



Integrated Food Security Phase Classification
Evidence and Standards for Better Food Security and Nutrition Decisions

20²⁰⁰⁴⁻²⁰²⁴ YEARS
informing decisions

FAMINE REVIEW COMMITTEE:

COMBINED REVIEW OF: (i) THE FAMINE EARLY WARNING SYSTEM NETWORK (FEWS NET) IPC COMPATIBLE ANALYSIS FOR IDP CAMPS IN EL FASHER, NORTH DARFUR; AND (ii) THE IPC SUDAN TECHNICAL WORKING GROUP ANALYSIS OF ZAMZAM CAMP (NORTH DARFUR), SUDAN

CONCLUSIONS AND RECOMMENDATIONS

July 2024



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The Integrated Food Security Phase Classification (IPC) Famine Review Committee (FRC) acknowledges the notable efforts made by FEWS NET, which demonstrated high levels of commitment in responding to the FRC's requests for additional information and clarifications during the review, which was highly appreciated.

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1. EXECUTIVE SUMMARY

Key findings

- After a thorough review of the evidence, the FRC finds it plausible that IPC Phase 5 (Famine) is ongoing in July 2024 in Zamzam camp near El Fasher town. The FRC concludes that IPC Phase 5 (Famine) conditions will continue into the August to end of October projection period.
- While uncertainty remains, the FRC finds that the likelihood of famine remains high in Zamzam camp after October and that many other areas throughout Sudan remain at risk of Famine as long as the conflict and limited humanitarian access continue.
- The FRC highlights that similar conditions are likely prevailing in other IDP sites in the El Fasher area, notably in Abu Shouk and Al Salam camps and underlines the urgent requirement to assess the presence and size of populations in these areas along with their food security, nutrition, and health conditions as soon as possible.

In this report, the Famine Review Committee (FRC) provides its analysis and conclusions for the current and projection period classifications for the Zamzam IDP camp in North Darfur, Sudan. The FRC has carefully reviewed the recent IPC analyses conducted separately by FEWS NET and the Sudan IPC Technical Working Group (TWG), and this report provides 'plausibility assessments' of these findings.

The FRC is limiting its analysis and conclusions specifically to the Zamzam IDP camp due to the specific requests for FRC activation, limited data, and recent information from key informants on this area. It is essential to note that although this report focuses on Zamzam camp, other areas of Sudan, both within Darfur and elsewhere, are potentially experiencing Famine, and will remain at risk of Famine as long as the conflict continues, and humanitarian access is denied for the provision of aid at the scale and urgency necessary. Access to extremely vulnerable groups for data collection and analysis of their wellbeing and needs is essential.

The FRC utilized a wide range of methods and data sources to build the convergence of evidence case for its conclusions. Unfortunately, due to the extreme lack of humanitarian access there have not been very recent direct measures and data collection on food consumption, nutrition, and mortality. In accordance with the IPC protocols, part of the FRC analysis extrapolated data from recent months and other parts of Darfur. This was combined with a rigorous analysis

of drivers, trends, and contextual analysis to help build the evidence base for Zamzam. Additionally, the FRC utilized market data, humanitarian aid data, satellite imagery, field reports, technical reports, and many key informant interviews with technical experts and Sudanese people in areas under review.

The main drivers of Famine in Zamzam camp are conflict and lack of humanitarian access, both of which can immediately be rectified with the necessary political will. Famine conditions will only worsen and be further prolonged if conflict continues and humanitarian and full commercial access is not made possible. As with any Famine, there is a multi-sectoral collapse, and basic human needs for health services, water, food, nutrition, shelter, and protection are not being met. Specific recommendations for various stakeholders are provided in this report.

The FRC commends both FEWS NET and the Sudan TWG for their dedication to rigorous and neutral IPC analysis. The FRC encourages careful monitoring of the situation both in Zamzam camp and in other areas at risk of Famine, and specifically recommends an updated IPC analysis to be conducted in September. The situation is rapidly evolving, and analysis processes need to be agile and dynamic enough to meet the challenges of the rapidly changing situation, as well as the very challenging access conditions for data collection.

