SOUTH SUDAN

Integrated Public Health Rapid Assessment in Old Fangak, Fangak County, Jonglei State

March 2025

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SUMMARY

Fangak County is situated in northwestern Jonglei State, bordering Ayod County to the south, Canal/Pigi County to the east, Panyikang County (Upper Nile State) to the north-east, Pariang (Ruweng Administrative Area) to the north-west, and Guit and Koch (Unity State) to the west. The White Nile runs along the county's western and northern borders, which makes the county part of the eastern plains, sorghum and cattle livelihood zone (FEWSNET 2018).

Since 2021, most parts of Fangak County have remained inundated by floodwater.[1] In September 2024, a new wave of flooding displaced thousands to high ground areas and to Tonga, Panyikang County, Upper Nile State.[2,3] The widespread flooding in 2024 affected large parts of South Sudan, triggering a cholera outbreak across more than half of the counties, with particularly high case numbers in the northern parts.[4]

These areas also saw a significant influx of returnees due to the ongoing conflict in Sudan, which further exacerbated the situation.[5] In September 2024, the South Sudan Ministry of Health confirmed the cholera outbreak, and between September 28, 2024, and March 28, 2025, Old Fangak County reported 891 cholera suspected cases and 28 deaths, with Old Fangak Payam being the second hardest-hit area in the county.

Additionally, according to the latest IPC analysis conducted in September 2024, during the first projection period, from December 2024 to March 2025, Fangak was classified as IPC AFI Phase 4 (Emergency) and AMN Phase 4 (Critical)[6], with further deterioration expected in the lean season (April to July 2025). A separate returnee Household Analysis Group (HAG) was conducted for returnees from Sudan who were classified in IPC AFI Phase 4, with at least 5% of the population experiencing catastrophic food insecurity across the two projection periods.

Between February 22nd and March 3rd, 2025, REACH conducted data collection in Old Fangak using a mixed-methods approach comprising 256 household surveys and 10 key informant interviews. The assessment targeted two groups: (1) host community (HC) members and IDPs, including IDP returnees[7] and (2) returnees from Sudan who arrived after the 2023 conflict (will be referred to as "returnees" in this report). For the first group, stratified simple random sampling was used across three small neighbourhoods (Hai 44, Hai Muzafin, and Hai Mathar), while the second group was treated as a single stratum and sampled randomly using a list from local authorities. The analysis aimed to provide localised findings not to be generalisable beyond the assessed population. At least 110 households were sampled per group using a 95% confidence level, 10% margin of error, and 10% non-response rate. Due to frequent displacement and lack of population data, aggregated analysis was not conducted, but results remain representative at the population group level.

[1] REACH: Fangak shocks verification missions, Jonglei state, South Sudan, June 2021
[2] UNMISS: Thousands of families flee rising waters in Fangak as extraordinary flooding hits South Sudan, September 2024.
[3] Radio Tamazuj: Thousands flee Fangak villages over floods, August 2024
[4] South Sudan Cholera Outbreak: Situation Report #1, October 30, 2024
[5] South Sudan: IOM-UNHCR. Population flow monitoring dashboard.
[6] South Sudan: Acute Food Insecurity Situation for September - November 2023 and Projections for December 2023 - March 2024 and for April - July 2024
[7] **IDP returnees**: HH who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognized state border and who has since returned to their homes or places of habitual residence.

Key Messages

- The public health situation in Old Fangak is of **medium severity** across the population groups, with moderate evidence of morbidity **primarily driven by rising levels of infectious diseases and high levels of acute malnutrition**, as reported in the SMART survey conducted in July 2024.[8] While a cholera outbreak was ongoing at the time of data collection, sufficient vaccination coverage has helped control the spread of the disease, as evidenced by the low unmet health needs reported. Nevertheless, despite the overall public health severity being classified as medium, the situation remains fragile due to the area's disease history and the high severity of key public health drivers, such as food security and WASH. In the event of any breakdown in the health system, conditions could quickly deteriorate.

- Findings reveal significant service gaps in key public health drivers in Old Fangak, particularly affecting returnee households from Sudan. Inadequate sanitation facilities, which fall below emergency standards, and low food consumption are contributing to deteriorating health outcomes and heightened risks of malnutrition.

- As the lean season approaches, there is an urgent need to **scale up emergency food assistance, health, and sanitation services** to prevent further deterioration. Without sustained or expanded interventions, **the risks of rising malnutrition, morbidity, and mortality** will increase**, particularly among the returnee population, who are at higher risk**.

[8] Integrated Nutrition and Mortality SMART Survey, Fangak County, Jonglei State – July 2024 (on file with REACH)

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List of Acronyms

AFI:	Acute Food Insecurity
AMN:	Acute Malnutrition
CCCM:	Camp Coordination and Camp Management
FCS:	Food Consumption Score
FGD:	Focus Group Discussion
FSL:	Food Security and Livelihoods
FSNMS:	Food Security and Nutrition Monitoring System
HC	Host community
HH:	Household
HHS:	Household hunger scale
IDP:	Internally Displaced Person
IPC:	Integrated Phase Classification
IPHRA:	Integrated Public Health Rapid Assessment
KI:	Key Informant
LCS:	Livelihood Coping Strategies
MSF:	Médecins Sans Frontières
MSSMEB:	Multi-sectoral Survival Minimum Expenditure Basket
PLW:	Pregnant and Lactating Women
SSD:	South Sudan
WASH:	Water, Sanitation and Hygiene

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CONTEXT AND RATIONALE

Fangak County is situated in northwestern Jonglei State, bordering Ayod County to the south, Canal/Pigi County to the east, Panyikang County (Upper Nile State) to the north-east, Pariang (Ruweng Administrative Area) to the north-west, and Guit and Koch (Unity State) to the west. The White Nile runs along the county's western and northern borders, which makes the county part of the eastern plains, sorghum and cattle livelihood zone (FEWSNET 2018).

Since 2021, most parts of Fangak County have remained inundated by floodwater. In September 2024, a new wave of flooding displaced thousands to high ground areas and to Tonga, Panyikang County, Upper Nile State.

The widespread flooding in 2024 affected large parts of South Sudan, triggering a cholera outbreak across more than half of the counties, with particularly high case numbers in the northern parts. These areas also saw a significant influx of returnees and refugees due to the ongoing conflict in Sudan, which further exacerbated the situation. In September 2024, the South Sudan Ministry of Health confirmed the cholera outbreak, and between September 28, 2024, and March 28, 2025, Old Fangak County reported 891 cholera cases and 28 deaths, with Old Fangak Payam being the second hardest-hit area in the county.

Additionally, according to the latest IPC analysis conducted in September 2024, food security and nutrition remain extremely poor. During the first projection period, from December 2024 to March 2025, Fangak was classified as IPC Phase 4 (Emergency), with acute malnutrition (AMN) also classified as Phase 4 (Critical), with further deterioration expected in the lean season (April to July 2025). A separate returnee Household Analysis Group (HAG) was conducted for returnees from Sudan classified returnees in IPC AFI Phase 4, with at least 5% of the population experiencing catastrophe between December 2024 and March 2025. While food security was projected to improve in most parts of the country, returnee households were expected to face deterioration due to early harvest exhaustion for those who cultivated and increasing staple food prices, as most households would rely on market purchases.

