



South Sudan - Water, Sanitation and Hygiene Brief



July/August and November/December 2018

Introduction

The dynamic and multi-faceted nature of the South Sudanese displacement crisis has created significant challenges for the delivery of humanitarian aid. Accessibility and security issues within South Sudan have impeded a systematic understanding of Water, Sanitation and Hygiene (WASH) needs in many areas of the country, and have created difficulties in establishing a clear and unambiguous system for prioritizing the delivery of aid, thereby limiting the effectiveness of humanitarian planning and limiting the potential impact of donor funding. As this crisis continues to expand, evolve and spill into neighbouring countries, it has become increasingly important to fill information gaps to inform a more effective humanitarian response and plan for immediate life-saving WASH activities and contingency planning for durable solutions.

In 2018, REACH, in close coordination with the WASH Cluster, identified five core WASH indicators related to displacement, access to water, access to sanitation, access to key WASH NFIs (soap, mosquito nets, water containers), and water or vector borne disease.

These five indicators were used to establish the first countrywide WASH baseline in the wet season (July and August) of 2018 during Round 22 of the Food Security and Nutrition Monitoring System (FSNMS). FSNMS partners agreed to once again incorporate WASH cluster indicators for FSNMS Round 23 during the dry season (November and December of 2018). FSNMS is a seasonal countrywide assessment conducted, funded and run by the World Food Programme, UNICEF, and the Food and Agriculture Organization, and supported by REACH in Round 22. FSNMS, established in 2010, is a representative survey that employs

two-stage cluster sampling, using a state based sample size and cluster determination. In each county, access permitting, 9 clusters were selected and 12 households (HH) interviewed per cluster.

FSNMS is a critical source of information that allows for the identification of affected areas, monitoring trends, and the prioritization of resources. The data collected during FSNMS is used for the Integrated Food Security Phase Classification (IPC) analysis, the Humanitarian Needs Overview (HNO) and the Humanitarian Response Plan (HRP), as well as additional decision making platforms.

Methodology

Together the WASH indicators create a WASH composite which aims to measure the severity of WASH needs in each county. Each indicator was broken into 5 severity levels, as seen in this matrix <http://bit.ly/2EqRYwJ>. The final severity ranking was created by calculating the average level from the following indicators, with all parameters given equal weight:

1. Water - Safe access to and use of an improved water source (borehole, tapstand, water yard) in less than 30 minutes as a main source of drinking water (composite indicator).
2. Sanitation - Having access to a latrine (private, shared, or communal/institutional).
3. NFI - Owning a jerrycan or bucket with a lid and soap, and that every member of the HH slept under a mosquito net (composite indicator).
4. Health - Having one or more household members affected by self-reported water or vector borne disease in the two weeks prior to data collection. Findings were then mapped (Map 1).

Key Findings

- WASH Severity levels - The WASH situation remains concerning across the entire country. Regardless of displacement status or location, **the average severity of WASH needs across South Sudan was Level 4-the second highest level of severity**. Nevertheless, important differences were observed between population groups, settings and regions and the different composite indicators. Greater Upper Nile (GUN) and Great Bahr el Ghazal (GBeG) also had severity rankings of Level 4, though the severity per indicator varied in the regions. Greater Equatoria (GE) had the lowest overall severity ranking at 3.5.¹
- Water - **Safe and improved access to water during both seasons was limited, reported by only 34% of HHs** (Table 2). Distance to the nearest water point and protection concerns were key limiting factors for HH safely accessing and using an improved water point in a timely fashion, as when only looking at the source of water, the proportion of HHs reporting a borehole or tapstand as their primary water source almost doubled across the country (Figure 1).
- Sanitation - Access and use of latrines varied by region as seen in Table 2. **While 21% of HHs across South Sudan reported access to latrines (private, shared, or communal/institutional), only 17% of HHs reported always using a latrine**. Low access and use stems from insufficient and damaged infrastructure, and in some regions is compounded by cultural norms around improved sanitation practices.
- WASH Non-Food Items (NFIs) - **14% of HHs reported positively on all three NFIs-owning at least one jerrycan or bucket with a lid, with access to soap, and every member of the HH slept under a mosquito net**.