Key results

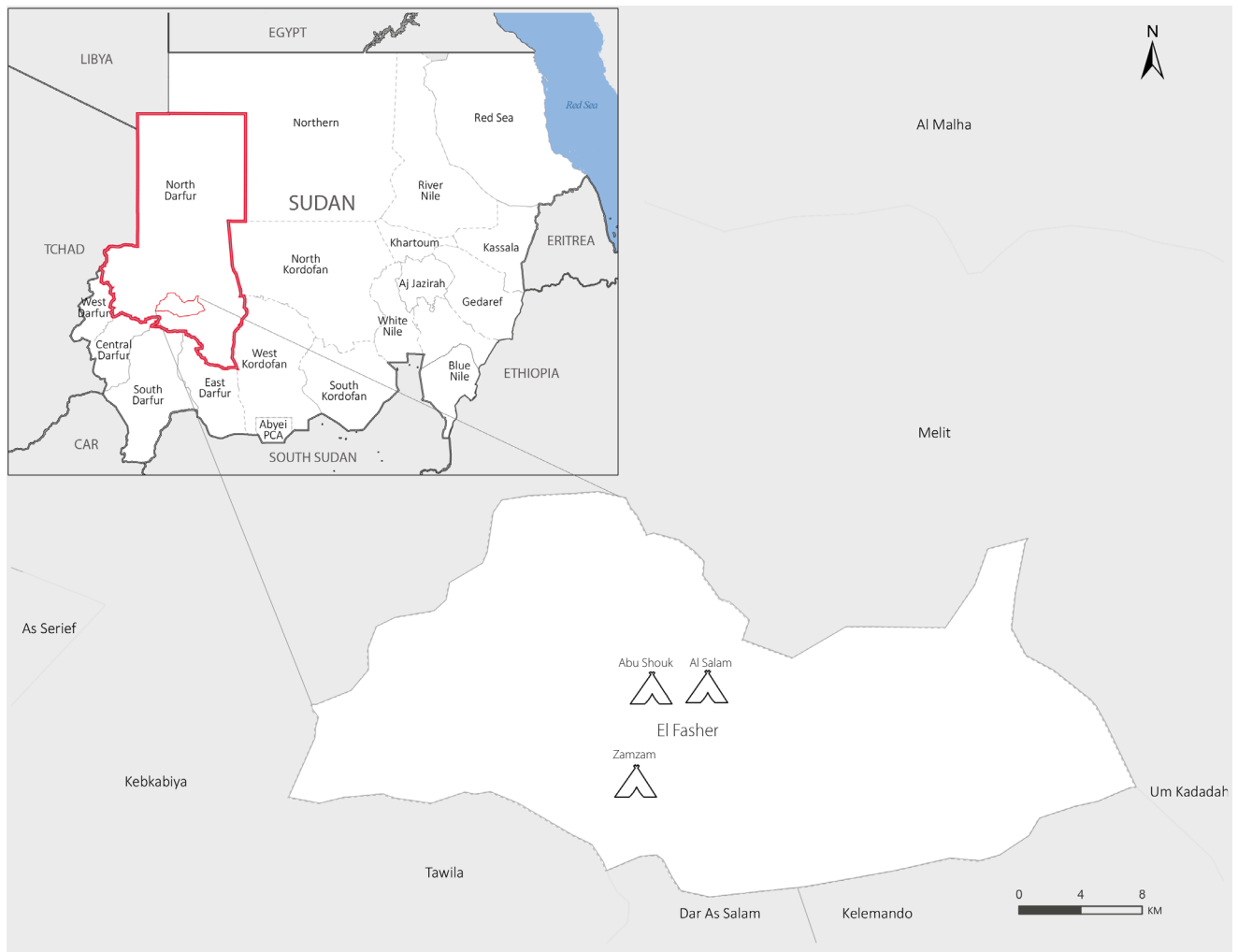
The main conclusions of the FRC are summarized in Table 1.

Table 1: Key Conclusions from the FRC on the Acute Food Insecurity (AFI) Classifications under Review