This integrated public health rapid assessment evaluated Old Fangak town's population vulnerabilities and potential drivers of humanitarian needs across various public health sectors.

METHODOLOGY

Between February 22nd to March 3rd 2025, REACH teams conducted primary data collection using a mixed-methods approach consisting of 256 household (HH) surveys and 10 Key Informant Interviews (KIIs).

The assessment focused on two population groups. The first group consisted of the host community (HC) and IDPs, including IDP returnees living within the host community, while the second group comprised returnees from Sudan who arrived following the onset of the Sudan conflict in 2023 and were currently residing in Old Fangak town.

For the first population group (host community (HC) and IDPs, including IDP returnees), a stratified simple random sampling design was used. The group was divided into three geographic strata: 1) Residents of Hai 44, 2) Residents of Hai Muzafin, and 3) Residents of Hai Mathar. The purpose was to gather household data from geographically distinct areas within Old Fangak town, without aiming to obtain results that were representative at the site level but rather at the population level.

For the second population group (returnees from Sudan), simple random sampling was employed. This group was treated as a single stratum due to their distinct vulnerabilities, such as a lack of cultivated land and livelihood assets. Geographically, Old Fangak town was treated as a single stratum for the returnee population, without further disaggregation by neighbourhood, as was done for host communities and IDPs.

The analysis is intended to provide localised results that are not generalizable beyond the assessed population. Within each stratum, using a 95% confidence interval, a 10% margin of error, and a 10% non-response rate, a minimum of 110 households were sampled. For the host community and IDP households were proportionally distributed across sites according to their population size, with random location sampling techniques used for selection. For returnees from Sudan, simple random sampling was applied based on a list provided by the local authority.

To ensure statistically valid inferences, REACH did not conduct an aggregated analysis, as population distribution data needed for weighting was lacking. Population displacement and movement also occur frequently in the area, making it difficult to retrieve accurate population figures. However, results remain statistically representative at the population group level and are indicative of the situation at the sampled sites.

Table 1 - Breakdown of qualitative data collection

Key Informant Interviews	
Community leaders KIs (1 IDP and 1 returnee)	2
Community members KIs (2 HC, 2 IDP and 3 returnees)	7
Implementing partner KI	1

Key definitions

Internally displaced persons[9]: Households who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognized state border.

IDP returnees: HH who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognized state border and who has since returned to their homes or places of habitual residence.

Host community: Households that have never been displaced by the crisis and consider the assessed location as their area of origin and places of habitual residence.

Refugee returnee (who returned home): Households who have temporarily been forced to flee their country because of persecution, war or violence (refugee) and who have since returned to their homes or places of habitual residence.

[9] IOM- Key migration terms

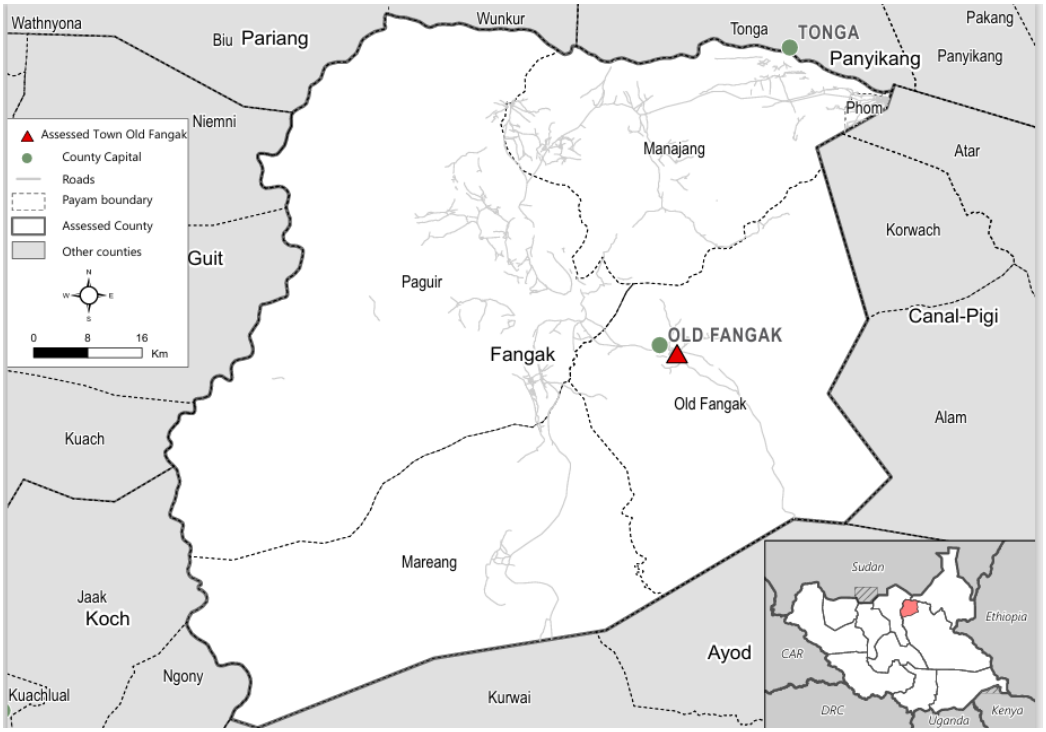
Assessment objectives

- To assess the severity of public health outcomes and identify initial public health priorities for humanitarian response to mitigate excess morbidity, malnutrition and mortality in Old Fangak, Fangak County.
- To understand the demographic composition of the target population.
- 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 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 utilization 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 estimate the proportion of households with access to basic WASH NFIs.
- To assess the main shelter types being used by the population.
- To assess the prevalence of shelter damage among the population.
- To estimate the proportion of the population with access to critical non-food items (soap, mosquito nets, water treatment tablets, blankets, tarpaulin, cooking supplies, jerry cans, etc.)

Geographical scope

Data collection was conducted across Old Fangak town, Old Fangak Payam, Fangak County, Jonglei State.

Figure 1- Map of assessed location



FINDINGS

Participant Characteristics

The assessment surveyed a total of 256 households, comprising 1,979 individuals, with an overall average household size of 8 members. Specifically, HCs and IDPs, including IDP returnees, with a sample of 131 households, averaged 8 in household size. The gender distribution of respondents was 98% female and 2%[10] male. Within the assessed households, 11% had at least one child up to two years old and 15% with at least one child between three to five years old. For returnee households (n=125), household size averaged at 8 people, with 10% of households having at least one child up to two years old and 14% between three to five years old. 99% of respondents were female and only 1%[11] were male.

[10] At the time of data collection, most respondents were female, as men were typically engaged in livelihood activities such as fishing or spending time in the market. As a result, women were more likely to be at home and available for interviews, which was contextually accurate.
[11] Ibid

Table 2 - Participant Characteristics

Household level data collection	HC + IDPs (n= 131)	Returnees (n=125)
Gender of household members[12]		
Female	68 (52%)	67 (53%)
Male	63 (48%)	58 (46%)
Age groups		
Children aged 0-2 years	14 (11%)	13 (10%)
Children aged 3-5 years	19 (15%)	17 (14%)
Household size		
Average household size	7	7
Head of household marital status		
Married	124 (94%)	117 (94%)
Single	2 (2%)	(0%)
Widowed	4 (3%)	8 (6%)

Reported priority needs

Overwhelmingly, both returnees (71%) and HCs and IDPs (76%) reported food as their top need, with a significant majority identifying it as their primary concern. This finding aligned with the KIs priority need, where most reported food as their most serious need. Drinking water was named as a primary need for 19% of HCs and IDPs, and 15% of the returnee households, highlighting the necessity for improved access to clean water.