Table 1: Top 15 counties at highest WASH Severity compiled from four core WASH indicators in 2018 (Severity Level)

	Wet season	Dry season
1.	Maiwut (5)	Panyikang (5)
2.	Nasir (5)	Canal/Pigi (5)
3.	Yirol East (5)	Guit (5)
4.	Awerial (5)	Maban (5)
5.	Panyikang (5)	Nasir (5)
6.	Pibor (5)	Nasir (5)
7.	Canal/Pigi (5)	Ayod (5)
8.	Ulang (5)	Cueibet (5)
9.	Melut (5)	Melut (5)
10.	Fangak (5)	Pibor (4)
11.	Wau (5)	Aweil East (4)
12.	Yirol West (5)	Tonj South (4)
13.	Malakal (4)	Ikotos (4)
14.	Guit (4)	Tonj North (4)
15.	Kapoeta South (4)	Baliet (4)

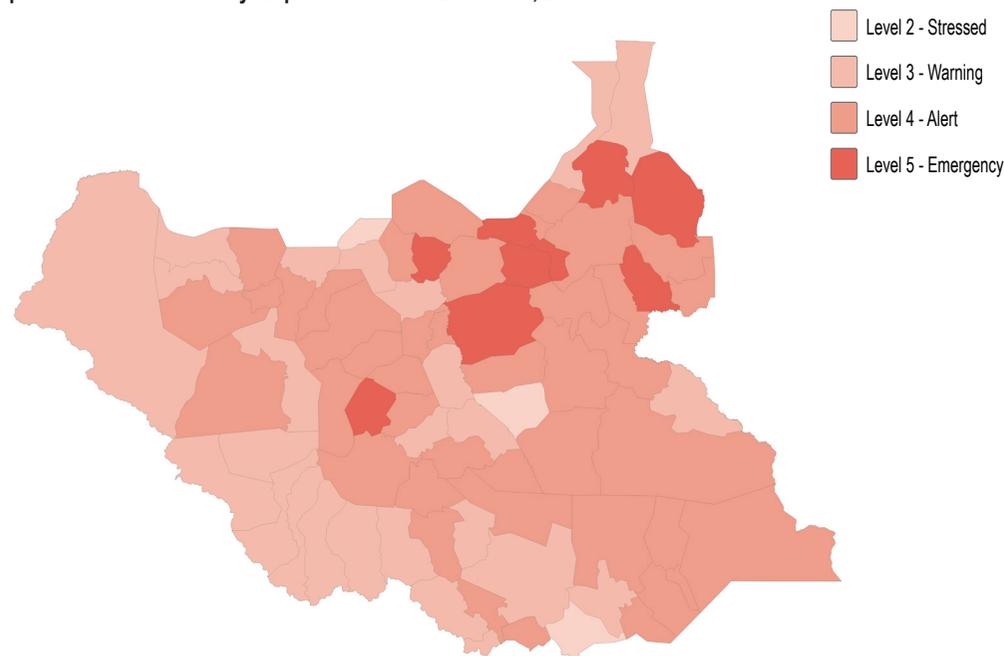
Table 2: Proportion of HHs reporting by indicator

indicator	SSD	GE	GUN	GBeG
1. Water	34%	29%	31%	42%
2. Sanitation	21%	45%	13%	10%
3. NFIs	14%	14%	13%	15%
4. Health	74%	72%	71%	78%





Map 1: WASH needs severity map - November to December, 2018



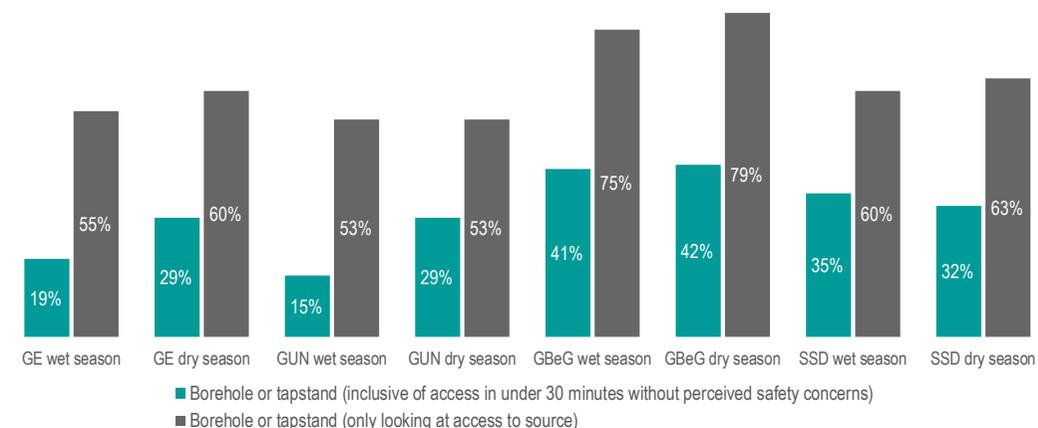
• Water and vector borne diseases - Low access to WASH NFIs may have compounded the **high proportion of HHs reporting a water or vector borne disease, 74%** (Table 2), as the most commonly self-reported diseases were malaria, fever, and acute watery diarrhoea (AWD).

