

Health

At the time of data collection, **morbidity levels were critically high**, with more than half of the assessed population (**53%**) reporting illness in the two weeks prior to data collection, indicating a substantial disease burden across communities. **Children under five were disproportionately affected**, with (**61%**) reported sick during the same period.⁷ This means that 6 out of every 10 children had been ill in the past two weeks, indicating a very high morbidity rate. The most reported symptoms, including fever, diarrhoea, and respiratory infections were consistent with poor WASH conditions, overcrowding, and limited access to timely treatment.⁸

Of the individuals with a reported illness at the time of data collection, (**13%**) reported **being unable to access healthcare**, reflecting barriers related to cost, distance, and service availability.

Relatively high coverage of preventive health services, including cholera, measles vaccinations and vit A supplementation, indicates that basic outreach services were functioning at the time of data collection, likely supported by humanitarian partners, and may explain the relatively lower U5MR, and moderate levels of acute malnutrition observed. However, despite relatively strong

Vaccination Coverage

- 70%** of individuals who receive **cholera vaccination**
- 79%** of children aged 9-59 months who received **measles vaccine**
- 89%** of children aged 6-59 months who received **vitamin A supplementation** in the 6 months prior to data collection

preventive service coverage, access to healthcare remained uneven and constrained, particularly for curative services. health services' availability, **with only one primary healthcare facility serving the assessed area** and minimal outreach to remote island communities.⁸

Mortality

Findings show an elevated **crude death rate (CDR)** of **1.21 deaths per 10,000 people per day, exceeding the emergency threshold** and indicating that **mortality levels were already above expected baseline levels with significant excess mortality occurring at the time of data collection**. While this estimate already signals critical conditions, the actual crude mortality rate may be higher. In contrast, the **under-five mortality rate (U5MR)** was estimated at **0.76 deaths per 10,000 children per day**; however, this

estimate is less reliable due to the small number of reported deaths. Analysis of mortality patterns indicates that approximately 95% of deaths were due to non-trauma causes. 65% of the reported deaths occurred at the current place of residence, while 35% took place in health facilities.

Food Security and Livelihoods

Findings presented in this section reflect conditions at the time of data collection and should be interpreted in light of the April 2026 IPC updated analysis and the ongoing lean season (April–August 2026).

At the time of data collection, food security conditions in Nyal Payam were severe, with a large share of the population facing Emergency levels of acute food insecurity (IPC Phase 4).^{4,5} Prolonged flooding destroyed livelihoods, disrupted food production, and severely constrained markets and humanitarian access.^{3,9}

Food Consumption Score (FCS)¹⁰



7% Acceptable
46% Borderline
47% Poor

Household Hunger Scale (HHS)¹¹



0% None
0% Little
47% Moderate
24% Severe
29% Very Severe

As a result, (**89%**) of households identified **food assistance as their top priority**. In terms of FCS, nearly half of households reported severe food consumption gaps (**47%**) with a **poor FCS** and the other half concerning food consumption gaps (**46%** with **borderline FCS**). Over half of households reported **very severe (29%)** or **severe (24%)** hunger (HHS). Data collection took place during a period when conditions were expected to improve; moreover, with the onset of the lean season, food security is likely to worsen further. Findings suggest that pockets of households could be experiencing food consumption gaps consistent with IPC AFI Phase 5 conditions.

During KI interviews, respondents attributed these outcomes to the prolonged and compounding impacts of chronic flooding, which has submerged farmland for six to seven consecutive years. As a result, local food production has effectively collapsed, including the cultivation of sorghum, maize, vegetables, and other staple crops. KIs consistently reported that farmland has

Using CDR and GAM to assess severity⁶

The **Crude Death Rate (CDR)** and **Global Acute Malnutrition rate (GAM)** are two key indicators used to measure the severity of a humanitarian crisis. The CDR is assessed against the global World Health Organization (WHO) 'emergency threshold,' which is **one death per ten-thousand people per day**. Other definitions:

Under-Five Death Rate (U5DR): The number of deaths among children under five years of age per 10,000 children per day.

disappeared entirely, leaving households without access to traditional food sources. Concurrently, livestock holdings have collapsed, with cattle, goats, and sheep dying from flood-related diseases or being displaced to distant dry areas. Most of the KIs reported that households no longer own animals for milk, meat, or sale, further eroding food availability and income.

With both crop and livestock production gone, households had relied almost entirely on markets, wild foods (such as water lilies and keew), small-scale fishing, and occasional poultry. These sources were low in calories, seasonal, and unreliable. **Markets** had been identified as the main food source (**42%**), followed by **wild food gathering** (**24%**), indicating that many households had lost access to their usual livelihoods and food sources.