The second priority needs reflect a wider range of necessities, varying across both population groups, though shelter materials, drinking water, and food consistently emerged as the top three needs for both. Among host community members and IDPs, shelter materials (34%) were named, followed by drinking water (24%) and food (21%), indicating a continued struggle to secure stable living conditions. For returnees, drinking water (29%) was the most frequently cited second priority, followed by shelter materials (20%) and food (17%). Additionally, healthcare (7%) was reported by a greater number of returnees at this level, underscoring ongoing health-related vulnerabilities. Specifically, regarding shelter, the vast majority of Old Fangak residents live in overcrowded conditions, with many families forced to share limited dry spaces on what has essentially become an island. KIs reported that due to recent insecurity, more people were arriving from Malakal County during the time of data collection, further contributing to the already overcrowded shelters.

Table 3 - Priority Needs

Household level data collection	HC and IDP (n= 131)	Returnee (n=125)
First priority need		
Food	100 (76%)	89 (71%)
Drinking water	25 (19%)	19 (15%)
Shelter materials (tarpaulin or other materials)	2 (2%)	11 (9%)
Clothing and blankets	0 (0%)	3 (2%)
WASH NFIs (soap, buckets, etc.)	3 (2%)	0 (0%)

[12] Among the 1,936 individuals surveyed, 53.2% were female and 46.8% were male. The variable represents the sex of individuals as reported by the respondents themselves.

Shelter repair support	0 (0%)	2 (2%)
Healthcare	1 (1%)	1 (1%)
Second priority need		
Shelter materials (tarpaulin or other materials)	44 (34%)	25 (20%)
Drinking water	31 (24%)	36 (29%)
Food	28 (21%)	21 (17%)
WASH NFIs (soap, buckets, etc.)	2 (2%)	13 (10%)
Fuel (firewood, gas, etc.)	10 (8%)	4 (3%)
Shelter repair support	6 (5%)	6 (5%)
Healthcare	2 (2%)	9 (7%)
Cooking facilities (cooking gear, etc.)	4 (3%)	6 (5%)
Clothing and blankets	4 (3%)	4 (3%)
Livelihood support	0 (0%)	1 (1%)
Third priority need		
Shelter materials (tarpaulin or other materials)	28 (21%)	50 (40%)
WASH NFIs (soap, buckets, etc.)	35 (27%)	20 (16%)
Healthcare	17 (13%)	11 (9%)
Shelter repair support	15 (12%)	6 (5%)
Fuel (firewood, gas, etc.)	7 (5%)	7 (6%)
Clothing and blankets	9 (7%)	5 (4%)
Food	3 (2%)	12 (10%)
Cooking facilities (cooking gear, etc.)	5 (4%)	8 (6%)

Food Security and Livelihoods

The food security situation in Old Fangak town remains critically concerning across all population groups, with returnees from Sudan being the most severely affected. **These households experience significant food consumption gaps indicative of IPC AFI Phase 4 (emergency), with some likely facing conditions indicative of AFI Phase 5 (catastrophe).** Based on the **Food Consumption Score (FCS),** 39% of returnee households have "poor" food consumption, 28% fall within the "borderline" category, and only 33% report "acceptable" consumption, meaning they could meet the frequent diverse food groups consumed. Furthermore, according to the **Household Hunger Scale (HHS)**, 70% of households reported experiencing "moderate" hunger, 20% "severe" hunger, and 10% "very severe" hunger. These findings are consistent with the October 2024 IPC Acute Food Insecurity (AFI) classification, though the magnitude of food insecurity among returnee households appears to be higher than IPC projections, with many continuing to face significant food consumption gaps.

For host community and IDP households, food security remains a major concern, with significant food consumption gaps. According to the FCS results, consumption gaps are indicative of an AFI phase 4, 33% of households scored "poor" food consumption, 39% "borderline", and only 28% scored "acceptable" food consumption levels. Furthermore, based on the HHS results, consumption gaps are indicative of an AFI phase 3, 78% of surveyed households reported experiencing "moderate" hunger, 15% reported "severe" hunger, and 4% reported very severe" hunger.

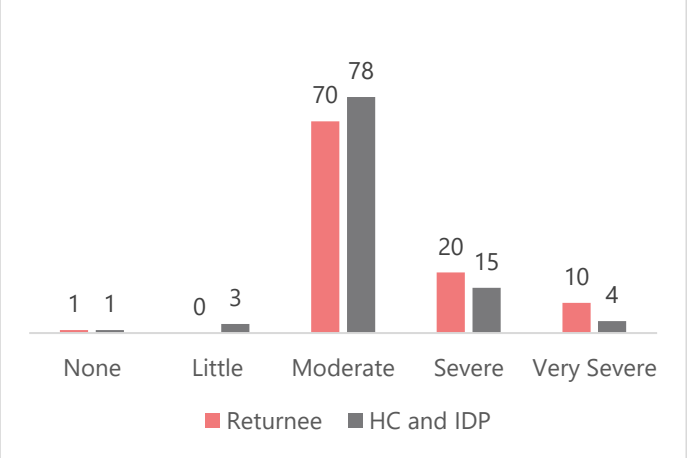
Table 4 - Results of Food Security and Livelihood Indicators – part 1

Household level data collection	HC and IDP (n=131)	Returnee (n=125)
Food Consumption Score (FCS)		
Acceptable	37 (28%)	41 (33%)
Borderline	51 (39%)	35 (28%)
Poor	43 (33%)	49 (39%)
Household Hunger Scale (HHS)		
None/slight	1 (1%)	1 (1%)
Little	4 (3%)	(0%)
Moderate	102 (78%)	87 (70%)
Severe	19 (15%)	25 (20%)
Severe Catastrophe	5 (4%)	12 (10%)
Reduced Coping Strategy Index (RCSI)		
High	80 (63%)	54 (51%)
Medium	46 (37%)	51 (49%)
Low	0 (0%)	0(0%)
First food source		
Fishing	46 (35%)	41 (33%)
Humanitarian food assistance	28 (21%)	2 (2%)
Gathering	27 (21%)	53 (42%)
Market (purchase cash or credit)	17 (13%)	10 (8%)
Exchange of food for labour	6 (5%)	1 (1%)
Bartering	4 (3%)	0 (0%)
Own crop/garden production	2 (2%)	0 (0%)
Borrowing/debts	1 (1%)	3 (2%)
Support from neighbours/relatives	0 (0%)	15 (12%)
Second food source		
Humanitarian food assistance	45 (34%)	10 (8%)
Gathering wild food	28 (21%)	40 (32%)
Fishing	28 (21%)	52 (42%)
Borrowing/debts	13 (10%)	8 (6.4%)
Exchange of food for labour	6 (5%)	1 (1%)
Market (purchase cash or credit)	4 (3%)	1 (1%)
Support from neighbours/relatives	0 (0%)	7 (6%)

Food Availability and Access

Food availability in Old Fangak town remains severely limited due to years of severe flooding that have destroyed croplands and disrupted livelihoods since 2021. Furthermore, high food prices and the arrival of returnees from Sudan, as well as IDPs displaced by last year's flooding, continue to overwhelm the limited available resources. Today, households heavily rely on fishing, wild food gathering, and humanitarian aid for sustenance.

