

# SOUTH SUDAN

## Integrated Public Health Rapid Assessment of Internally Displaced Persons in Twic County, Warrap State

April 2024



### **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. The methodologies used by REACH include primary data collection and in-depth analysis, and all activities are conducted through inter-agency aid coordination mechanisms. REACH is a joint initiative of IMPACT Initiatives, ACTED and the United Nations Institute for Training and Research - Operational Satellite Applications Programme (UNITAR-UNOSAT). For more information, please visit [our website](#). You can contact us directly at: [geneva@reach-initiative.org](mailto:geneva@reach-initiative.org) and follow us on Twitter @REACH\_info.

## SUMMARY

The recent conflict in the Abyei region escalated dramatically in the last quarter of 2023. On January 27, 2024, the Nyinkuach area of Abyei town became the epicentre of hostilities, resulting in over 80 fatalities and widespread displacement, particularly in the southern parts of Abyei. Populations along the border were forced to flee, deepening the humanitarian crisis as many sought safety in existing camps or within host communities in Twic County. However, the lack of systematic monitoring has left the exact number of recently displaced internally displaced persons (IDPs) uncertain. The conflict, which began between the armed youth of Twic and the Abyei Administrative Area (AAA) in February 2022, has led to a significant increase in IDPs in Twic County. The initial count of 40,000 at the onset of the conflict has risen to over 75,000 by February 2024, making Twic County as having the third highest IDP population in South Sudan according to CCCM data.<sup>1</sup>

The conflict and subsequent displacement have exacerbated vulnerabilities among the IDP population in Twic County, leading to severe public health concerns, including acute food insecurity. According to the latest Integrated Food Security Phase Classification (IPC) report issued in September 2023, Twic County in Warrap State has been classified as Emergency (IPC Phase 4) for acute food insecurity for both projection periods, December 2023 to March 2024 and April to July 2024. Additionally, the IPC for acute malnutrition (AMN) has placed Twic County in Phase 4 (Critical) for the same periods.

REACH conducted an assessment between 16 and 24 April to provide humanitarian actors with updated information on the public health situation at Twic IDP sites. The focus was on health, nutrition, food security, livelihoods, and WASH indicators. Data collection in Twic County included 110 household surveys, 10 focus group discussions (FGDs), 4 key informant interviews (KIIs), and various observation checklists. The sample size was calculated to yield localised results, targeting 110 households based on a 95% confidence level, a 10% margin of error, and a 10% non-response rate. Results are indicative of the situation within the target population and statistically representative of the sampled sites. Due to security and logistical issues, assessments were conducted at only six sites: Gomgoi, Abin Dau, Majak Aher, Nyindeng Ayuel, Aweng, and Majook Noon. Key informants, including health facility staff and service providers, were purposefully selected. Community observation checklists were utilised to evaluate each site. Additionally, a secondary data review was conducted to enhance understanding of population dynamics and humanitarian services.

## Key Findings

- **The household survey indicates the population was experiencing food gaps indicative of an IPC AFI Phase 4, with pockets of the population that could be experiencing food gaps indicative of IPC AFI Phase 5.** In the displacement sites, 38% of households were found to face "poor" food consumption, 50% of the households a "borderline" one and only 11% reached an "acceptable" level according to the Food Consumption Score (FCS). In addition, 64% of households were found to experience "moderate" hunger, 21% "severe" hunger, and 11% of households were found to be experiencing "very severe" hunger on the Household Hunger Scale (HHS). The assessment results suggest that high food prices and limited access to cash-earning opportunities were the main contributing factors to acute food insecurity, while cash assistance appeared to be insufficient to prevent severe food security from occurring.
- Shelter appeared to be a priority area in the 6 IDP sites assessed. **The household survey findings indicate that shelter was the second highest priority need after food for the IDP**

<sup>1</sup> [South Sudan: CCCM Cluster IDP Site Masterlist - February 2024](#)

**population.** FGD participants also reported that the last time they received shelter materials was upon their arrival in 2022. With the rainy season commencing in May, there was a growing concern within the IDP community about the impact, as the lack of adequate shelters leaves many vulnerable to harsh weather conditions.

- Health did not appear as a priority need in the survey; however the evidence suggests, the situation could be critical. In the assessed IDP sites, of the 29% of individuals in the households assessed with a healthcare need in the two weeks prior to data collection, **29% of those reported their needs were unmet.** The barriers were attributed to a long waiting time for services (51%), particularly at the Gomgoi health facility, from which the majority of the IDPs reportedly sought services. This significantly hinders timely medical access. Additionally, 16% reported having no functional health facility nearby, while 11% stated that the nearest health facility was too far away.
- Assessment findings reveal crisis WASH issues in the assessed IDP camps. While 57% of households relied on public taps and 42% on boreholes for drinking water (both considered to be improved sources), 77% used untreated water. **The lack of soap in 98% of households** severely compromises hygiene practices, heightening the risk of disease transmission. Moreover, with 32% of households practicing open defecation and most latrines either non-functional due to last year's rainfall or full, the threat of disease outbreaks intensifies as the rainy season nears.
- In the FGDs, participants reported that the monthly humanitarian cash assistance, which resumed in April after last being distributed in August 2023, was sufficient for only two meals a day for a household of six members for one week. The humanitarian service provider mentioned that the current food assistance/cash program would continue until August. Considering that this program is a lean season intervention, and with the anticipated flooding between June and October, the absence of assistance beyond August would likely lead to further deterioration of the food security situation.

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## List of Acronyms

<b>AFI:</b>	Acute Food Insecurity
<b>AMN:</b>	Acute Malnutrition
<b>CCCM:</b>	Camp Coordination and Camp Management
<b>FCS:</b>	Food Consumption Score
<b>FGD:</b>	Focus Group Discussion
<b>FSL:</b>	Food Security and Livelihoods
<b>FSNMS:</b>	Food Security and Nutrition Monitoring System
<b>HH:</b>	Household
<b>HHS:</b>	Household hunger scale
<b>IDP:</b>	Internally Displaced Person
<b>IMWG</b>	Information Management Working Group
<b>IPC:</b>	Integrated Phase Classification
<b>IPHRA:</b>	Integrated Public Health Rapid Assessment
<b>IYCF:</b>	Infant Young Child Feeding
<b>KI:</b>	Key Informant
<b>LCS:</b>	Livelihood Coping Strategies
<b>MSF:</b>	Médecins Sans Frontières
<b>MSSMEB:</b>	Multi-sectoral Survival Minimum Expenditure Basket
<b>PLW:</b>	Pregnant and Lactating Women
<b>SSD:</b>	South Sudan
<b>Vit A:</b>	Vitamin A
<b>WASH:</b>	Water Sanitation and Hygiene