Unit of Analysis	Analysis period & classification submitted to the FRC	FRC Conclusion
IPC TWG: Zamzam camp	Current (April – May 2024) IPC AFI Phase 4 (Emergency) 10 percent households classified in Catastrophe (IPC Phase 5) and 40 percent in Emergency (IPC Phase 4).	- In Zamzam camp, for the April to May period, the FRC finds the TWG classification, IPC AFI Phase 4, to be plausible. The situation has likely deteriorated since April-May given the evolution of the conflict, displacement, humanitarian access, and seasonality. The FRC finds the FEWS NET analysis in June plausible. - In Zamzam camp, in July, the FRC finds it plausible that Famine (IPC Phase 5) is ongoing. - In Zamzam camp, in the August to October projection period, the FRC finds it plausible that Famine (IPC Phase 5) will persist. - Given all the uncertainty, notably on the upcoming harvest season, the current rainy and lean season, the evolution of the conflict, and the level of humanitarian and commercial access, the FRC is unable to make a determination on the plausibility of FEWS NET's projection for the period from November to January 2025 in Zamzam camp. However, the FRC finds that the likelihood of famine continuing remains high. - The FRC accepts the logic of FEWS NET's inclusion of Abu Shouk and Al Salam camps in their findings, though due to a lack of outcome data and some uncertainty about the population status and size, the FRC recommends not to classify these areas; though highlights the high likelihood of similar conditions prevailing in other IDP sites in the El Fasher area. - The FRC further underlines the urgent requirement to assess the presence and size of populations in these areas along with their food security, nutrition, and health conditions as soon as possible. - The FRC also shares the concerns raised by the Sudan TWG and FEWS NET on other areas of concern outside El Fasher and agree that regular monitoring is needed. - Conditions similar to Zamzam could be present in other areas with high concentrations of IDPs and refugees like the IDP settlements highlighted in the TWG risk of Famine analyses.
	1st Projection (June-September 2024) IPC AFI Phase 4 (Emergency) 15 percent of households classified in Catastrophe (IPC Phase 5) and 45 percent in Emergency (IPC Phase 4). Risk of Famine	
	2nd Projection (October 2024 - February 2025) IPC AFI Phase 4 (Emergency) 10 percent of households classified in Catastrophe (IPC Phase 5) and 40 percent in Emergency (IPC Phase 4). Risk of Famine	
FEWS NET: Zamzam, Abu Shouk, and Al Salam IDP Camps	Current (June-July 2024) IPC AFI Phase 5 (Famine) with reasonable evidence	
	Projection (July-August 2024 - January 2025) IPC AFI Phase 5 (Famine) with reasonable evidence	



Map 1. Map of North Darfur and El Fasher locality including the IDP camps under review



2. FAMINE REVIEW PROCESS

The FRC may be activated under four different scenarios as detailed in the IPC Famine Guidance Note¹. The review by the FRC is a neutral and independent process aimed at supporting IPC quality assurance and ensuring technical rigour and neutrality of the analysis.

Between end of June and July, the FRC received two activation requests for displaced populations near the town of El Fasher in North Darfur. One from FEWS NET for an IPC compatible analysis conducted on three IDP camps, and a second from the IPC Global Support Unit (following a decision by the IPC Global Steering Committee) on the analysis conducted by the Sudan IPC TWG on one IDP camp.

In June 2024, FEWS NET conducted an IPC compatible analysis for Sudan and classified the displaced population in Zamzam, Abu Shouk and Al Salam camps in El Fasher locality in IPC Phase 5 (Famine, with reasonable evidence) for the current (June 2024) and projected period (July 2024 through January 2025).

This classification resulted in the activation of the FRC for a plausibility assessment based on the IPC Technical Manual 3.1 which states *that Famine reviews are mandatory for both IPC products and IPC compatible products*. The FRC held an initial consultation with FEWS NET regarding their submission. As per the IPC protocols, following the formal activation, a multi-partner Famine Review Preparation Team (FRPT) was established, which conducted a preliminary review of the FEWS NET analysis and presented its findings to the Famine Review Committee. The FRC analysed all the evidence made available during the review and proceeded with a series of key informant interviews in order to gain an in-depth understanding of the context and situation on the ground.

In June, the IPC Global Steering Committee agreed to publish the Sudan IPC TWG analysis due to concerning outcomes of the analysis across Sudan. While in July 2024, a Famine Review was also activated by the IPC Global initiative for the IPC AFI analysis conducted by the IPC TWG of Sudan after acknowledging the presence of evidence above IPC Phase 5 (Famine) thresholds in Zamzam IDP camp.

To ensure an effective process and considering the similarity of the areas under review, the decision was subsequently made to combine the Famine Review of the FEWS NET analysis and of the IPC TWG into a combined process and report.

It is important to highlight that the FRC conducted its review a few weeks after the completion of the two analyses, considering the latest developments, including the escalation of conflict, large-scale displacements, and other contributing factors. The FRC also considered additional evidence up to the 24 July 2024, which was not included in the previously conducted analyses.

While the Sudan IPC TWG analysis was based on a first projection period from June – September 2024, the FRC opted to assess the current situation as of July 2024 given the Famine Review analytical process, including key informant interviews focused on the current situation as of July, based on the latest developments, as opposed to a retrospective analysis.