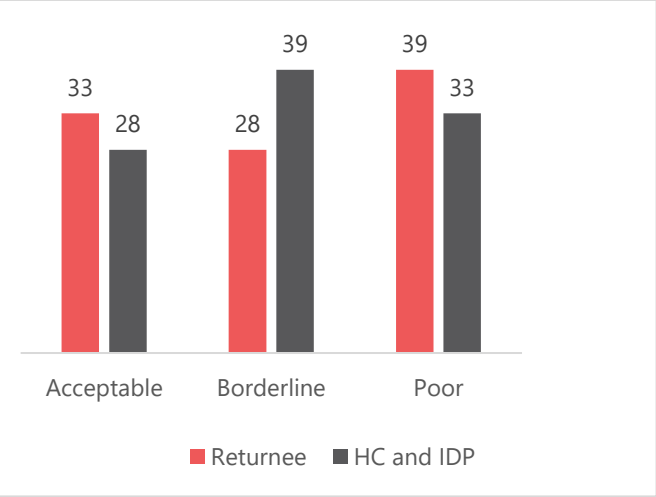
Figure 2- Percentage of Households by Household Hunger Scale



Among returnee households, 42% cited wild food gathering as their main food source, followed by fishing (33%), support from relatives or neighbours (12%), and local markets (8%). For host community and IDP households, the primary sources were fishing (35%), wild foods (21%), humanitarian assistance (21%), and market purchases (13%). However, access to key food sources (wild food gathering and fishing) is further hampered by inadequate food available (72% of returnees and 63% of HC and IDPs), transport to the food sources expensive (60% and 42%), live too far from food sources/no means of transport (22% and 27%), damage to the main source of food (31% and 29%) and security issues travelling to and from food sources (26% and 21%).

Despite a large food consumption gap among returnee households, only 13% reported being registered for humanitarian food assistance, compared to 73% of HC and IDP households. This finding highlights the urgent need to register returnee households to reduce the impact of humanitarian food assistance (HFA) sharing, as KIs reported that recipients often share their HFA with those who are not receiving.

Figure 3- Percentage of Households by Food Consumption Score Category



For one, Old Fangak is entirely surrounded by floodwater, effectively turning it into an island where transportation is only available by air (mostly restricted to logistics and humanitarian purposes) and boats. KIs reported that challenges include the high cost of hiring canoes for collecting wild foods like

water lilies and fishing in deeper waters, with rental prices costing about **15,000 and 20,000 South Sudanese Pounds (SSP)** (approximately **3 USD**) per trip. Additionally, limited fishing gear and declining availability of wild foods due to elevated water levels paint a dire outlook as the rainy season approaches. Vulnerable groups, such as people with disabilities and recently arrived returnees, face even greater barriers in accessing these food sources.

Market access is also significantly constrained by a multitude of complex economic factors. **Food prices are exceptionally high, driven by skyrocketing inflation, multiple checkpoints along the River Nile route from Juba to Old Fangak, the weakening of the SSP, and broader macroeconomic instability**. At the time of data collection, one Malwa of sorghum costs **25,000–30,000 SSP** (approximately **6 USD)**, which is insufficient to sustain a typical six-member household for more than two days. In Old Fangak, according to the REACH Joint Market Monitoring Initiative (JMMI), the food component of the Multi-Sector Survival Minimum Expenditure Basket (MSSMEB)[13] rose by 160% from March 2024 to February 2025.[14]

Table 5 - Average number of days households across the population groups employed different coping strategies, in the 7 days prior to data collection

Reduced coping strategy index (rCSI)	HC and IDP (n=131)	Returnee (n=125)
High	80 (63%)	54 (51%)
Medium	46 (37%)	51 (49%)
Low	0 (0%)	0 (0%)
Reduced coping strategy index (rCSI)	**Mean**	
	HC + IDPs (n=131)	**Returnees (n=125)**
Rely on lower-quality food	2.4	2.3
Borrowing	2.3	2.5
Reducing meal size	2.7	2.78
Reducing meals for adults	3.1	2.7
Reducing number of meals	2.9	2.6

The challenges related to food availability and access have contributed to poor dietary diversity, with diets dominated by fish and wild foods and limited consumption of vegetables, legumes, or other protein sources across population groups. As a result, malnutrition rates, especially among children under five and pregnant or lactating women, remain high. The July 2024 SMART survey conducted in Fangak County, including clusters from Old Fangak, recorded a Global Acute Malnutrition (GAM) prevalence of 16.8% (95% CI: 13.2–21.0%),[15] exceeding the WHO emergency threshold of 15%[16].

[13] The Multi-Sectoral Survival Minimum Expenditure Basket (MSSMEB) represents the minimum culturally adjusted group of items required to support a six-person South Sudanese household for one month.
[14] REACH South Sudan: Joint Market Monitoring Initiative (JMMI) dashboard
[15] Integrated Nutrition and Mortality SMART Survey, Fangak County, Jonglei State – July 2024 (on file with REACH).
[16] IPC Technical Manual, version 3.1

Table 6 - Results of Food Security and Livelihood Indicators – part 2

Household level data collection	HC + IDPs (n=131)	Returnees (n=125)
Main barriers to accessing food		
Not enough food is available	83 (63%)	89 (71%)
Transportation to food source too expensive	55 (42%)	75 (60%)
Live too far from food sources/no means of transport	35 (27%)	28 (22%)
Damage to the main source of food	38 (29%)	39 (31%)
Security issues travelling to and from food sources	27 (21%)	32 (26%)
Main source of income		
First main income source		
Selling of collected firewood, charcoal, wild foods	76 (58%)	99 (79%)
Humanitarian cash assistance	15 (12%)	1 (1%)
Salary and wages (professional, religious/spiritual, etc)	12 (9%)	(0%)
Shopkeeper or trader	8 (6%)	2 (2%)
Selling of own produced animal products	6 (5%)	5 (4%)
Second main income source		
Humanitarian cash assistance	37 (28%)	8 (7%)
Selling of collected firewood, charcoal, wild foods	26 (20%)	17 (14%)
Shopkeeper or trader	12 (9%)	7 (7%)
Selling of own produced animal products	9 (7%)	12 (10%)
Saving[17]	8 (6%)	8 (7%)
Daily labour-casual	8 (6%)	25 (20%)
Loan from community	4 (3%)	18 (15%)
Main source of energy used for food preparation		
Firewood	125 (96%)	125(100%)
Coal (charcoal, mineral charcoal)	2 (2%)	(0%)
Livelihoods Coping Strategies Index		
None	(0%)	(0%)
Stress	5 (4%)	3 (2%)
Crisis	3 (2%)	2 (1%)
Emergency	123 (94%)	121 (97%)
Households registered and receiving a general food distribution/cash/voucher		
Yes	95 (73%)	17 (14%)
No	36 (28%)	108 (86%)
Food security and livelihood assistance modality		
Food (in-kind)	99 (76%)	125 (100%)
Cash	25 (19%)	15 (12%)
Food (vouchers)	39 (30%)	66 (53%)