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## CONTEXT AND RATIONALE

Since the conflict between the armed youth of Twic County and the Abyei Administrative Area (AAA) began in February 2022, the number of internally displaced persons (IDPs) in Twic County has risen from the initial 40,000<sup>2</sup> reported at the onset of the conflict to over 75,000 as of February 2024. This is the third-highest figure of IDPs registered in any county in South Sudan, according to the CCCM cluster.<sup>3</sup> Recent Inter-Agency Rapid Needs Assessment data shows that IDPs have reportedly been settling across all six payams (Akoc, Ajak Kuac, Aweng, Pannyok, Turalei and Wunrok) composing Twic County.<sup>4</sup>

Since 2022, conflict and displacement have heightened vulnerabilities among IDPs in Twic County, which have led to increased public health concerns, among them severe food insecurity.<sup>5</sup> For instance, during the September 2023 Integrated Food Security Phase Classification (IPC), Twic County was classified in acute food insecurity (AFI) IPC Phase 4 (or Emergency) in the first and second projection periods (December 2023–March 2024 and April–July 2024), while acute malnutrition (AMN), was expected to face an area-level classification of Phase 4 (or Critical) across the two projection periods (October 2023–March 2024 and April 2024–June 2024).<sup>6</sup> Despite hosting numerous IDPs as stated above, FSMNS data from round 29 (July–August 2023) indicated no IDP presence, likely due to survey methodology limitations which led to the exclusion of IDP sites during data collection. Considering that IDPs are presumably at higher risk of experiencing food insecurity due to their displacement status, the already alarming outcomes from the last IPC analysis could potentially be underestimating a more extreme food insecurity situation impacting particularly this IDP group.<sup>7</sup>

The conflict escalated in the last quarter of 2023, and the situation worsened on January 27, 2024, when fighting broke out in the Nyinkuach area of Abyei town. Attacks further spread to the entire area of southern Abyei, resulting in over 80 deaths and widespread displacement.<sup>8</sup> Humanitarian partners in Twic reported that the population in the border areas with Abyei were displaced southward and settled within the existing camps or among the host community, but the exact number of IDPs is unknown. Compounding these recent events, the Sudan crisis has disrupted supply chains and trading,<sup>9</sup> and has driven a small number of returnees into Twic County.<sup>10</sup> Moreover, in March 2024, the state health ministry declared a Hepatitis E outbreak in Twic County.<sup>11</sup> The combination of these multiple shocks presents a risk to the well-being of the population and the adequate provision of basic services.

In response to evidence suggesting extremely high vulnerabilities and needs among the IDP population living in Twic IDP sites, and in the face of a rapidly evolving and complex context, REACH conducted an assessment aiming to provide humanitarian actors with a stronger understanding of movement dynamics and up-to-date information on the current public health situation in the IDP sites, including core indicators on food security and livelihoods, and WASH, health, and nutrition.

<sup>2</sup> South Sudan - [Twic County, Warrap State: IDPs Assessment - 18 February 2022](#)

<sup>3</sup> [South Sudan: CCCM Cluster IDP Site Masterlist - February 2024](#)

<sup>4</sup> South Sudan - [Twic County, Warrap State: IDPs Assessment - 18 February 2022](#)

<sup>5</sup> REACH - [Rapid Needs Assessment: Twic County March 2023 | South Sudan](#)

<sup>6</sup> South Sudan: [Acute Food Insecurity Situation for September - November 2023 and Projections for December 2023 - March 2024 and for April - July 2024](#)

<sup>7</sup> Formal IDP sites are excluded from FSNMS data collection; instead, an ISNA assessment is being conducted.

<sup>8</sup> Initial Rapid Needs Assessment Report. Mabok, Taglei, Leu, Awolnhom, Noong Payams. Abyei Special Administrative Area Date: 15th-16th February 2024. On file with REACH

<sup>9</sup> OCHA: [Impact of Sudan Crisis on South Sudan Flash Update No. 2 \(As of 8th June 2023\)](#)

<sup>10</sup> IOM-UNHCR. [Population flow monitoring dashboard](#).

<sup>11</sup> Humanitarian Briefing Note, 2 March 2024: On file with REACH.

The general research design for the Integrated Public Health Rapid Assessment (IPHRA) consisted of a mixed-methods approach, which included four main data collection methods: household surveys; Key Informant Interviews (KIIs); observation checklists; and Focus Group Discussions were also included.

## METHODOLOGY

### Sampling strategy

#### Sampling strategy: Selection of sites

The sample size for the HH surveys was estimated through a two-stage stratified simple random sampling design, intended to provide localised results which were not generalisable beyond the assessed population. A single stratum was identified, as the population of interest for this assessment was the IDP population living in informal sites in Twic County, which is approximately 77,078 across 12 sites. Due to security and logistics constraints, **only 6 sites were purposefully selected and surveyed** (Gomgoi, Abin Dau, Majak Aher, Nyindeng Ayuel, Aweng, and Majook Noon) located in the payams of Aweng, Turalei and Wunrok. The target number of households was 110, and it was estimated using the assumptions of 95% confidence level, 10% margin of error, and 10% non-response rate. Households were distributed proportionally across sites according to their population, and random location sampling techniques were used for their selection. Results are indicative of the situation within the target population and statistically representative of the sampled sites.

#### Sampling strategy: Selection of households

The assessment team used random location sampling with GIS software or the internal REACH GeoRand tool. The site's boundary was delineated, and random GPS points were created. The number of random points created equalled the number of households needed divided by three; thus, to complete the 110 target households, 37 GPS points were generated over the assessment areas. The survey team then visited each GPS point, interviewed the three closest households to that point, completed the survey tool, and took GPS points for each household.

**Key informants:** Key informants were purposefully selected and included health facilities staff, WASH and FSL service providers. **Focus Group Discussions:** Focus Group discussion participants were purposefully selected for community leaders but community members were randomly selected. **Observation checklists:** Observation checklists were conducted per assessment site, and specialised tools were used for each service, including the Community Observation Checklist, Water Point Checklist, and Health Facility Checklist. **Secondary data review:** A secondary data review was conducted prior to the assessment, to better understand inter-group relations, population movement dynamics, humanitarian presence, and service provision.

### Assessment objectives

The objectives of the assessment are to assess the severity of public health outcomes, in particular, those related to Food Security and Livelihoods (FSL), Water, Sanitation and Hygiene (WASH) and access to health services, with the aim to identify public health priorities that can better inform the humanitarian response and ultimately mitigate risks of excess morbidity, malnutrition, and mortality among the IDP population living in IDP sites in Twic County.

- To understand the demographic composition of the IDP population living in the IDP site in Twic County.