Staple food prices had far exceeded household purchasing power for most households. For example, at the time of data collection, a 50kg sack of maize flour was at cost 540,000 SSP (**85 USD**). Household incomes had remained minimal, and market access had often been restricted. Humanitarian food assistance had been irregular and insufficient. The last general food distribution (GFD) had taken place in August 2025, with rations lasting only one to two weeks.

Livelihoods and Coping Strategies

Households heavily relied on natural resources and informal labour to meet their basic needs. The sale of **firewood, charcoal, and wild foods** remains the dominant primary income source for (**56%**) of households, followed by **fishing** (**15%**), **small trade** (**8%**). Qualitative findings from community members and leaders indicated a significant reduction in traditional livelihood activities, largely attributed to prolonged flooding and the loss of productive assets. With the traditional livelihood base eroded, only a small number of fragile and low return activities remain. Fishing related trade emerged as the most frequently reported activity, while other sources such as petty trade, local brewing, small scale crop or vegetable sales, firewood and charcoal extraction, harvesting fencing materials, poultry keeping, and canoe transport, were mentioned only sporadically. These activities are practiced by very few individuals and contribute minimally to household or community income.

Nutrition

At the time of data collection, the nutrition situation among children aged 6–59 months was serious. Screening of **372** children aged 6–59 months using Mid-Upper Arm Circumference

(MUAC) indicated a **Global Acute Malnutrition (GAM)** prevalence of **6.7%** (95% CI: 4.3–9.4), including **5.6% moderate** and **1.1% severe** acute malnutrition,¹³ reflecting a serious nutrition situation. This suggests widespread vulnerability, driven by high levels of illness, severe food insecurity, and poor WASH conditions. Based on trends in South Sudan, the true prevalence of acute malnutrition is likely above 10%.

Breast milk accounted for over half (**52%**) of reported food consumption, showing its central role in infant diets. However, **intake of other nutritious foods was low**, including dairy (9%) and eggs (5%), pointing to **poor dietary diversity among children** receiving complementary foods. **Key barriers** included **lack of money** (**38%**) and **high food prices** (**35%**), as well as limited knowledge of child feeding practices (14%) and child illness (5%). Overall, **this indicates low attainment of the Minimum Acceptable Diet (MAD)**, meaning many children are not receiving adequate diets in terms of diversity, quality, and quantity.

Water, Sanitation & Hygiene (WASH)

WASH conditions in Nyal at the time of data collection were critically inadequate and posed a significant public health risk. Despite relatively high reported **access to improved water sources** (**79%**), water safety is severely compromised, with the majority of households **consuming untreated water** (**79%**) and many communities, especially outside Nyal town, relying on contaminated flood water and swamps.

Sanitation conditions were critically poor across the assessed areas. A majority of households (**83%**) reported having no access to a functioning latrine, resulting in widespread open defecation. Field observations confirmed open defecation occurring within homesteads, along the dyke, and directly into surface water sources, the sources relied upon by at least 20% of the population for drinking. KIs noted that the collapse of latrine structures is driven largely by flooding. Because latrines are typically constructed on lower ground, many have been submerged or destroyed. KIs reported having no tools, materials, or financial means to rebuild even basic emergency latrines. Floodwaters have also restricted movement, preventing access to potential construction materials sites and hindering rehabilitation efforts.¹²

Hygiene conditions are critically poor across all assessed locations. Almost all households (**97%**) lack access to soap, while key informants reported a widespread absence of hygiene supplies, including menstrual hygiene materials for women

95% Confidence Interval (CI): The range within which the true value is likely to fall.

Mid-Upper Arm Circumference (MUAC):¹³ A measure of acute malnutrition based on arm circumference.

GAM (Global Acute Malnutrition): Percentage of children who are wasted (too thin for their height) or have nutritional oedema. The GAM emergency threshold is **15%**, indicating the proportion of children six to fifty-nine months who are acutely malnourished.

SAM (Severe Acute Malnutrition): The most serious form of acute malnutrition, associated with a high risk of death.

and girls. Informants also highlighted unsafe disposal of child faeces due to flooding, collapsed latrines, and inadequate sanitation facilities, with waste often discarded in open areas.

These conditions increase environmental contamination, health risks, and protection concerns.

Conclusion

At the time of data collection (February 2026), the public health situation in Nyal Payam was critical, driven by **elevated mortality, widespread preventable illness, extreme food insecurity, unsafe WASH conditions, and limited access to healthcare** put the population, especially children under five years old, at high risk of excess morbidity and mortality.

These outcomes were driven by the interaction of chronic flooding, livelihood collapse, physical isolation, and severely constrained humanitarian access. As the lean season progresses, the window to prevent further deterioration is narrowing. Immediate and sustained scale up of multi-sectoral humanitarian assistance is urgently required. Priority actions include expanding emergency food assistance, strengthening healthcare availability and referral services, scaling up nutrition interventions, and implementing life saving WASH support. Particular attention must be given to isolated island communities, which continue to face the most severe access constraints and the highest levels of risk.