Livelihoods and Coping Strategies

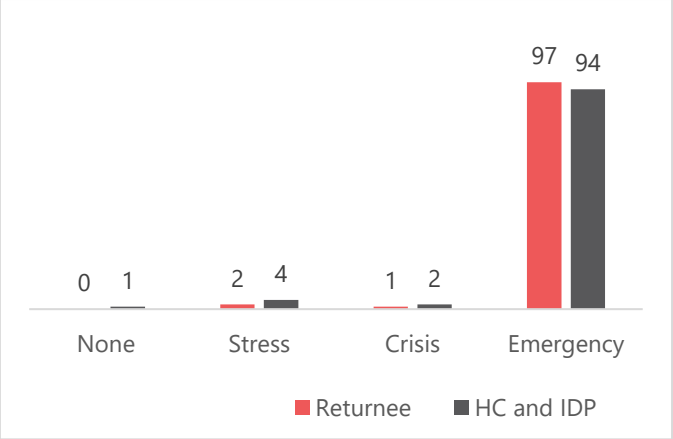
Across all population groups, most households relied on unsustainable income sources, often with stretches of unemployment. Among returnee households, 79% reported that their main source of income is selling firewood, charcoal, and wild foods. An additional 20% indicated daily labour as a

[17] Daily agricultural labor (farm, vegetable, garden, etc.) and casual daily labor (petty trade, etc.) were also reported at 6.1%.

secondary income source. Similarly, 58% of HC and IDP households reported that their main source of income is selling firewood, charcoal, and wild foods, while 28% cited humanitarian cash assistance as their secondary source.

KIs reported that almost every household has lost productive assets like livestock since the onset of flooding in 2020. Additionally, flooding has restricted movement to areas with more viable livelihood opportunities, unless individuals have access to canoes and speedboats. Although canoes are available as a means of transport, KIs reported that hiring them is extremely expensive for the majority of households and simply unaffordable to the most vulnerable ones. Furthermore, KIs highlighted that most returnees from Sudan and IDPs lack essential fishing equipment, such as fishing nets, forcing them to depend on the market for food.

Figure 4- Livelihood Coping Strategies used in the 30 days prior to data collection, by % of HHs



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 12 months prior to data collection. Households reported widespread usage of negative coping strategies to meet their essential needs. Overall, 97% of returnee households and 94% of HC and IDP households reported having deployed at least one emergency coping strategy as their most severe type of livelihoods coping strategy, while this was the case for 1% and 2% of households for crisis coping strategies and 2% and 4% of households for stress coping strategies. Only 1% of HC and IDP households had reportedly not utilised any type of livelihood coping strategies. In addition, the strategy 'travel to another village or cattle camp or fish camp to look for food corresponds to what was phrased as 'travelling to a fishing camp' in this context. These findings should be interpreted with caution due to potential variations.

Table 7- Different negative coping strategies adopted by households (disaggregated by severity)

Livelihood Coping Strategy	Category	HC + IDPs (n=131)			Returnees (n=125)		
Livelihood Coping Strategy	Category	% of population using LCS	% of population that has exhausted LCS	Total % of using of exhausted LCS	% of population using LCS	% of population that has exhausted LCS	Total % of using of exhausted LCS
Send household members to eat with another household	Stress	58%	2%	60%	59%	0%	59%
Sell more animals than usual for this time of year	Stress	19%	5%	24%	14%	2%	16%
Borrow money or purchase food on credit	Stress	57%	5%	62%	36%	5%	41%
Gather wild foods more than normal for this time of the year	Stress	23%	7%	30%	22%	4%	26%
Sell productive assets or means of transport (fishing net, hoe, axe, spear, hooks, wheelbarrow, bicycle, plough, etc.)	Crisis	31%	8%	39%	24%	10%	34%
Send more household members than normal to cattle and/or fishing camps	Crisis	24%	6%	30%	11%	14%	25%
Sell or eat seeds intended for planting this season	Crisis	27%	12%	39%	18%	4%	22%
Sell or slaughter the last of your cows and goats	Emergency	15%	2%	17%	5%	5%	10%
Travel to another village or cattle camp or fish camp to look for food	Emergency	80%	2%	82%	86%	0%	86%
Beg other community members for food	Emergency	32%	2%	34%	41%	0%	41%0%

Water, Sanitation, and Hygiene

Sanitation conditions have deteriorated substantially in Old Fangak since the onset of the flooding in September 2024. Findings indicate that 75% of returnee households and 53% of host community and IDP households practice open defecation due to the absence of functional latrines. According to KIs, the widespread practice of open defecation is driven by several compounding factors, including latrines that have been submerged by seasonal floods, lack of adequate space for constructing new sanitation facilities, limited access to construction tools and materials, and low community awareness about the importance of safe sanitation practices.

A critical shortage of hygiene essentials is evident, with 95% of the returnee households and 90% of host community and IDP households lacking access to soap. KIs reported that most of the population could not access washing and bathing soap and are resorting to using ashes as an alternative for cleaning cooking utensils. This widespread unavailability of basic hygiene items and the widespread practice of open defecation significantly increases the risk of disease outbreaks, particularly in densely populated areas affected by prolonged flooding.

In terms of water access, 98% of returnees and 99% of the HC and IDP households reported using improved water sources, such as boreholes and public taps. However, KIs reported that some of these facilities are currently surrounded by floodwater, which not only impedes access but also raises serious concerns about water contamination.

Poor water quality and inadequate sanitation continue to drive waterborne diseases such as cholera and diarrhoea, further leading to poor public health outcomes.

Table 8 - Results of Water, Sanitation, and Hygiene

Household-level data collection	HC + IDPs (n=131)	Returnees (n=125)
Main source of drinking water[18]		
Improved (public tap, borehole, etc.)	129 (99%)	122 (98%)
Non-improved (surface water like river, stream, etc.)	1 (1%)	3 (2%)
Main water treatment methods		
Chlorine tablet	120 (92%)	99 (79%)
Boil water	6 (5%)	14 (11%)
No treatment	4 (3%)	12 (7%)
Don't know	1 (1%)	0 (0%)
Households with access to functioning latrines		
Open defecation	69 (53%)	93 (75%)
Pit latrine with slab	46 (35%)	24 (19%)
Pit latrine without slab/open pit	5 (4%)	1 (1%)
Households with access to soap		
No soap in the house	118 (90%)	119 (95%)

Health

The survey findings revealed that 38% of returnee children under five and 51% of HC and IDP children under five were self-reported as sick within the two weeks prior to data collection. These figures are well above the IPC Acute Malnutrition (AMN) protocol threshold of 20% for high morbidity prevalence.[19] Notably, 9% of returnee children under five and 13% of children from HC and IDPs, as reported by caregivers, had unmet health needs.

Overall, nearly one-third (29%) of returnee individuals surveyed self-reported being sick in the two weeks prior to data collection. The most commonly reported symptoms were fever (64%), cough (42%), diarrhoea (29%), and skin infections (19%). Notably, 87% of individuals reported having access to healthcare services, while 13% reported unmet healthcare needs. Among HC and IDPs, 48% of individuals self-reported being sick, with the main symptoms being fever (54%), cough (39%), and diarrhoea (35%). Only 12% reported having unmet health needs.