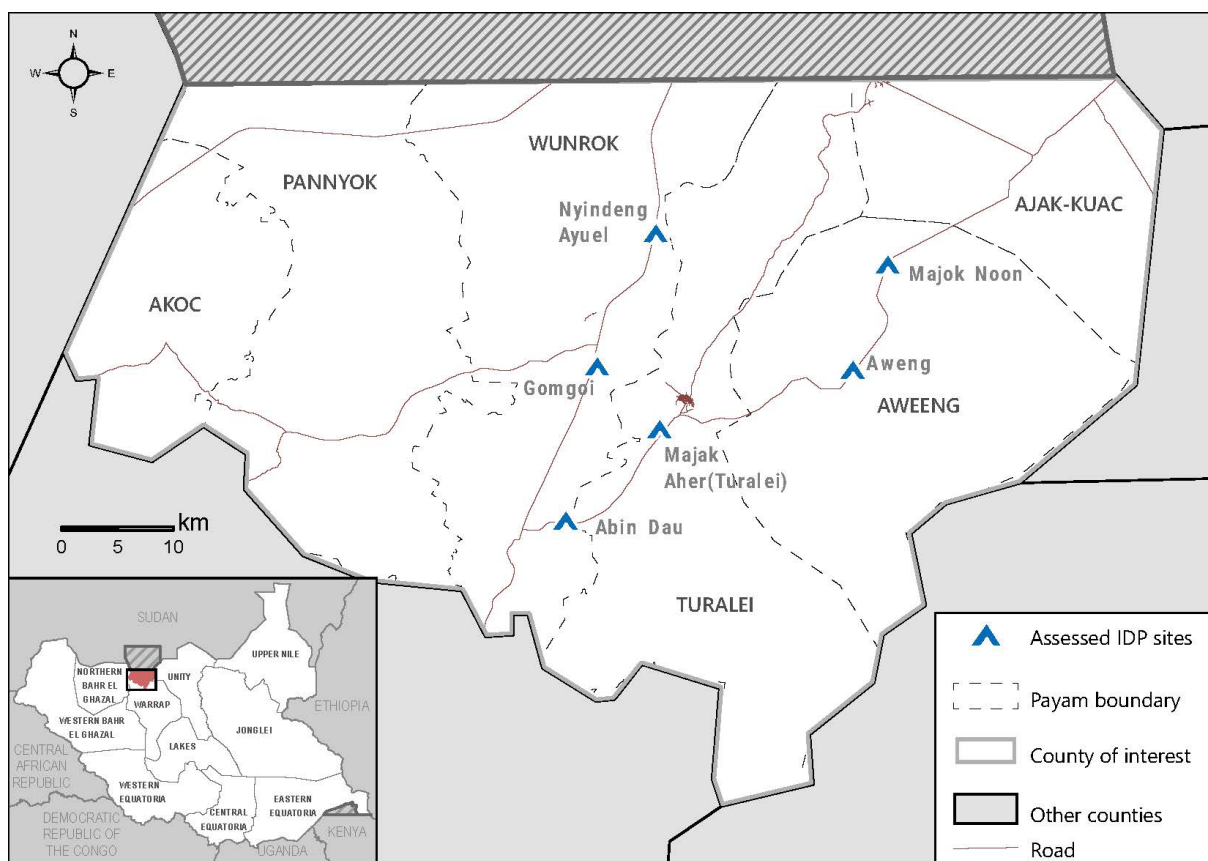


- To understand the movement dynamics, including movement intentions and push and pull factors, of IDPs in Twic County.
- To estimate the proportion of the population with health care needs in the two weeks prior to data collection (any health care needs, unmet needs, needs by sex/age/symptom).
- To understand the main barriers for the target population in accessing health and nutrition services.
- To assess broad infant and young child breastfeeding and complementary feeding patterns in emergency for children under 2 years of age.
- To identify any challenges for caregivers in infant and young child feeding practices.
- To assess the availability and functionality of health and nutrition facility services.
- To estimate the coverage of Vitamin A supplementation among children 6-59 months of age.
- To estimate the coverage of measles vaccination among children 9-59 months of age.
- To estimate the coverage of oral cholera vaccinations among people 5+ years of age.
- To estimate the proportion of the target population experiencing food consumption gaps, both in terms of quantity and diversity.
- To estimate the proxy coverage of emergency food security interventions in the target population.
- To understand the availability and utilisation of food at the household level.
- To understand the main barriers for the target population in accessing food.
- To estimate the proportion of the population using livelihoods-based coping strategies to access food or other basic needs, and their severity.
- To estimate the proportion of the population experiencing water consumption gaps, both in terms of quantity and quality (Liters per person per day, main source of drinking water).
- To estimate the proportion of the population with access to improved sanitation facilities.
- To understand the main barriers for the target population in accessing water.
- To assess the functionality of water points used by the target population in the community and at health or nutrition facilities.
- To assess the functionality of latrines used by the target population in the community and at health or nutrition facilities.

## Geographical scope

The assessment was conducted in Twic County, Warrap State, covering six informal IDP sites: Gomgoi, Abin Dau, Majak Aher, Nyindeng Ayuel, Aweng, and Majook Noon, located in three payams—Aweng, Turalei, and Wunrok. Due to security constraints, the assessment team could not visit sites near the border with the Abyei Administrative Area (AAA)—Yan Makot, Wunrieng, and Majak-Kol. Furthermore, the sites Yan Makot, Wunrieng, and Majak-Kol had been recently abandoned due to conflict and various shocks that compelled the population to flee and relocate to the southern part of Ajak Kuac Payam.

Figure 1 - Map of assessed areas



## FINDINGS

### Participant Characteristics

The survey included 110 households, totalling 667 individuals, with an average household size of six members. Gender distribution among the surveyed households was 55% female and 45% male. A significant portion of the household heads, 87%, were married. Within these households, 12% had at least one child under the age of two years, and 13% had at least one child under the age of five. The predominant county of origin for the surveyed IDPs was Abyei, from which 87% were reported displaced, 12% from Twic County, and 1% from Mayom.

In addition to the quantitative data, the assessment team collected qualitative information. Ten focus group discussions (FGDs) were conducted 8 with community leaders and community members, and 2 regarding population movements with the IDPs. Furthermore, four key informant interviews (KIIs) with implementing partners were carried out, alongside observations of 11 water points and 3 health facilities.

Figure 2 - Participant Characteristics

	Number of observations	
	'n'	Percentage %
<b>Household survey</b>		
<b>Household residency status</b>		
IDPs	111	100 %
<b>Age groups</b>		
Households with children under 3-5 years of age	84	13 %
Households with children under 3 years of age	82	12 %
Average household size	111	6
<b>Gender of household members</b>		
Female	365	55 %
Male	302	45 %
<b>Head of household marital status</b>		
Divorced	1	1 %
Married	96	87 %
Single	1	1 %
Widowed	13	11 %
<b>County of origin</b>		
Abyei	97	87 %
Mayom	1	1 %
Twic	12	12 %
<b>Key Informant Interviews</b>		
Community leader and member/Population movement		10
Female FGDs		3
Male FGDs		5
Mixed FGDs		2
Implementing partners KIs		4
<b>Observations</b>		
Water Point Observation		11
Health Facility Observation		3

## Reported priority needs

Figure 3 - Priority Needs

Household-level data collection		
Priority needs	Number of observations 'n'	Percentage %
<b>First priority need</b>		
Food	81	73 %
Shelter materials and repairs	22	20 %
Drinking water	7	7%
<b>Second priority need</b>		
Shelter materials and repairs	63	57 %
Food	25	23 %
Drinking water	8	7 %
<b>Third priority need</b>		
Drinking water	26	23 %
Healthcare	17	16 %
Cooking facilities (cooking gear, etc.) <sup>12</sup>	14	13 %

<sup>12</sup> 13% of households reported Shelter materials.