Additionally, the FRC defined the projection period from August to October 2024, with the following rationales:

- The projection period defined by the Sudan IPC TWG (June – September 2024) captures seasonality in a normal year with harvests starting in October. The FRC extended the projection period to October, considering the latest developments, including the limitations faced by the displaced populations in Zamzam camp in accessing agricultural areas, and a delayed start to the agricultural planting season.
- FEWS NET projection period (July 2024 – January 2025) captures both the lean season and harvest/post-harvest period, which was considered by the FRC to be non-homogenous considering seasonal patterns and the high volatility of the situation on the ground.

solid evidence or Phase 5 (Famine) with reasonable evidence classifications. (iii) in case the IPC GSU, acknowledging the presence of evidence above Phase 5 (Famine) thresholds, decides to activate the Famine review. (iv) in case, for similar reasons, an IPC global partner officially requests the IPC GSU to activate it.

¹ According to the *IPC Famine Guidance Note*, Famine Reviews are triggered when at least one of the following conditions is met: (i) The country IPC TWG reaches the conclusion that at least one area is classified in Phase 5 (Famine) with solid evidence or Phase 5 (Famine) with reasonable evidence. (ii) in case of a breakdown in technical consensus within the country IPC TWG regarding possible Phase 5 (Famine) with



3. FRC ASSESSMENT OF THE SITUATION AS OF JULY 2024

3.1 Hazards and vulnerabilities

Conflict and displacement: North Darfur and the locality of El Fasher have experienced intense conflict and continued ground operations, particularly since the escalation in April 2024 and continuing throughout May. Towns and farmlands around El Fasher town were heavily impacted by hostilities, with fighting concentrated in and around the town, and entire villages burnt or razed to the ground. Recent satellite imagery analysis identified more than 40 communities located mainly in agricultural areas to the west of El Fasher town as likely targets of arson attacks.

As a result of the intensification of fighting, since May 2024, nearly three hundred thousand people² have fled conflict-affected and partially besieged neighbourhoods of El Fasher town, including the two IDP camps of Abu Shouk and Al Salam, which were largely integrated into El Fasher town. Those fleeing are now largely concentrated in Zamzam camp or fled further to Tawila, Jabal Marrah, Dar El Salam and other neighbouring localities. Increased civilian traffic as well as a significant increase in IDP settlements, was sighted on the main road south from El Fasher town to Zamzam camp.

While no pre-conflict official figure was available, Zamzam camp was estimated to host 300,000-400,000 IDPs before April 2024. With the increased violence, the influx of IDPs fleeing El Fasher town and other areas has likely expanded the camp's population to at least 500,000, with some unconfirmed estimates pointing as high as 800,000. Abu Shouk camp has seen significant displacement with more than half of the population reportedly fleeing from armed groups targeting and settling in this area. Similarly, Al Salam has been reported to be largely emptied. To date, an unknown number of displaced populations reside in Al Salam and Abu Shouk camps.

Conditions of populations fleeing through or into Zamzam camp are extremely poor due to the continued conflict, restricted access to food and basic services like healthcare in El Fasher town, and limited humanitarian food assistance. Populations moving

between El Fasher town and Zamzam camp face difficulties including taxation and insecurity. Financial barriers are preventing many from fleeing El Fasher town more than distance, as the camp is only 12 km away from the town. The road is only accessible a few hours a day and reportedly unsafe to use otherwise. New arrivals to Zamzam camp have limited assets and livelihood opportunities while often lacking the resources to create safe or temporary shelters.

Many population groups from El Fasher town fleeing into Zamzam camp have continued onwards to Nyala, Tawila, Jabal Marrah and other areas benefitting from social, or communal support. However, many of the displaced populations from the existing IDP camps of Al Salam and Abu Shouk, who lack communal or social support in surrounding areas may have largely remained in Zamzam camp. High transportation costs are also hampering movements out of Zamzam camp for some groups, particularly the most vulnerable. Additional security concerns further curtail mobility for specific ethnic groups from El Fasher town, but also from Zamzam camp to destination areas outside of the locality.

After a decrease in hostilities observed in El Fasher town in mid July, shelling has resumed in late July in El Fasher town damaging houses and infrastructure such as the Saudi hospital. To date, no regular and large-scale attacks have hit Zamzam camp. However, insecurity and roadblocks continue hindering the free flow of goods and food commodities into the camp. Uncertainty remains over how the situation will unfold in the coming months.

Access: With the ongoing hostilities in North Darfur, concentrated around El Fasher town, access to the El Fasher locality, has been reduced to a few usable routes from the South or West of the Zamzam camp. Access is largely restricted for all actors, both humanitarian and commercial, due to three key factors: 1) conflict and insecurity, 2) cross-border movement restrictions, and 3) physical road conditions.

Conflict and insecurity continue to shrink the humanitarian space, with access limited to the few actors who are willing and able to continue operating in this unsafe space. While large scale humanitarian operations by the United Nations (UN) and other international organizations are not feasible under these

² IOM, DTM Sudan Focused Flash Alert: Conflict in El Fasher, North Darfur State – Update 003, 7 July 2024.