KIs reported that the Médecins Sans Frontières (MSF) facility is the only medical service provider in Old Fangak Payam, making it the primary healthcare access point for the population. However, some complicated cases require referrals to other hospitals, such as the Malakal Teaching Hospital. Unfortunately, ongoing insecurity in the region has made these referrals difficult, further complicating access to specialised care.

[18] Percentages do not add up to 100% because of slight discrepancies caused by rounding.
[19] IPC AMN Technical Manual Version 3.0

Table 9 - Results of Health Indicators – part 1

Individual-level data collection		
Individuals within households who reported health care needs during the two weeks prior to data collection	**HC and IDP (n=1043)**	**Returnee (n= 936)**
Overall	503 (48%)	271 (29%)
Female	251 (46%)	154 (31%)
Male	252 (50%)	117 (27%)
Individuals needed to access health care in the last two weeks by age group		
Children aged 0-2 years	86 (61%)	35 (32%)
Children aged 3-5 years	63 (51%)	43 (38%)
Main symptoms reported in the past 2 weeks	**(n=503)**	**(n=271)**
Fever	272 (54%)	172 (64%)
Cough	174 (39%)	113 (42%)
Diarrhoea	197 (35%)	79 (29%)
Skin infection	55 (11%)	51 (19%)
Rash with raised bumps on the head, neck	52 (10%)	40 (15%)
Individuals reporting unmet healthcare needs, by % of individuals with a health problem in the two weeks prior to data collection		
Overall	58 (12%)	35 (13%)
Female	31 (12%)	20 (13%)
Male	27 (11%)	15 (13%)
Children aged 0-2 years	10 (12%)	6 (17%)
Children aged 3-5 years	8 (13%)	4 (9%)
Household-level data collection		
Main barriers to accessing healthcare	**HC and IDP (n=131)**	**Returnees (n=125)**
Could not afford the cost of medication (price increased)	63 (48%)	62 (50%)
Could not afford the cost of medication (at regular price)	44 (34%)	24 (19%)
Specific service sought unavailable	41 (31%)	13 (10%)
Could not afford the cost of consultation/service	39 (30%)	45 (36%)
Long waiting time for the services	39 (30%)	54 (43%)

At the household level, when asked about access to healthcare, respondents reported the following barriers. Among returnee households, 50% reported that they could not afford the cost of medication, 43% cited long waiting times for services, and 36% could not afford the cost of consultation or services. Similarly, among households from HC and IDPs, 48% reported an inability to afford medication, 31% found the specific service they sought unavailable, and 30% could not afford the cost of consultation or services. These findings highlight significant barriers to accessing essential healthcare in this area.

KIs identified overcrowding as a major challenge at the available medical facility, particularly in the inpatient wards, which are insufficient to accommodate the large number of patients. In addition, the facility faces high demand from people in nearby villages seeking medical services, which remain free of charge to all patients. Despite the significant number of households reporting that they could not afford medication, this may also reflect a preference for avoiding hospitals due to long wait times, overcapacity, and other factors, with some individuals opting instead to purchase medicine from private clinics when they feel unwell.

Table 10 - Results of Health Indicators – part 2

Individual-level data collection		
Children 6-59 months who received vitamin A supplementation during the six months prior to data collection	**HC + IDPs (n=192)**	**Returnees (n=163)**
Overall	129 (67%)	101 (68%)
Female	53 (69%)	49 (62%)
Male	76 (66%)	52 (61.9%)
Children aged 0-2 years	79 (66%)	57 (61.3%)
Children aged 3-5 years	50 (69%)	44 (62.9%)
Children 9-59 months who received the measles vaccination	**(n=189)**	**(n=161)**
Overall	154 (82%)	118 (73.3%)
Female	60 (80%)	55 (70.5%)
Male	92 (83%)	63 (75.9%)
Children aged 0-2 years	97 (84%)	77 (73.6%)
Children aged 3-5 years	57 (78%)	51 (72.9%)
Participants who have received oral cholera vaccination	**(n=961)**	**(n=873)**
Overall	767 (83%)	715 (82%)
Female	431 (85%)	391 (83%)
Male	361 (82%)	325 (81%)
Children aged 0-2 years	48 (90%)	36 (80%)
Children aged 3-5 years	97 (78%)	93 (83%)
Households having access to healthcare within one hour by their normal means of transportation	**(n=131)**	**(n=125)**
Yes	123 (93.9%)	108 (86.4%)

The survey findings also revealed low vaccination coverage for the assessed vaccines (measles, vitamin A supplementation, and cholera) across the surveyed population groups, particularly among returnee households. This may be attributed to the poor physical accessibility in most parts of Old Fangak.

- Measles vaccination coverage among children under five was 72% in returnee households and 82% in HC and IDP households.
- Vitamin A supplementation coverage for children under five was 62% among the returnees and 67% among HC and IDPs.
- Cholera vaccination coverage was 82% among returnees and 83% among individuals from HC and IDPs.

These coverage levels fall below the recommended SPHERE standards of 95% for measles vaccination and vitamin A supplementation and 90% for cholera vaccination.[20]

[20] Sphere standards handbook 2018

Shelter

Table 11 - Results of Shelter Indicators

Household-level data collection		
Types of shelter	**HC and IDP (n=131)**	**Returnee (n=163)**
Rakooba (Rectangular-shaped grass roof house)[21]	109 (83%)	90 (72%)
Tukul[22]	19 (15%)	27 (22%)
Sleeping in the open	2 (2%)	7 (6%)
Shelter issues		
Major damage to the roof	64 (50%)	82 (70%)
Damage to walls	46 (36%)	39 (33%)
Damage to windows	42 (33%)	32 (27%)
Shelter is too hot	34 (26%)	44 (37%)
Lack of privacy inside the shelter	32 (25%)	41 (35%)

Shelter conditions remain a significant concern, particularly among returnee households. Assessment findings indicate that 72% of returnee households were living in Rakooba-type shelters, while 22% lived in tukuls. Similarly, 83% of the HC and IDP households reported living in Rakooba shelters and 15% in tukuls. Among the returnee households, 70% reported major roof damage with a risk of collapse, followed by insufficient space (48%), shelter being too hot (37%), and a lack of privacy (35%). For HC and IDP households, 50% indicated roof damage with a risk of collapse, damage to walls (36%), damage to windows or doors (33%), and shelters being too hot (26%).

KIs also highlighted widespread overcrowding in shared shelters or host households, attributed to the influx of IDPs from nearby villages and returnees from Sudan. Many displaced families and returnees were found living in abandoned buildings and government houses or sharing already tight space with relatives or friends. These shared living arrangements compromised privacy and increased exposure to shelter-related vulnerabilities, with many of the shelters also reported as damaged. KIs further identified a lack of plastic sheeting as the primary barrier to improving shelter conditions. Additional challenges included the unavailability of construction materials in nearby areas and the lack of land for new construction, which particularly affected returnees and IDPs.

When asked about sleeping conditions, 98% of returnee households reported that members were able to sleep inside the shelter, albeit with challenges, compared to 85% of HC and IDP households. Among the returnees, the main issues reported were insufficient space (73%) and inadequate space for sleeping conditions, such as leaks, noise, and sleeping in non-designated areas (70%). Similar conditions were observed among HC and IDP households, with 80% reporting insufficient space and 58% citing inadequate sleeping conditions.