The quantitative self-reported priority needs aligned with the qualitative findings. In most of the FGDs, participants reported that the most pressing issue they faced at the time of data collection was food, followed by shelter as the second most critical, and water as the third.

Across all the assessed sites, the majority of the FGD participants mentioned that the main issue with food was the insufficiency of cash assistance, which was inadequate to purchase enough food for a household to meet the monthly needs of the IDPs. This issue was compounded by delays in humanitarian assistance. Additionally, participants expressed concerns about the long distances required to access wild food due to the depletion of nearby sources, and they feared insecurity when traveling to distant livelihood areas.

As the rainy season began in May, participants have indicated that the existing conditions of the shelters were inadequate. They expressed a need for materials to reconstruct their shelters and mitigate the effects of the rainy season, which otherwise leaves them vulnerable to severe weather

The majority of the FGD participants stated that water was not a serious issue; however, some mentioned that they still experienced challenges in accessing clean drinking water. These challenges were attributed to broken parts of the water infrastructure, such as taps, boreholes, and solar systems, as well as a limited number of water points.

## Food Security and Livelihoods

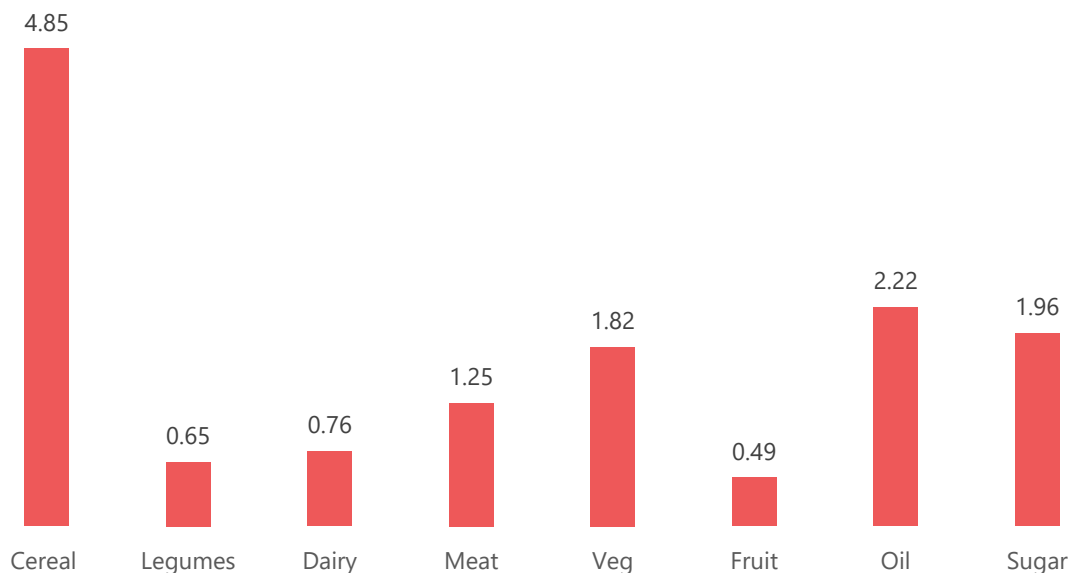
The food security situation in the surveyed IDP sites was severe, as evidenced by the presence of large food consumption gaps. **38% of households were reported to have a “poor” food consumption score (indicative IPC AFI Phase 4)**, characterised by inadequate dietary diversity and frequency, 50% of the households had a “borderline” and only 11% of households had an “acceptable” food consumption. According to the Household Hunger Scale (HHS) data, 64% of households experienced “moderate” hunger, 21% experienced “severe” hunger (indicative IPC AFI Phase 4), and up to **11% of households were found to be experiencing “very severe” hunger**. These findings suggest that some IDP households could be experiencing food consumption gaps indicative of an IPC Phase 5 (Catastrophe).<sup>13</sup>

To access food, 36% of households reported relying on markets as their primary source as their livelihoods were compromised. With nationwide inflation, the prices of essential commodities have skyrocketed, rendering them unaffordable for many. FGD participants reported that a Malwa (3.5 kg) of cereal cost 6,000 SSP in the Wunrok market and 6,500 SSP in the Turalei market—prices that were unaffordable for most households at the time of data collection. According to the Joint Market Monitoring Initiative (JMMI) April data, the cereal prices across the two markets were above the national median prices.<sup>13</sup> In the Turalei market, 3.5 kgs of cereal were priced at 6,891 SSP, and in Wunrok at 5,894 SSP according to JMMI.<sup>14</sup> And the data show a steep increase in the cost of staple foods between January and April. The food Multi-Sector Survival Minimum Expenditure Basket (MSSMEB)—which is the cost required to cover the basic food consumption for a six-person household for one month—rose by 135% in Wunrok and 165% in Turalei during this period.<sup>14</sup>

<sup>13</sup> Refer to the [IPC Technical Manual Version 3.1](#) for all food security outcome thresholds.

<sup>14</sup> [REACH: South Sudan | Joint Market Monitoring Initiative \(JMMI\)](#)

**Figure 4 – Average number of days food was consumed in households, in the 7 days prior to data collection**



Despite ongoing monthly cash distributions from humanitarian organization, set to continue until August, at the time of data collection, where the transfer value per capita was 8,400 SSP<sup>15</sup>, the effects of inflation are seemingly not well captured, and efforts might be falling short of supporting economic access to food sources. According to the FGD, participants reported that the amount was sufficient only to provide two meals a day for a household of six members for only one week. A KI mentioned that the current food assistance/cash program would run until August. Considering that this program is a lean season intervention, and with the anticipated flooding between June and October, the absence of assistance beyond August will likely cause the food security situation to deteriorate further. The situation was compounded by the Sudan crisis, which has disrupted trade flow, increased population numbers with the arrival of returnees, and provoked delays in humanitarian food assistance, as well as the exhaustion of nearby wild food due to overutilisation.<sup>16</sup> Therefore, across the assessed areas, the IDPs were receiving cash due to the availability of markets in Turalei and Wunrok, while a key informant mentioned that those in Akoc and Pannyok payams received in-kind assistance.

Results show that 63% of surveyed households were relying on selling collected firewood, charcoal, and wild foods as their primary source of income. However, during data collection, participants mentioned that the market was oversaturated, resulting in slow sales. Another significant income source was daily casual labour, particularly for women from IDP sites who travel to nearby active markets like Mayen Abun, Turalei, and Wunrok. Nevertheless, participants reported being underpaid by traders and facing challenges to accessing opportunities, since host community members also relied on these income-generating activities.