Access to Water

Households across the country reported low access to an improved water source in less than 30 minutes without protection concerns; 34% of HHs nationwide reported positively on this indicator. **The lowest proportion of HHs accessing this type of drinking water were in the GUN during the wet season and the**

highest in GBeG during the dry season (Figure 1). The low proportion in the Equatorias came from Central and Western Equatoria, where perceptions of insecurity preventing access and insufficient boreholes were reported as the primary reasons why access was low.^{2 3 4} Across the country, when only looking at access to an improved water source, without considering perceptions of safety and time spent accessing the water points, access almost doubled in both seasons (Figure 1). While the region with the lowest average proportion of HHs able to access improved water sources were in GE, counties that saw access remain low throughout both the wet and dry seasons were primarily in GUN. These counties are found along

Figure 1: Households reporting a borehole or tapstand as their primary source of drinking water (inclusive of time spent accessing source being less than 30 minutes and without feeling unsafe when accessing the water point), compared to access to a borehole or tapstand (excluding safety and time)



the Nile and Sobat Rivers, counties that traditional rely on surface water sources and have limited infrastructure due to periods of prolonged insecurity and restricted access (Panyikang 0% wet and dry seasons, Canal 0% wet and 12% dry, Malakal 3% wet and 0% dry, Manyo 5% wet and 2% dry, Fangak 6% both wet and dry, Fashoda 9% wet and 11% dry). Counties that saw a big decrease in access to a borehole or tapstand in under 30 minutes, and did not report perceived safety concerns when accessing the water source between the wet and dry season were spread throughout the country. Ayod County saw the proportion of HHs with access to this source of drinking water drop from 34% in the wet season to 8% in the dry, and Bor South from 67% to 32%. In addition to increased reliance on surface water sources and time spent accessing water, during the dry season, the Bor-Ayod Corridor had the highest reported protection concerns related to water access across the country

(42% to 47%), reportedly due to perceptions of increased violence which lead to females (primarily reported to be gender based violence) requesting males accompany them for additional protection.⁵ In the GBeGs, the decrease from wet to dry season was most prominent in Gogrial East (66% to 22%) and West (45% to 20%), Rumbek Centre (74% to 37%) and Tonj North (66% to 35%). These decreases stemmed from HHs reporting an increased amount of time was required to access boreholes, which was reportedly due to broken boreholes and insufficient access to spare parts.⁶ Limited access to improved water sources increases health risks as people revert to water sources, such as surface water, that may be contaminated and unsafe to drink or cook with.

Access to Sanitation

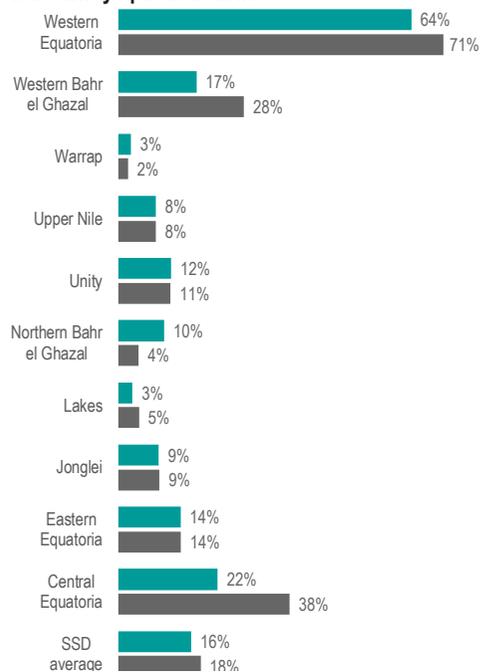
Across South Sudan limited access to and use of latrines remained constant during both wet and dry seasons. 21% of HHs reported having access to a latrine, however 17% reported

1. Greater Upper Nile (GUN) includes Upper Nile, Unity and Jonglei. Greater Bahr el Ghazal (GBeG) includes Northern Bahr el Ghazal, Western Bahr el Ghazal, Warrap and Lakes. Greater Equatoria (GE) includes Eastern Equatoria, Central Equatoria and Western Equatoria
2. REACH, Situation Overview Central and Eastern Equatoria, July - September, 2018

3. REACH, Situation Overview Western Equatoria, October - December 2018
4. REACH, Situation Overview Greater Equatoria, October - December 2018
5. REACH, Situation Overview Jonglei, October - December 2018
6. Reported in an interview with a key informant humanitarian partner



Figure 2: Households reporting that adults over 5 always used a latrine and the feces of children under 5 were always put in a latrine



always using a latrine. Counties that saw a higher proportion of HHs reportedly always using latrines were primarily in Central Equatoria and Western Equatoria, which traditionally have had more widespread sanitation infrastructure and established cultural practices around latrine use (Figure 2). However, access and usage gaps were most commonly found in Western Equatoria. This gap could be attributed to HHs reporting the presence of a latrine but that insecurity in 2018 damaged sanitation infrastructure and limited access, in particular in Mundri East (45% latrine access and 30% latrines use), Mundri West (37%

access and 24% use), and Nagero (82% access to 70% use).⁷ The lower proportion of HHs using latrines in the Greater Kapoeta area, likely due to the absence of infrastructure and cultural practices, brought down the Greater Equatoria average.⁸

When excluding Western and Central Equatoria, the national average proportion of HHs reportedly using a latrine in the wet and dry season drops from 17% to 9%. Twelve counties had an average of 0% of HHs reportedly using a latrine (Kapoeta East and South, Yirol West, Rubkona, Maban, Panyikang, Tonj South, East and North, Uror, Gogrial East, and Nyirol). This low proportion of HHs with access to latrines across the country, in particular HHs with no access at all, highlight that the need for both increased sanitation infrastructure and sensitisation remains a sanitation priority.

