGIC OBJECTIVES (SO)
		HCT	NESF	HLG			
Increase outreach and services information in the most vulnerable areas (informal settlements, returns areas, camp settings)	% of population targeted by outreach and services information	-	GBV AoR: 10% of the population in the most affected communities (88,000 individuals)	-	4WS	July-December	SO2
Increase outreach and services information in the most vulnerable areas (informal settlements, returns areas, camp settings)	% of population targeted by outreach and services information	-	GBV AoR: 10% of the population in the most affected communities (88,000 individuals)	-	4WS	July-December	SO2

Financial requirements (July- December 2022)

SECTOR BUDGET	TOTAL REQUIREMENTS (US$)	AVAILABLE FUNDING (US$)	FUNDING GAP (US$)
Syria HCT	General Protection:	General Protection:	General Protection:
	$406,000	$0	$406,000
	CP AoR:	CP AoR:	CP AoR:
	$43,070,823	$0	$43,070,823
	GBV AoR:	GBV AoR:	GBV AoR:
	$237,500	$0	$237,500
	MA AoR:	MA AoR:	MA AoR:
	$281,100	$0	$281,100
	TOTAL	TOTAL	TOTAL
	$1,318,600	$0	$1,318,600
NES NGO Forum	General Protection:	General Protection:	General Protection:
	$175,600	$0	$175,600
	CP AoR:	CP AoR:	CP AoR:
	$122,000	$0	$122,000
	GBV AoR:	GBV AoR:	GBV AoR:
	$140,600	$0	$140,600
	MA AoR:	MA AoR:	MA AoR:
	$40,000	$0	$40,000
	TOTAL	TOTAL	TOTAL
	$478,200	$0	$478,200
Syria cross-border HLG	$0	$0	$0
Total	General Protection:	General Protection:	General Protection:
	$581,600	$0	$581,600
	CP AoR:	CP AoR:	CP AoR:
	$516,000	$0	$516,000
	GBV AoR:	GBV AoR:	GBV AoR:
	$378,100	$0	$378,100
	MA AoR:	MA AoR:	MA AoR:
	$321,100	$0	$321,100
	TOTAL	TOTAL	TOTAL
	$1,796,800	**$0**	**$1,796,800**

CRITICAL RESPONSE AND FUNDING REQUIREMENTS:
Response to the Water Crisis in Syria