<https://reliefweb.int/report/sudan/dtm-sudan-focused-flash-alert-conflict-el-fasher-north-darfur-state-update-003-publication-date-07-july-2024>

conditions, local and community organizations, like the Emergency Response Rooms (ERR) are functional. While a trickle of supplies, both food and non-food, is coming in through informal trade, local traders are taking big risks to supply these markets.

Numerous bureaucratic or approval procedures by the armed forces operating in the area hamper the scope and scale of access to the populations in Zamzam camp and the surrounding area. Access to these areas is largely dependent on approvals from armed forces, creating bureaucratic impediments, even for informal traders. Cross-border access from Chad is crucial to reach the people in need in Greater Darfur. While cross-border operations were officially permitted on 5 March 2024, only one of the 11 cross-border routes through Chad and South Sudan into Greater Darfur, West and South Kordofan states is officially open.

To the West, El Tina is the only official cross border route in the Greater Darfur region that is open for the deployment of humanitarian aid. However, the route to El Fasher area becomes impracticable as the road conditions deteriorated in June from the start of the rainy season. Road conditions prevent large trucks from using this route, and insecurity over the 300 km route to the El Fasher locality deter humanitarian and commercial deliveries.

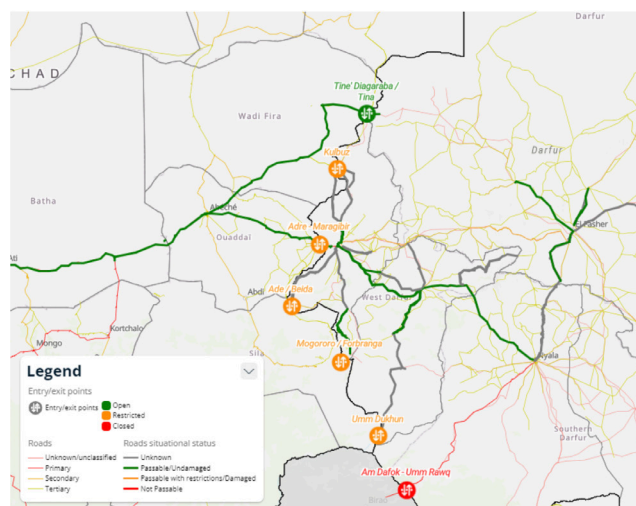
From the East, the road near Mellit and onwards to Port Sudan has been cut off since mid-April and no route is available for humanitarian actors to provide assistance into Greater Darfur. Recent humanitarian convoys trying to pass through this route in July were not allowed to enter.

To the South, the road to Nyala may be open, though the major cross-border routes in Chad and South Sudan are either closed or restricted. Commercial or humanitarian deliveries arriving from Port Sudan or other areas to the East are limited due to the great distance and the ongoing fighting in Al Obeid, Al Jazirah and Sennar states, the major transportation routes westward.

The opening of all six border crossings with Chad, especially Adre, which is a tarmacked road and typically the main route to access this area, would be a decisive factor in the race against time to reach millions of Sudanese in Darfur states and other neighbouring states with critical supplies of food and services.

It is important to note that commercial and informal traders are still accessing difficult-to-reach areas and populations, even irregularly, and may be able to assist populations where current humanitarian operations have significant difficulties.

Map 2. Functionality of cross border routes in July 2024



3.2 Acute Food Insecurity

Food Availability

The major determinants of food availability in Zamzam camp are the amount that is produced locally or brought in through commercial trade or humanitarian aid.

In terms of production in 2023/24, North Darfur was the only state of the five in Greater Darfur benefitting from higher-than-normal production of the staple millet harvest³ (130 percent compared to 2022/23). However, the production was 20 percentage points lower than the 2018-2022 5-year average. For sorghum, North Darfur produced almost double in 2023/24 (178 percent than the previous year) and one third more than the 5-year-average (32 percent). It is counterintuitive that the high-yielding staple production, with benefits from a bumper agricultural year for households, would occur in such a conflict-affected context.

While it is believed that the favourable harvest translated into some income for producers and casual labourers between the end of 2023 and early 2024,

³ FAO, *Crop and Food Security Assessment*, March 2024.

<https://openknowledge.fao.org/items/2c5d2696-0948-4675-bf88-21656ef7b70c>



the protracted IDP population in Zamzam camp traditionally do not stock food, and rather access food in the market via the income generated by daily labour. Additionally, some IDPs reportedly bury food stocks, which is common particularly in times of insecurity.