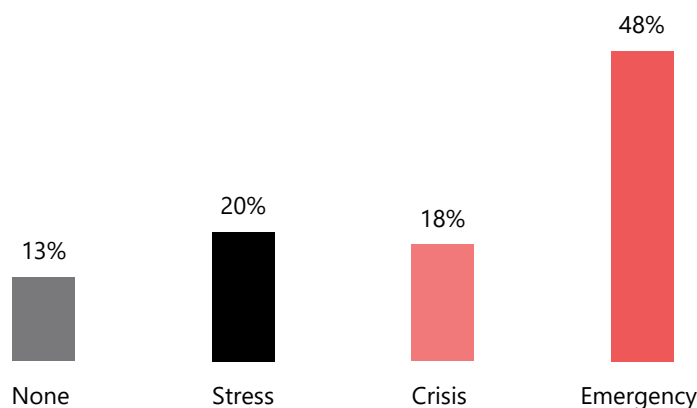
The livelihood coping strategy indicator is defined as the share of the population who adopted coping strategies of different severity levels in the 30 days prior to data collection or exhausted them within the

<sup>15</sup> 8400 SSP was equivalent to 2.5 USD at the time of data collection.

<sup>16</sup> OCHA: [Impact of Sudan Crisis on South Sudan Flash Update No. 2 \(As of 8th June 2023\)](#)

12 months prior to data collection.<sup>17</sup> According to the assessment findings, 48% of surveyed HHs were found to use Emergency-level livelihood coping strategies to meet their food needs, 18% Crisis, 20% Stress and 13% None in the 30 days before data collection. FGD participants reported that IDPs lacked access to basic livelihood assets such as poultry and livestock, greatly reducing their ability to cope.

**Figure 5 - Livelihood Coping Strategies used in the 30 days prior to data collection, by % of HHs**



**Reported negative livelihood coping strategies adopted because of a lack of food or money to buy food:**

- Send household members to eat with another household (40%, stress)
- Sell more animals than usual for this time of year (14%, stress)
- Borrow money or purchase food on credit (41%, stress)
- Gather wild foods more than normal for this time of the year (44%, stress)
- Sell productive assets or means of transport (fishing net, hoe, axe, spear, hooks, wheelbarrow, bicycle, plough, etc.) (29% crisis)
- Send more household members than normal to cattle and/or fishing camps (26%, crisis)
- Sell or eat seeds intended for planting this season (21%, crisis)
- Sell or slaughter the last of your cows and goats (12%, emergency)
- Travel to another village or cattle camp to look for food (29%, emergency)
- Beg other community members for food (31%, emergency)

During data collection, due to a lack of access to food, some HHs reportedly left the camps for places like Kuajok, Wau, and Aweil, where they could find support from relatives. Almost a quarter (25%) of the assessed HHs reported they intended to move out of the IDP site. Of those HHs, the main reported movement driver was the lack of food (67%).

Moreover, 18% of the HHs reported depending on fishing, but drying seasonal swamps hinder access to and make fishing challenging. Depleting nearby wild food gathering areas also forced foragers into potentially insecure areas, as reported by the IDPs.

Overall, there are serious concerns regarding the food security situation and access to livelihoods in the assessed areas, despite their proximity to well-established humanitarian presence and markets like those in Turalei and Wunrok. While this proximity should theoretically facilitate access to basic food

<sup>17</sup> WFP-VAM: [Livelihood Coping Strategies](#) – Food Security

items and casual labour opportunities, it appeared insufficient to alleviate the severity of challenges faced by IDPs. Consequently, IDPs residing in Ajak Kuac, Akoc, and Pannyok payams, which were not assessed in this assessment, could be confronting even more severe food security conditions than those observed in the assessed sites due to insecurity, poor road access, and the lack of fully functional markets. The household hunger scale suggests the potential presence of a pocket of the population experiencing AFI IPC Phase 5. Given that this is a group that should be receiving assistance, it suggests the response is not adequately resourced to prevent worst-case scenario outcomes from manifesting. This could potentially be attributed to their remoteness and difficult access, exacerbated by insecurity and impassable routes caused by last year's rains. Therefore, with the onset of the rainy season in May, 18 and anticipated unprecedented flooding, most of the roads will be inaccessible, which will further affect market functionality and humanitarian activities.

**Figure 6 - Results of Food Security and Livelihood (Core)**

<b>Food Consumption Score (FCS)</b>	<b>Number of observations 'n'</b>	<b>Percentage %</b>
Acceptable	12	11 %
Borderline	56	50 %
Poor	42	38 %
<b>Household Hunger Scale (HHS)</b>		<b>Percentage %</b>
None/slight	5	5 %
Moderate	71	64 %
Severe	23	21 %
Severe Catastrophe	12	11 %
<b>Main food sources</b>		<b>Percentage %</b>
<b>First food source</b>		
Market (purchase cash or credit)	40	36 %
Humanitarian food assistance	21	20 %
Fishing	17	15 %
<b>Second food source</b>		
Fishing	20	18 %
Exchange of food for labour	18	16 %
Gathering wild food	16	14 %
<b>Third food source</b>		
Fishing	31	27 %
Humanitarian food assistance	15	14 %
Market (purchase cash or credit) <sup>19</sup>	12	11 %

<sup>18</sup> FEWNETS: [South Sudan Livelihoods Zone Map and Descriptions](#)

<sup>19</sup> Exchange of food for labour was also mentioned by 11% of the households.

**Figure 7 - Results of Food Security and Livelihood (Supplemental)**

	Number of observations 'n'	Percentage %
<b>Main barriers to accessing food</b>		
Not enough food is available	41	44 %
Live too far from food sources/no means of transport	23	28 %
Damage to the main source of food	9	12 %
<b>Main source of income</b>		
		<b>Percentage %</b>
<b>First main income source</b>		
Selling of collected firewood, charcoal, wild foods	70	63 %
Daily labour casual (petty trade, taxi etc)	15	14 %
<b>Second main income source</b>		
Daily labour casual (petty trade, taxi etc)	40	37 %
Selling of collected firewood, charcoal, wild foods	25	23 %
<b>Main source of energy used for food preparation</b>		
		<b>Percentage %</b>
Firewood	109	98 %
<b>Livelihoods Coping Strategies Index</b>		
		<b>Percentage %</b>
None	14	13 %
Stress	22	20 %
Crisis	20	18 %
Emergency	53	48 %
<b>Households registered and receiving a general food distribution/cash/voucher</b>		
		<b>Percentage %</b>
Yes	64	59 %
No	46	41 %
<b>Food security and livelihood assistance modality</b>		
Food in kind	20	18 %
Cash	42	38 %
None	42	38 %

## Water, Sanitation, and Hygiene

Most of the surveyed households obtained their water from improved sources: 57% of households relied on public taps as their primary source of drinking water, while the remaining 42% used boreholes. In the assessed IDP sites, FGD participants reported no significant issues in accessing clean drinking and cooking water. However, in some FGDs, participants identified some challenges, especially in Aweng and Majok Noon. These difficulties were linked to damaged water infrastructure components, such as taps, boreholes, and solar systems. FGD participants in Majok Noon reported that due to the camp's sole borehole being broken and congestion at the public tap some households resorted to using surface water for their needs. In addition, 77% of households in the survey reported using untreated water. A few (19%) households reported a lack of access to appropriate containers for collecting and storing water. Among those households possessing containers, the median quantity available was 1 container, a figure deemed inadequate for meeting the daily water needs of an average household comprising six individuals.