Self reported water or vector borne diseases and WASH NFI access

The precarious WASH situation is even more concerning considering the health conditions faced by affected populations. In 2018, 74% of HHs reported a self-diagnosed vector or water borne disease in the two weeks prior to data collection. **Malaria remained the most prevalent self-diagnosed water or vector borne**

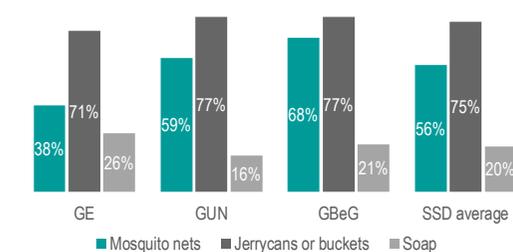
Table 3: Top three water or vector borne diseases self-diagnosed by HHs

	Under 5 wet season	Under 5 dry season	Adults wet season	Adults dry season
Malaria	76%	71%	70%	68%
Fever	57%	58%	44%	44%
AWD	20%	19%	15%	13%

disease, followed by fever then AWD (Table 3). When broken down into age groups, it was more commonly found that children under 5 years old would fall ill as opposed to adults (Table 3). The biggest decrease in HHs reporting a member was ill was in Northern Bahr el Ghazal (70% in the dry to 83% in the wet), potentially an due to heavy flooding during the rainy season, and reportedly low access to health care services.⁹ The largest decrease in HHs reporting a member was ill was in Western Equatoria (84% in the dry to 69% in the wet). Nagero, however, recorded the highest proportion of HHs reporting a member had AWD (71% over both the wet and dry seasons), potentially due to unsafe drinking water and unhygienic preparation of food, commonly left uncovered, making it more likely to become contaminated.¹⁰

The high prevalence of HHs reporting a member was ill is likely not only connected to poor access to improved water and sanitation but also limited WASH NFIs. Throughout both seasons only 14% of HHs reported access to all three WASH NFIs. While three quarters of the population reported access to at least one jerrycan or bucket, this left a quarter of HHs without access to a jerrycan or bucket that can be sealed once water was collected. Even if water is collected from an improved water source, inadequate storage conditions can lead to an increase in the microbial contamination of water sources, thus a higher risk of an infectious disease.¹¹ **The risk of contracting a water-borne disease is further compounded by limited access to the key sanitation NFI, soap, with only 20% of HHs reporting owning soap.** The prevalence of malaria throughout both seasons may also be linked with 44% of the population sleeping without a mosquito net, as sleeping under a mosquito net decreases the potential of catching

Figure 3: Access to WASH NFIs



malaria or another vector borne disease. Increased access to WASH NFIs could act as a strong mitigant against vector and water borne diseases.

Conclusion

Throughout the wet and dry seasons of 2018, only a third of HHs assessed reported access to an improved water source and 21% reported access to sanitation facilities. Throughout both seasons the most prominent WASH needs were most commonly found in Greater Upper Nile (Upper Nile State, Unity and Jonglei) counties (Table 1). **The Panyikang, Canal, Fangak triangle as well as counties along the Nile and Sobat Rivers reportedly had the highest proportion of HHs that were continually dependent on unprotected water sources, and had limited or no access to latrines and WASH NFIs.** This may have impacted the high proportion of HHs (74%) reporting having a water of vector borne disease, with malaria the most commonly reported (74%), fever (56%) and then by AWD (20%).

About REACH

REACH facilitates the development of information tools and products that enhance the capacity of aid actors to make evidence-based decisions in emergency, recovery and development contexts. All REACH activities are conducted through inter-agency aid coordination mechanisms. For more information, you can write to our in-country office: southsudan@reach-initiative.org or to our global office: geneva@reach-initiative.org. Visit www.reach-initiative.org and follow us @REACH_info.

7. Reported in an interview with a key informant humanitarian partner

8. REACH, Situation Overview Greater Equatoria, October - December 2018

9. REACH, Situation Overview: GBeG, October - December 2018

10. Reported in an interview with a key informant humanitarian partner

11. WHO. Storage and Treatment of Household Water - August, 2013