However, it has now been at least seven months since the millet harvest, five months since the sorghum harvest, seven months since the groundnut and three months since the tobacco harvest. Food availability is decreasing, and the next regular harvest would regularly start three months from now, in October.

The traditional lean season has started and brings seasonal increases in acute food insecurity in a normal year. The prolonged conflict and disruptions to agricultural production are likely to have brought about an early lean season, especially for the displaced populations in Zamzam camp.

While displaced populations fleeing into Zamzam camp may have brought some food stocks, it is unlikely that displaced populations are moving with large food reserves. The quantities and diversity of food commodities in Zamzam camp are expected to be extremely limited and further strained by the major arrivals in between April and June.

The FRC notes the difficulties in estimating remaining stocks from the 2023/2024 season, despite the positively reported agricultural outlook, due to:

- Uncertainty regarding the ability of populations to reach agricultural land or assets
- Ability of displaced populations to retain food stocks along the displacement routes
- Potential losses from direct conflict, looting or other factors
- Concentration of available food stocks in El Fasher town vs. in Zamzam camp

In 2024, the last and only delivery of food assistance to Zamzam camp was in April, covering less than five percent of the population. The levels of humanitarian food assistance and prolonged inability to reach populations in need in Zamzam camp will not address the profound and deepening food shortages.

Markets are currently the main, if not only source of food for IDPs in Zamzam. The main market and informal vendors in Zamzam camp purportedly carry a small variety of food commodities, especially asida (sorghum porridge), bread and local vegetables, as well as oil and sugar. Commercial deliveries are arriving at Zamzam camp likely from Chad.

Little food reportedly reached El Fasher town through the Eastern Route (Al Obeid). While detailed information is not available on the shipments from the West, the overall quantity supplied is expected to be low, and unable to fully mitigate the growing food shortages.

The onset of the rainy season will compound the logistical challenges for humanitarian and commercial deliveries as unpaved roads become unusable and further restrict the available routes and flow of commodities into Zamzam camp and the El Fasher area.

In terms of prospective harvests, despite favourable climatic forecasts, the outlook for the 2024/2025 agricultural season is not positive given the continuation and intensification of conflict. Insecurity is likely to decrease the availability and access to agricultural inputs, while the prolonged displacement continues to disrupt agricultural activities. Lack of agricultural inputs, particularly seeds, is expected to be a major impediment to the current planting season, which should have already started. Losses from conflict or taxation may further discourage agricultural activities and create protection risks, preventing some population groups from accessing agricultural lands at all.

The large influx of displaced populations between April and June occurred before the traditional planting season for millet and sorghum and other crops in July. Local production is expected to have been significantly disrupted in the El Fasher area and for the displaced population now residing inside Zamzam camp. This suggests that the upcoming agricultural season will be significantly disrupted or delayed potentially resulting in an even earlier onset to the lean season in 2025.

Some agricultural activities will occur and will benefit those fortunate enough to plant and harvest. Armed actors are seemingly not directly preventing agricultural production, though the regular practice of looting and

attacks on agricultural assets are likely to continue.

El Fasher locality is included in the priority areas under OCHA's Sudan Famine prevention Plan,⁴ which encompasses integrated response measures across food security, nutrition, and productive activities (agriculture and livestock). The plan for El Fasher locality includes the distribution of large-scale emergency agricultural inputs to produce local nutritious food depending on access to cultivable land; with livestock support services, including provision of dairy cows, goats and/or hens. However, to date, distributions of agricultural and pastoral kits in El Fasher locality and Zamzam camp are reportedly facing similar challenges as the life-saving humanitarian food security assistance due to insecurity.

Food access

Access to food on the market. IDPs in Zamzam are facing increasing challenges to access food. Households are no longer consuming multiple large diversified meals per day and many are only having one meal per day. The major constraint for IDPs is financial access to food as the price of staples and other main commodities have soared.

Markets are the main source of food for IDPs. In El Fasher market, the unit price of sorghum saw a year-on-year increase of 50 percent between May 2023 and May 2024, and it is forecasted to further double through February 2025. Similar trends are expected for Zamzam camp.

The main market of Zamzam camp is functioning intermittently, benefitting from irregular commercial deliveries reaching the camp. Businessmen and traders carry food, money and fuel through unsafe areas, paying taxes to armed groups, accepting risks and facing longer than normal routes due to impassable roads, particularly near the El Tina border. This may help explain the high price spikes observed since May in the markets in and around El Fasher town. While high prices may prevent access to food for many, there are still some that are purchasing food on the market, suggesting the market has not fully collapsed.