An overwhelming 98% of households lacked access to soap, which is crucial for preventing the spread of infectious diseases and protecting public health. In all the assessed sites, FGD participants stressed that maintaining cleanliness was a significant challenge. The lack of soap was identified as the main issue, with most people unable to afford it. Additionally, the absence of sanitary materials for women was frequently highlighted, and financial constraints were cited as the primary barrier in most of the FGDs.

Furthermore, 32% of households reported engaging in open defecation, a concern that escalates with the onset of the rainy season and poses risks during disease outbreaks. FGD participants consistently



reported serious issues with latrines, noting that the existing latrines were either full or had collapsed due to the previous year's rainfall, which aligned with observation findings. Consequently, most IDPs in the assessed locations have resorted to open defecation. Moreover, in some FGDs, participants mentioned that the absence of WASH partners at some sites, particularly at the Gomgoi and Nyindeng Ayuel IDP sites, had contributed to the deteriorating WASH situation.

**Figure 8 - Results of Water, Sanitation, and Hygiene**

Household level data collection		
Main source of drinking water	Number of observations 'n'	Percentage %
Public tap	63	57 %
Borehole	46	42 %
Households collecting time to water	Percentage %	
Water available inside the compound	17	15 %
Under 30 minutes	69	62 %
30 minutes or less than 1 hour	21	20 %
1 hour to less than half a day	2	2 %
Half a day	1	1 %
Main water treatment methods	Percentage %	
Boil water	2	2 %
Chlorine tablet	24	22 %
No treatment	84	77 %
Households with access to functioning latrines	Percentage %	
Access to functional latrine	76	68 %
Open defecation	35	32 %
Households with access to soap	Percentage %	
No soap in the house	109	98 %

## Nutrition

### (a) Infant and Young Child Feeding Practice (IYCF)

Proper feeding of infants and young children can increase their chances of survival and promote optimal growth and development, especially in the critical window from birth to two years of age.<sup>20</sup> Out of the 30 children 0-23 months in the assessed HHs, 90% were reported to have been breastfed the day before during the day and night, which is below the emergency threshold of breastfeeding practices.<sup>21</sup> However, complementary feeding practices posed challenges, with 70% of caregivers of children 0-23 months citing financial constraints as a barrier to purchasing food.

<sup>20</sup> [Breastfeeding in the 21st century: epidemiology, mechanisms, and lifelong effect](#). Victora, Cesar G et al. The Lancet, Volume 387, Issue 10017, 475 – 490.

<sup>21</sup> [Indicators for assessing infant and young child feeding practices \(WHO 2021\)](#)

**Figure 9 - Results of Infant and Young Children Feeding Practice**

<b>Individual-level data collection</b>		
	<b>Number of observations 'n'</b>	<b>Percentage %</b>
<b>Child breastfed yesterday during the day or night by sex</b>		
Overall	30	90 %
Female	16	94 %
Male	14	86 %
<b>Food types consumed by children</b>		
		<b>Percentage %</b>
Breast milk	25	90 %
Dairy products (milk, infant formula, yogurt, cheese)	1	10 %
<b>Challenges households faced with the complementary feeding of the child</b>		
		<b>Percentage %</b>
Lack of money/financial barriers to buy food	9	70 %
High food prices/food is expensive	7	50 %
Lack of adequate information on IYCF	3	17 %
Child is sick/has a low appetite	2	10 %

## Health

The survey findings reveal that 29% of individuals had a self-reported healthcare need within the two weeks before the survey. Of the participants, 30% (n = 365) of females and 28% (n = 301) of males reported being sick and having a need to access healthcare during that period. Among children, 56% (n = 82) under 2 years old and 23% (n = 84) aged 3-5 years had been ill in the two weeks prior to data collection. Fever and diarrhea were the most common illnesses, accounting for 41% and 33% of the cases, respectively.

The majority of these individuals with any healthcare need were able to access healthcare when they felt they needed it (71%), however, nearly one-third (29%) reported their health need was unmet, meaning approximately 8% of all individuals assessed had an unmet health care need. Within this group, 28 % were female household members while 30 % were male household members. In children under 2 years old, 35% (n = 16) had unmet needs; among those aged 3 to 5, 26% (n = 5) did. The primary barriers to healthcare access were long waiting times (50% of households), the unavailability of a nearby functional health facility (28%), and the facility being too far (18%). Only 2% of HHs did not report any barrier to accessing healthcare. FGD participants in the assessed locations reported that congestion was a common issue at the Gomgoi health facility, with the waiting room frequently being overcrowded.

Figure 10 - Results of Health (Core)

Individual-level data collection		
Participants with self-reported health care needs during the two weeks prior to data collection	Number of observations 'n'	Percentage %
Overall	194	29 %
Female	111	30 %
Male	83	28 %
Children aged 0-2 years	46	56 %
Children aged 3-5 years	19	23 %
Main symptoms reported		Percentage %
Fever	79	41 %
Diarrhea	63	33%
Cough	48	25%
Skin infection	24	12%
Eye infection or red eye	22	11%
Individuals reporting unmet healthcare needs, by % of individuals with a health problem in the two weeks prior to data collection (29%)		Percentage %
Overall	56	29%
Female	31	28 %
Male	25	30%
Children aged 0-2 years	16	35 %
Children aged 3-5 years	5	26 %
Main barriers to accessing healthcare		Percentage %
Long waiting time for the services	55	50 %
No functional health facility nearby	31	28 %
Health facility is too far away	20	18 %

To gather information on immunization coverage, the survey team asked caregivers/mothers whether their children had received vitamin A capsules (children between 6-59 months), measles vaccination (children between 9-59 months) and whether people ever received oral cholera vaccination. For percentages see table 8.

In the survey, 47% (n = 115) of children aged 6-59 months received measles vaccinations. Additionally, 29% (n = 177) of the individuals reported receiving oral cholera vaccinations, indicating a low vaccination rate that could pose a risk in the event of a cholera outbreak. Disaggregated data by gender and age is provided in Table 11 below.

Only 21% of households reported having access to healthcare within one hour using their regular mode of transportation. This suggests that the majority of IDPs resided a considerable distance from the free healthcare services provided by NGOs, as 67% of households reported receiving their healthcare from NGO-managed hospitals. During discussions with community leaders and community members, it was reported that IDPs faced significant health challenges. In most of FGD participants reported that most IDPs were generally in poor physical condition, often due to a lack of food, which frequently led to illness. Injuries resulting from the conflict in 2022 were also noted as having reduced individual health and productivity.