[21] A **rakooba** is a temporary or semi-permanent shelter structure, usually built using wooden poles for the frame and covered with materials like grass, plastic sheeting, or iron sheets.
[22] It is typically constructed using local materials such as mud or earth for the walls, wooden poles or branches for support, and a thatched grass roof. Tukuls are often used as permanent or semi-permanent shelters.

DISCUSSION

Despite medium-level severity in health outcomes, as indicated by morbidity rates and unmet health needs, public health conditions in Old Fangak remain highly precarious. The area has a well-documented history of recurrent disease outbreaks, including measles, Hepatitis E, and most recently, cholera. At the time of data collection, an active cholera outbreak further underscored Old Fangak's vulnerability. Between 28 September 2024 and 28 March 2025, a total of 891 cholera suspected cases and 28 deaths were reported, with Old Fangak Payam emerging as the second most affected area in the county. Coverage for cholera vaccination remains below the SPHERE standards. Similarly, measles vaccination and vitamin A supplementation coverage also fall below SPHERE standards. Lastly, apart from MSF's medical services, drugs and consultation remain largely unaffordable for most residents.

Persistent risk factors such as poor sanitation, overcrowded living conditions, and stagnant floodwaters continue to heighten the likelihood of future public health emergencies. These environmental risks are compounded by high rates of malnutrition and morbidity, particularly among children. The July 2024 SMART survey reported a GAM rate of 16.8% (95% CI: 13.2–21.0%) across the county, including Old Fangak among the sampled clusters. Moreover, morbidity levels among children under five were notably high, affecting 38% of returnees and 51% of the host community and IDP populations.

While most households report access to clean drinking and cooking water, hygiene and sanitation conditions remain poor. Areas surrounding water points are often unclean, and some are still surrounded by floodwaters, posing contamination risks. Findings indicate that 95% of returnee households and 90% of HC and IDP households lack access to soap, increasing the risk of disease transmission. This risk is further compounded by widespread open defecation, reported by 74% of returnee households and 53% of households from HC and IDP. These conditions significantly increase the risk of infectious disease outbreaks.

Poor household food consumption was observed across all population groups, with particularly severe outcomes among returnee households. Findings suggest consumption gaps for returnee households may be indicative of IPC AFI Phase 4, with pockets of returnee population potentially facing food gaps indicative of IPC AFI Phase 5 and IPC Phase 3 for HC and IDP households. Both groups relied heavily on unsustainable food sources, such as wild food gathering and had limited to no access to livelihood sources. These wide food consumption gaps can contribute to elevated malnutrition risk, particularly among vulnerable groups. When combined with the widespread poor sanitation and hygiene conditions, these food gaps also make the community more susceptible to infectious diseases, as the public health situation deteriorates further.

The public health and food security situation in Old Fangak is expected to worsen with the onset of the rainy season. Food insecurity is already high, especially among returnees from Sudan, due to prolonged flooding that has made farming impossible. Households now rely on fishing, wild food gathering, and humanitarian food assistance. KIs specifically noted that as water levels rise during the rainy season, even the limited coping strategies currently sustaining households, primarily water lilies and fish, become less available and cannot replenish as quickly as households consume them, creating an alarming food access gap during the upcoming lean season.

As the lean season approaches, these options will increasingly become unsustainable, leaving households to rely more heavily on the market and HFA. Rising inflation and limited purchasing power further restrict access to food, increasing the risk of acute malnutrition. Meanwhile, ongoing displacement is worsening overcrowding and straining already overstretched health and WASH services. These challenges, compounded by funding shortfalls, threaten the continuity of life-saving

support. Urgent, coordinated multisectoral action is needed to prevent further deterioration in health and nutrition outcomes.

Table 12 - Comparison between IPHRA Core Indicator Thresholds

Category	Domain	Evidence	Standard (If applicable)	Severity	
				Returnees	HC and IDP
Health Outcomes	Mortality	**Not available**	1 death per 10,000 per day 2 under-5 deaths per 10,000 per day		
	Malnutrition	Global Acute Malnutrition (GAM) was 16.8% (95% CI: 13.2–21.0) (July 2024, external source)	>10% GAM by MUAC	**High**	
	Morbidity	12.9% of returnee individuals with healthcare needs in the 2 weeks prior to data collection (9.3% of children under 5 years old with health needs) 11.5% of HC and IDP individuals with healthcare needs in the 2 weeks prior to data collection (12.7% of children under 5 years old with health needs)	>20% of people with any health care need in 2 weeks	**Medium**	**Medium**
Direct Contributing Factors	Household Food Consumption	Food security outcomes are indicative of an IPC AFI Phase 4 Emergency classification, with some population experiencing IPC 5 for returnee households (70% "Moderate" hunger, 20% "Severe", 10% "Very Severe") For HC and IDP, food security outcomes are indicative of an IPC AFI Phase 4 Emergency (78% "Moderate" hunger, 15% "Severe", 4% "Very Severe")	20% Severe and Very Severe hunger Very few households acceptably diverse food consumption (<40% Acceptable FCS or High HDDS) >80% Household convergence Matrix classification of P3, P4 or P5 Survival food sources or mainly for aid	**High**	**Medium**
	Household Water Security	55.2% of returnee households and 67.2% of HC and IDP have at least 2 water containers for collection and storage	At least 2 water containers per household for collection and storage	**Medium**	**Medium**

	Household water consumption (quality)	97.6% of returnee households and 99.3% of HC and IDP households relied on improved water sources as their primary water source	Most households have access to an improved water source (80%)	**Low**	**Low**
	HH Income and Coping	97% of returnee households and 94% of HC and IDP relied on emergency livelihood coping strategies. 79.2% of returnee households and 58% HC and IDP households reported that the main source of income is selling collected firewood, charcoal and wild foods	Most households are relying on humanitarian assistance, begging, or other severe coping strategies (>50%); Exhausted survival income sources or mainly rely on aid	**High**	**High**
	Living Conditions	69.5% of returnee households and 49.6% of HC and IDP households report major damage to shelter. KIs reported overcrowding in Old Fangak due to the influx of returnees and IDPs.	Percentage of shelters and/or settlement sites that are located in areas with no or minimal known natural or man-made threats, risks and hazards. 45 square metres for each person in camp-type settlements, including household plots. 30 square metres for each person, including household plots, where communal services can be provided outside the planned settlement area Minimum 3.5 square metres of living space per person, excluding cooking space, bathing area and sanitation facility. 4.5–5.5 square metres of living space per person in cold climates or urban settings where internal cooking space and bathing and/or sanitation facilities are included	**High**	**Medium**
Indirect Contributing Factors	Natural and built environment (Sanitation)	74.4% of returnee households reported open defecation and 52.7% for HC and IDP households.	No human faeces in the living environment. Latrines are at least 30m from water	**High**	**High**