In the main Zamzam camp market, between April 2024 (pre-conflict) and mid-June 2024 the unit price of cooking oil rose by 63 percent, sugar by 190 percent, millet by 67 percent and rice by 75 percent. While water is freely accessible through water trucking, the quality in the camp is poor. Those who can, take risks and purchase jerrycans (100 SDG) and barrels (6,000 SDG) in El Fasher town.

As prices soar, income opportunities and savings shrink. Livelihood opportunities and wages for labour are plummeting. The labour-to-sorghum terms-of-trade have declined from about 12 kg/daily pay in March 2023 to about 3.5 kg/daily pay in May 2024 in El Fasher locality. These terms-of-trade are expected to be even lower in Zamzam camp.

Access to humanitarian aid. The last distribution by humanitarian partners took place in April 2024 and covered 22,395 beneficiaries with a half ration of 1,050 Kcal. Arguably that food is long-gone, also considering the tendency of the community to share everything they have particularly with and amongst the most vulnerable. While future distributions are planned, the likelihood of these taking place before the end of the lean season, especially if no agreements are reached on the opening of the Adre corridor are unlikely. However, this crossing would allow the much needed scale up in food and non food humanitarian assistance to address the needs of vulnerable populations, not only Zamzam camp.

The international airport of El Fasher town is not accessible for humanitarian deliveries due to insecurity. The needs of millions cannot be met through air deliveries. Convoys need to be routed through Darfur for that purpose. However, critical food and non-food items like medicines and therapeutic feeding for malnourished children could be deployed via air, if the air zone could be cleared and such deliveries are allowed by armed actors.

Prior to the siege, before May 2024, when violence peaked, humanitarian partners had several activities, including the distribution of multipurpose cash, seasonal tool distribution for food production and other cash programmes. However, most activities have ceased or been postponed.

⁴ OCHA, *Famine Prevention Plan, April 2024*.

<https://www.unocha.org/publications/report/sudan/sudan-famine-prevention-plan-2024-through-accelerated-mitigative-actions-halt-deterioration-food-insecurity-livelihood-impoverishment-and-malnutrition>



Remittances and social safety nets. IDPs mainly rely on savings and informal safety nets for their survival. Remittances, communal kitchens, food and cash-sharing are the main sources to access food in Zamzam camp. While no detailed information on remittance flows is available, social safety nets are likely playing a large role in providing remittances and a main source of liquidity enabling access to food and other commodities⁵. Formal banking services are not functional due to the conflict. The closest functioning bank is in Dar El Salam, and unreachable to most vulnerable IDPs even in the unlikely eventuality of major physical cash availability. A steady flow of remittances seems to be continuing through informal financial service providers, or communal networks.

Money transfers are channelled to IDPs in three ways: i. Direct transfer to the family from the diaspora of relative and friends living abroad; ii. Streamlined digital money transfer through community focal points who then redistribute this money to the concerned families; iii. Businessmen who carry digital or hard currency and redistribute. The second option is often free of charge, though in some cases could warrant a service fee of around 10 percent of the cash transfer. The third option reportedly charges a commission ranging between 10 and 30 percent.

Digital transfers face a dual challenge. It relies on the unstable network, only granting access to those who have (or can get hold of) a direct connection or a bridge connection linked to a satellite Starlink phone. This automatically increases the demand of middlemen who own a satellite connection, and thus charge fees for the service. Secondly, digital transfers in contexts like Zamzam camp, where banks are shut down and liquid currency cannot be found easily, expose beneficiaries to an immediate post-transfer depreciation of the amount received.

Food prices in the market are 20 percent to 30 percent higher for clients using digital money as opposed to those who pay with Sudanese pounds. The difference in price is due to the scarcity of hard currency, to the lack of electricity needed to provide internet for electronic

money transfers, and lack of a bank accounts for the most vulnerable that imposes a re-routing of transfers. All of which increase fees or associated costs for these transactions. Despite these challenges, the inflow of remittances and the widespread money and food sharing culture is enabling a minimum access to food for some of the population groups in Zamzam camp.

Emergency Response Room (ERR) are operational in the three camps of Zamzam, Abu Shouk and Al Salam. In Zamzam, four communal kitchens coordinated by ERR provide food to more than 10,000 people daily. However, the current coverage (less than 2 percent of IDPs) cannot meet the urgent needs of the most vulnerable IDPs alone. ERRs are diversifying their funding from merely private sources up until a few months ago, to a blend of private (Sudanese diaspora) and public (INGOs, UN agencies), and plan to expand soon to set-up 24 communal kitchens virtually supporting 48,000 to 72,000 IDPs daily. With greater access to funding, they have the capacity to expand 5-6-fold; yet it would still only serve about 10-12% of the population. At present, though, informal safety nets and sharing are the major mitigating factors for some population groups.