Access to healthcare emerged as a critical issue, with the main barriers being the significant distance to healthcare facilities and the high cost of medications. In Majak Aher, the nearest healthcare provider was Mother Teresa Hospital in Turalei, which charges for consultations and treatments. Consequently, many IDPs opted to travel to the Gomgoi health centre managed by MSF or to Mayen Abun for healthcare, a journey of 2-3 hours on foot. Additionally, the absence of stabilization centers for treating children with complicated health conditions within the IDP camps was evident. Patients were

often referred to Mother Teresa or Mayen Abun hospitals for treatment, highlighting a gap in accessible healthcare services. With the onset of the rainy season, the prevalence of disease is high, and IDPs will be at risk.

**Figure 11 - Results of Health (Supplemental)**

<b>Household-level data collection</b>					
<b>Children 6-59 months who received vitamin A supplementation during the six months prior to data collection</b>				<b>Number of observations</b>	
			<b>'n'</b>	<b>Percentage %</b>	
Overall			74	59 %	
Female			46	65 %	
Male			28	52 %	
Children aged 0-2 years			43	65 %	
Children aged 3-5 years			31	53 %	
<b>Children 9-59 months who received measles vaccination</b>	<b>Yes, from the maternal recall</b>	<b>Yes, from the vaccination card</b>		<b>Percentage %</b>	
Overall	27 % (n = 31)	20 % (n = 25)	51	47%	
Female	29 % (n = 17)	19 % (n = 12)	29	48 %	
Male	24 % (n = 12)	22 % (n = 11)	23	48 %	
Children aged 0-2 years	29 % (n = 16)	27 % (n = 15)	31	55 %	
Children aged 3-5 years	25 % (n = 15)	14 % (n = 8)	23	39 %	
<b>Participants having received oral cholera vaccination</b>				<b>Percentage %</b>	
Overall	14 % (n = 84)	15 % (n = 93)	177	29 %	
Female	14 % (n = 46)	16 % (n = 55)	101	30 %	
Male	14 % (n = 38)	14 % (n = 38)	76	28 %	
Children aged 0-2 years	22 % (n = 8)	39 % (n = 14)	22	61 %	
Children aged 3-5 years	12 % (n = 10)	10 % (n = 8)	18	22 %	
<b>Households having access to healthcare within one hour by their normal means of transportation</b>				<b>Percentage %</b>	
Yes			22	21 %	
No			87	78 %	

## Shelter

The household survey indicated that shelter was the second highest priority need among IDP households, with 20% identifying it as their priority. Additionally, 57% reported it as their second priority. FGD, participants reported IDPs were having serious problems with their living conditions, particularly with their shelters. In most discussions, they stressed that their shelters were old and damaged. The IDPs stated that these shelters had been initially constructed upon their arrival in 2022, but since then, they have not received any support with shelter materials, such as plastic sheets. In some FGD, participants mentioned that they would have gathered and brought shelter materials themselves if these materials had been available in the nearby bushes. Additionally, in half of the discussions, participants reported that NGOs had not distributed plastic sheets. With the onset of rain in May, the lack of adequate shelters leaves many vulnerable to harsh weather conditions.

**DISCUSSION**

The overall conditions at the assessed IDP sites point to a severe public health situation, as indicated by the numerous severity indicators detailed in the table below. According to the Integrated Food Security Phase Classification (IPC), these IDP populations' current food security status is classified as AFI IPC Phase 4, 'Emergency,' with some populations facing catastrophic conditions. These findings are consistent with the September 2023 South Sudan IPC analysis for the projection period (April-July 2024) where food security was expected to deteriorate.

The severe public health conditions were likely driven by severe acute food security situations evidenced by 32% of the population facing severe or very severe food shortages. Major coverage and access issues for healthcare, for IDP sites like Nyading Ayuel and Gomgoi without active operational partners were identified as contributing factors to the deteriorating conditions. Critical hygiene is compromised as 98% lacked soap, and 32% resorted to open defecation, increasing health risks, especially during the rainy season.

Further deterioration is expected if the situation continues without a scale-up in the coming months, particularly during the lean season between June and August, which will likely result in continued out-migration from camps to other locations due to a lack of services. With the anticipated unprecedented flooding this year, Twic County is expected to be among the counties that will be severely affected, and the compounded issues of insecurity will likely further exacerbate the situation.

**Figure 12 - Comparison between IPHRA Core Indicator Thresholds**

Category	Domain	Evidence	Standard (If applicable)	Severity
Health Outcomes	Mortality	<b>Not available</b>	1 death per 10,000 per day 2 under-5 deaths per 10,000 per day	High
	Malnutrition	<b>Not available</b>	> 10% GAM by MUAC	
	Morbidity	29% of individuals with a healthcare need in the 2 weeks prior to data collection, with 56% for children under 3 years of age	> 20% of people with any health care need in 2 weeks	High
Immediate Drivers	Individual Food Consumption	90% of under-2 children reportedly breastfeed, but poor complementary feeding practices.		Medium
	Water Consumption	All households had access to improved water sources, however, the majority were not treating water (77%).		Low
Direct Contributing Factors	Household Food Consumption	32% Households Severe and Very Severe Household Hunger Scale  38% of households reported a "poor" food consumption score	20% Severe and Very Severe for IPC Phase 5	High

	Household Water Security	Of the 81% of HHs with containers, the median number of water containers was 1, meaning at least 50% of the population had only 1 container	At least 2 water containers per household for collection and storage	High
	HH Income and Coping	Nearly half of households (44%) relied on emergency livelihood coping strategies, and high reliance on limited humanitarian assistance.	Most households are relying on humanitarian assistance, begging, or other severe coping strategies (>50%) Exhausted, Survival income sources or mainly aid	High
	Living Conditions	Major concerns expressed by the population on lack of shelter materials and the upcoming rainy season.		High
Indirect Contributing Factors	Natural and built environment (Sanitation)	31.5% of households reported open defecation and during discussions and observations, most latrines were full.		High
	Market Functionality	The markets were functional for accessing food, but very limited livelihood opportunities and markets were oversaturated with firewood and other natural resources being gathered  44% of the HHs reported not enough food available.		Medium
	WASH Service Adequacy	Some (77%) HHs can collect water within 30 minutes	Some households can fetch water within 30 minutes (50- <80%)	Medium
	Health Service Adequacy	Only 21% of households can access health services within one hour.  29% of individuals with a healthcare need in the two weeks prior to data collection had unmet healthcare needs; or roughly 8% of all individuals  Less than half of children under 5 (47%) had reportedly been vaccinated for measles	Most households cannot access nearest functional health facility within 1 hour (<50%)  Less than 50% of children 6-59 months received Vitamin A supp. in the last 6 months, and less than 50% 9-59 months received measles vaccination	High
	Nutrition Service Adequacy	Lack of stabilisation centre accessible to the population.	<b>CMAM Program Coverage:</b>	Medium

			>50% in rural areas >70% in urban areas >90% in formal camps (If no partner coverage, assuming 0%)	
<b>Assessing Overall Severity for Public Health Classification – base this off the public health outcome indicators (morbidity, malnutrition, mortality)</b>  <b>High</b> – Indicates the population is currently experiencing emergency levels, or risk of emergency levels, of public health outcomes (morbidity, malnutrition, or mortality)  <b>Medium</b> – Elevated but not necessarily emergency levels of public health outcomes  <b>Low</b> – Non-emergency or elevated levels of public health outcomes.		<b>High-severity public health situation – based on very high severity of morbidity</b>		

## CONCLUSION AND RECOMMENDATIONS

In conclusion, the assessment has highlighted severe public health outcomes, particularly in Food Security and Livelihoods (FSL). At the same time, WASH and access to health services were slightly better.