			sources; Latrines are at most 50m from shelters		
	Market Functionality	KIs reported that prices of essential staple food are very expensive at the time of data collection (a Malwa of sorghum ranged between 25,000 and 30,000 SSP (approximately 6 USD) – an amount insufficient to sustain a six-member household for even two days).	Availability of critical items Financial accessibility of critical items Damage to market infrastructure or functionality	**High**	**High**
	Health Service Adequacy	86.4% of returnee households and 93.9% of HC and IDP households can access functional health facilities within an hour. 87.1% of returnee households and 88.5% of HC and IDP have access to functional health facilities 73.3% of returnee children aged 9-59 months and 81.5% of HC and IDP received the measles vaccination 62% of returnee children aged 9-59 months and 67.2% of HC, and IDP received the vitamin A supp vaccination 82% of returnee children aged 9-59 months and 82.9% of HC and IDP received the cholera vaccination	Most households cannot access the 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	**Medium**	**Medium**
	Nutrition Service Adequacy	Not assessed			
Assessing Overall Severity for Public Health Classification – base this off the public health outcome indicators (morbidity, malnutrition, mortality) **High** – Indicates the population is currently experiencing emergency		**Medium severity public situation based on the severity of morbidity and malnutrition**			

levels, or risk of emergency levels, of public health outcomes (morbidity, malnutrition, or mortality) **Medium** – Elevated but not necessarily emergency levels of public health outcomes **Low** – Non-emergency or elevated levels of public health outcomes.		[redacted]

CONCLUSION AND RECOMMENDATIONS

The assessment findings in Old Fangak indicate a medium to high severity of public health outcomes and their underlying drivers, as reflected in the Integrated Public Health Analysis table above. The highest priority domains for Old Fangak across all population groups include malnutrition, household food consumption, household income and coping strategies, living conditions, the natural and built environment (sanitation), and market functionality. These conditions were reported to be very severe, especially among the returnee population.

The area remains highly vulnerable to disease outbreaks despite existing health services across all population, with alarming levels of hunger, especially among the returnee population who reported to be experiencing a large food consumption gap. Contributing factors such as overcrowding, stagnant floodwaters, open defecation, and limited access to soap significantly elevate the risk of further public health emergencies. Interventions that specifically seek to reduce malnutrition and morbidity among children under 5 will be critical to improving health outcomes in this specifically vulnerable population. Recommended public health priorities are outlined in the table below as an initial step toward mitigating further deterioration of the public health situation in the next 6 months.

The convergence of these challenges, particularly amid ongoing displacement, insecurity, funding cuts, and the onset of the rainy season, demands urgent and sustained health sector interventions to prevent a further escalation of public health risks in Old Fangak.

Table 13 - Recommendations

Risk of Excess Mortality Dimension	Severity	Period	Recommendation
Morbidity	**Medium**	Medium-term	While overall health needs appear medium (12.9% for returnees and 11.5% for HC and IDPs), it is recommended to sustain the current healthcare service coverage to ensure continued access. Cholera prevention and response, as well as vaccination campaigns for not only cholera but all available vaccines, should be available.

Household Food Consumption	**High**	Short-term	Improve the coverage of FSL interventions by completing the new registration process to ensure the inclusion of vulnerable returnee households and newly arrived IDPs to immediately address urgent food consumption gaps.
Health Service Adequacy	**Medium**	Medium-term	Despite commendable efforts to improve vaccination coverage across the assessed population, all assessed vaccines fall below the Sphere-recommended thresholds. Though fewer mentioned healthcare needs unmet in the two weeks prior to data collection, 43.2% of returnee households and 29.8% of HC and IDP households reported long waiting time for the service, recommend improving health coverage for the far locations.
Sanitation and Hygiene	**High**	Medium-term	Noting that 74% of returnee households and 53% of households from other population groups practice open defecation, and that 95% of returnee households and 90% of host community, IDP, and IDP households lack access to soap and lack of sanitary materials, recommend that sanitation interventions be scaled up in the assessed area,
Livelihoods	**High**	Short term	The majority of households across all population groups reported lacking access to fishing equipment. Provide livelihoods interventions to sustain and improve access to food and livelihoods.
Living Conditions	**High**	Medium-term	Shelter assistance to address the most frequently cited second priority needs by returnees (33.6%) and HC (20%), and more specifically, roof damage (returnees 69.5% and HC and IDP 49.6%) and damage to walls (returnees 33.1% and HC and IDP 35.7%)

ANNEXES

References

1. REACH: Fangak shocks verification missions, Jonglei state, South Sudan, June 2021
2. UNMISS: Thousands of families flee rising waters in Fangak as extraordinary flooding hits South Sudan, September 2024.
3. Radio Tamazuj: Thousands flee Fangak villages over floods, August 2024
4. South Sudan Cholera Outbreak: Situation Report #1, October 30, 2024
5. South Sudan: IOM-UNHCR. Population flow monitoring dashboard.
6. South Sudan: Acute Food Insecurity Situation for September - November 2023 and Projections for December 2023 - March 2024 and for April - July 2024
7. **IDP returnees**: HH who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognized state border and who has since returned to their homes or places of habitual residence.
8. IOM- Key migration terms
9. Integrated Nutrition and Mortality SMART Survey, Fangak County, Jonglei State – July 2024 (on file with REACH
10. At the time of data collection, most respondents were female, as men were typically engaged in livelihood activities such as fishing or spending time in the market. As a result, women were more likely to be at home and available for interviews, which was contextually accurate.
11. Ibid
12. Among the 1,936 individuals surveyed, 53.2% were female and 46.8% were male. The variable represents the sex of individuals as reported by the respondents themselves.
13. The Multi-Sectoral Survival Minimum Expenditure Basket (MSSMEB) represents the minimum culturally adjusted group of items required to support a six-person South Sudanese household for one month.
14. REACH South Sudan: Joint Market Monitoring Initiative (JMMI) dashboard
15. Daily agricultural labor (farm, vegetable, garden, etc.) and casual daily labor (petty trade, etc.) were also reported at 6.1%.
16. Percentages do not add up to 100% because of slight discrepancies caused by rounding.
17. IPC AMN Technical Manual Version 3.0
18. A **rakooba** is a temporary or semi-permanent shelter structure, usually built using wooden poles for the frame and covered with materials like grass, plastic sheeting, or iron sheets.
19. It is typically constructed using local materials such as mud or earth for the walls, wooden poles or branches for support, and a thatched grass roof. Tukuls are often used as permanent or semi-permanent shelters.

Analysis

The household data were cleaned and analysed using IPHRA R scripts, which were developed by IMPACT HQ. Various statistics have been computed on the data, including percentages, means, and medians. The analysed data were presented in both tabular and Excel files. KIIs 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

The IPHRA methodology is intended to be a lightweight method to assess the most key public health outcomes and service coverage indicators compared to other more robust methods. Given the suggested IPHRA methods, there are several key limitations:

- **Not a causal analysis** – The IPHRA method intends to understand the severity of public health needs and service gaps, however given this focus it may not fully explain the reasons or causes of the results. Some analysis and triangulation with qualitative components may give an indication, but it will likely be limited.
- **Not-generalizable** – Cluster sampling approaches are not recommended for IPHRA assessments. The allowance of purposive sampling means that results (although representative per strata) shouldn't be generalized to a wider population beyond the sites and facilities assessed.
- **Likely not reaching saturation** – For the qualitative components, sample sizes are likely not adequate to reach a full saturation of responses in the population. The intent of these is 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.