Timely, coordinated, and adequately resourced interventions can still prevent avoidable deaths and stabilise public health outcomes in Nyal Payam during the lean season (April to August). Failure to act would result in further deterioration and continued loss of life from preventable causes.

Recommendations

Risk of Excess Mortality Dimension	Severity	Period	Recommendation
Household Food Consumption	High	Immediate (lean season 2026)	During the ongoing lean season (April–August 2026), improve the coverage of FSL interventions by scaling up emergency food assistance with adequate coverage, frequency, and ration sizes to address extreme acute food insecurity (IPC AFI Phase 4 with pockets of Phase 5)
Livelihoods	High	Immediate (lean season 2026)	Most households across all population groups reported lacking access to fishing equipment. In the short term (lean season 2026), provide livelihoods interventions like fishing nets and canoes to sustain and improve access to food and livelihoods.
Sanitation and Hygiene	High	Immediate (lean season 2026)	Noting that 83% of the households practice open defecation, and that 97% households lack access to soap and lack of sanitary and materials. During the ongoing lean season (April–August 2026), provide emergency sanitation and hygiene supplies, including soap, to reduce diarrhoeal disease and prevent outbreaks during the lean season
Health Service Adequacy	Medium	Immediate (lean season 2026)	Noting that 45% of households reported to reach a healthcare facility more than 1 hour. In the immediate term, during the lean season, prioritize health service interventions that will increase access in the assessed area. Particular attention could be paid to children under 2, whose measles vaccination and vitamin A supplementation rates were lower than the recommended thresholds.
Nutrition service adequacy	Medium	Immediate (lean season 2026)	Given the high rates of children with malnutrition and low rates of CMAM coverage, During the ongoing lean season (April–August 2026), scale up nutrition service interventions in the assessed population.

Methodology Overview

Between 31 January and 10 February 2026, REACH conducted a mixed-methods assessment in Nyal and surrounding islands (Meer, Nyijam, Nyoat, and Jiathual), including 301 household surveys and 10 key informant interviews (KIIs). Findings are representative of the assessed population but not generalizable to the wider Panyijiar County. These locations were treated as a single stratum due to shared vulnerabilities, including chronic flooding, limited market access, high food insecurity, poor WASH

conditions, and restricted access to health services.

A two-stage stratified simple random sampling approach was used. First, the sample was allocated proportionally to settlement population sizes. Second, households were selected randomly using GPS-generated points, with three households surveyed near each point.

The sample size was primarily determined based on mortality estimation, using standard assumptions (crude death rate of 1/10,000/day, ± 0.5 precision, 90-day recall period, household size of 6, and 5%

non-response), resulting in a target of 300 households. This sample was sufficient to also meet requirements for MUAC-based nutrition analysis.

Qualitative data collection included KIIs with community leaders, partners, and community members, complemented by a secondary data review.

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](#).

Endnotes

1. Conflict Sensitivity Resource Facility (CSRf), Maiwut County Profile, 2021 (yearly updated). Available [here](#).
2. South Sudan United Nations Office for the Coordination of Humanitarian Affairs (OCHA), South Sudan Humanitarian Update 1-17 April 2026. Available [here](#).
3. United Nations Development Programme (UNDP), Climate Security Risks Brewing In South Sudan As Floods Escalate In Many Parts of The Country: A Case of Panyijiar, September 2025. Available [here](#).
4. South Sudan: IPC Acute Food Insecurity and Malnutrition Snapshot | September April - July 2026, April 2026. Available [here](#).
5. South Sudan: IPC Acute Food Insecurity and Malnutrition Snapshot | September 2025 - July 2026, November 2025. Available [here](#).
6. [IPC Famine Classification- Special Additional Protocols](#).
7. [Overview of IPC Acture Malnutrition Protocols](#).
8. World Health Organization (WHO), Public Health Situation Analysis (PHSA) South Sudan, October 2025. Available [here](#).
9. OCHA: South Sudan: Floods Snapshot (As of 13 November 2025). Available [here](#).

10. The [FCS](#) measures dietary diversity and frequency over a 7-day recall period, combining the consumption of different food groups into a single score.

11. The [Household Hunger Scale \(HHS\)](#) is a household food deprivation developed to allow for cross-cultural comparisons. It classifies households into five categories, None (indicative of IPC AFI Phase 1), Slight (Phase 2), Moderate (Phase 3), Severe (Phase 4) and Very Severe (Phase 5). WFP, VAM Resource Centre.

12. UN Children's Fund (UNICEF): [Sanitation](#) is essential to children's survival and development.

13. Food Security Cluster (FCS): [FSC Indicator Handbook](#): Proxy Global Acute Malnutrition by MUAC.



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ABOUT REACH

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