The assessment reveals significant underlying vulnerability among the population, which is expected to worsen due to the forecasted severe flooding from June to October 2024.<sup>22</sup> A joint analysis conducted by the Information Management Working Group (IMWG), which included government officials, on the scenario for the anticipated flooding, indicated that an estimated 223,000 individuals in Twic County would be affected.<sup>23</sup> The impending floods threaten to exacerbate the already poor food security conditions further and strain essential life-saving sectors, particularly healthcare. This situation is compounded by persistent nationwide inflation, the influx of returnees from Sudan, disrupted trade and supplies from Sudan, and the ongoing insecurity in the border areas between Abyei and Twic, which will likely continue.

Lastly, there is a sanitation crisis among the IDP population, driven by the widespread unavailability of functional latrines. The reliance on open defecation, especially during the rainy season, significantly heightens the risk of disease outbreaks.

<sup>22</sup> WFP: [South Sudan – Seasonal Monitor May 2024](#)

<sup>23</sup> Information Management Working Group (IMWG) Joint Analysis on flood Scenarios: 4 June 2024. On file with REACH.

Figure 13 - Recommendations

Risk of Excess Mortality Dimension	Severity	Period	Recommendation
Household Food Consumption	High	Short-term	Improve coverage of FSL interventions to immediately address urgent food consumption gaps in Twic IDP populations.*
Morbidity	High	Short-term	Noting only 21% of HHs could access health services within one hour and 29% of individuals with healthcare needs in the two weeks prior to data collection had unmet healthcare needs, recommend improving health coverage to far IDP locations.
Living Conditions	High	Short-term	Identifying that shelter is the second highest reported priority need and given that FGD participants have reported significant damage to their shelters, recommended to prioritize shelter materials before the upcoming rainy season for the Twic IDP camps.
Health Service Adequacy	High	Short-term	Noting the low vaccine coverage, with only 47% having received measles vaccinations and 29% reporting oral cholera vaccinations, recommended improving the coverage of preventative child health services within Twic IDP camp settings.
Household Water Security	Medium	Short-term	Noting that 81% of HHs with containers, the median number of water containers was 1, meaning at least 50% of the population had only 1 container, recommend the provision of additional water containers to address the issue of water containers.
Sanitation	High	Short-term	Given that 98% of households lacked access to soap and 32% engaged in open defecation, the concerns escalate with the onset of the rainy season, posing risks during disease outbreaks, recommend sanitation interventions be implemented in the assessed IDPs.
WASH Service Adequacy	Medium	Short-term	Rehabilitate the broken boreholes and broken water systems within the established camps.*
*Recommendations developed in consultation with implementing partners			



## ANNEXES

## References

1. [South Sudan: CCCM Cluster IDP Site Masterlist - February 2024](#)
2. South Sudan - [Twic County, Warrap State: IDPs Assessment - 18 February 2022](#)
3. [South Sudan: CCCM Cluster IDP Site Masterlist - February 2024](#)
4. South Sudan - [Twic County, Warrap State: IDPs Assessment - 18 February 2022](#)
5. REACH - [Rapid Needs Assessment: Twic County March 2023 | South Sudan](#)
6. South Sudan: [Acute Food Insecurity Situation for September - November 2023 and Projections for December 2023 - March 2024 and for April - July 2024](#)
7. Formal IDP sites are excluded from FSNMS data collection; instead, an ISNA assessment is being conducted.
8. Initial Rapid Needs Assessment Report. Mabok, Taglei, Leu, Awolnhom, Noong Payams. Abyei Special Administrative Area Date: 15th-16th February 2024. On file with REACH
9. OCHA: [Impact of Sudan Crisis on South Sudan Flash Update No. 2 \(As of 8th June 2023\)](#)
10. IOM-UNHCR. [Population flow monitoring dashboard](#).
11. Humanitarian Briefing Note, 2 March 2024: On file with REACH.
12. Refer to the [IPC Technical Manual Version 3.1](#) for all food security outcome thresholds.
13. [REACH: South Sudan | Joint Market Monitoring Initiative \(JMMI\)](#)
14. 8400 SSP was equivalent to 2.5 USD at the time of data collection.
15. OCHA: [Impact of Sudan Crisis on South Sudan Flash Update No. 2 \(As of 8th June 2023\)](#)
16. WFP-VAM: [Livelihood Coping Strategies](#) – Food Security
17. FEWNETS: [South Sudan Livelihoods Zone Map and Descriptions](#)
18. Exchange of food for labour was also mentioned by 11% of the households.
19. [Breastfeeding in the 21st century: epidemiology, mechanisms, and lifelong effect](#). Victora, Cesar G et al. The Lancet, Volume 387, Issue 10017, 475 – 490.
20. [Indicators for assessing infant and young child feeding practices \(WHO 2021\)](#)
21. WFP: [South Sudan – Seasonal Monitor May 2024](#)
22. Information Management Working Group (IMWG) Joint Analysis on flood Scenarios: 4 June 2024. On file with REACH.

## Analysis

The household data were cleaned and analysed using IPHRA R scripts, which were built by IMPACT HQ. Various statistics have been computed on the data, including percentages, means, and medians, among others. The analysed data were presented in both tabular and Excel files. For FGDs and KIIs, including observation, the analysis was conducted using the REACH Data Saturation Analysis Grid (DSAG). The quantitative data were cleaned and analysed two days after data collection, and preliminary findings were drafted and shared with key partners, including donors, within seven days after the last day of data collection.

## Limitations

- IPHRA was not designed as a hard-to-reach methodology and has only been applied to populations that the assessment team could physically access. The team could not conduct a

comparative analysis between IDPs living in the southern part of the county and those in the northern part near Abyei due to accessibility issues; we believed the recently displaced residing there might have had even higher needs than what we had already seen in the assessed area.

- The IPHRA methods intended to understand the severity of public health needs and service gaps; however, given this focus, they might not have fully explained the reasons or causes of the results. Some analysis and triangulation with qualitative components might have given an indication, but it was likely limited.
- Cluster sampling approaches were not recommended, and the allowance of purposive sampling meant that results should not have been generalised to a wider population beyond the sites and facilities assessed.
- For the qualitative components, sample sizes were not adequate to reach full saturation of responses in the population. The intent of these was to provide some light-touch information to triangulate with household survey results.

**For more information on the research design, refer to the [Terms of Reference](#).**