Food utilization

Food utilization is impaired by the shortages of clean water, reportedly up to five litres per person per day only, hampering the safe and hygienic food preparation. Reportedly the poor quality (salty water) of water trucked, contributes to the frequent diarrhoea among children. Some IDPs move to El Fasher city and back in certain hours of the day, during the safe window period, to fetch higher quality water, available in the market albeit at very high cost.

Other inputs for food preparation such as cooking gas and basic cooking implements are estimated to be in short supply due to the sudden and recurrent displacement, as well as to limited availability in the market, which is facing disruptions. The cost of fuel is skyrocketing due to scarcity on the market of Zamzam camp. The same is believed to apply to cooking gas, although no evidence is available. Of particular concern is the availability of cooking utensils and cooking gas by the 150,000-200,000 believed to have moved to Zamzam camp since April 2024.

⁵ IDS, *Effective Social Protection in Conflict*, February 2024.

https://opendocs.ids.ac.uk/opendocs/bitstream/handle/20.500.12413/18235/Effective_Social_Protection_in_Conflict_Findings_from_Sudan.pdf?sequence=1&isAllowed=y

Even with the little food accessed by IDPs, significant challenges remain in terms of utilization. Limited access to quality potable water, and risk of flooding in Zamzam camp pose a clear threat for food utilization, particularly of vulnerable segments of the IDP population like children, pregnant and breastfeeding women, and elderly people. The increased morbidity to malaria and other water-borne diseases is likely to restrict the utilization of food even further, as intense rains start to hit the Zamzam camp, where crowded space and close proximity between people are characterised by open defecation practices, over-crowded latrines, over-crowded wells, and few water points. There are great concerns over potential measles and cholera outbreaks, which would be catastrophic in an already dire situation.

Stability

In addition to humanitarian access, which is non-existent at this stage, commercial supplies of food and critical non-food items (NFI) has a direct impact on the availability, access and utilization of food. There is an extremely high level of unpredictability on the usability of trade routes, the increased vulnerability of the households, and the fragility of the system of supplies and service provision. Of particular concern is the situation of the IDPs, as the vast majority of the displaced might have moved to Zamzam without stocks and utensils to prepare food, as well as tents and shelter materials.

Acute Food Insecurity Outcomes

No direct quantitative evidence on food security outcome indicators was collected in Zamzam camp. The TWG analysis (also referenced by FEWS NET) used IPC protocols for classifying similar or nearby areas⁶ using the data collected in El Neem camp by the WFP Food Security Monitoring Survey (FSMS) and extrapolated it to Zamzam camp.

As El Neem and Zamzam camps present some similarities (see annex 4), the comparison between El Neem and Zamzam camp is still considered informative. However, the FRC finds that the conditions

in Zamzam camp are likely worse than El Neem camp. The FRC considered the whole body of evidence on food security, mainly contributing factors to conclude that there has been a strong deterioration of the food insecurity situation and that the IPC Phase 5 (Famine) thresholds for acute food insecurity have likely been surpassed.

3.3 Acute Malnutrition

Health Services and Health Status

While there is no recent quantitative evidence on health services and health status in Zamzam camp, qualitative information was collected.

Overall, some challenges in providing health and nutrition services existed before the upsurge in conflict in the El Fasher locality in mid-May. Since May, the health services in Zamzam camp have been significantly disrupted. The conflict has forced medical staff to leave the area, many of whom have fled from El Fasher town and also from Zamzam camp, leading to a collapse of health care provision. Currently, there are two health facilities in Zamzam camp: one with primary health care and ambulatory therapeutic feeding programme and another that operates as a complete hospital with inpatient treatment, including for malnutrition, with a total capacity of 90 beds. While these services are available, there is a significant limitation in human resource capacity to serve the population and meet the demand of the entire camp. In the mornings, when the clinics open, large gatherings of mothers/caregivers arrive, however there is insufficient capacity to treat everyone and, as a result, many caregivers return home without receiving any treatment.

The MSF/Epicentre rapid nutrition assessment in January indicated that among children identified as severely acutely malnourished (SAM), only 28 percent (13 out of 47) had access to a nutrition treatment programme. For those identified as moderately acutely malnourished (MAM), only 29 percent (30 out of 105) had access to a supplementary feeding programme. These programme coverage data are below the required coverage for a camp according to the SPHERE⁷

⁶ As detailed in the IPC Technical Manual 3.1., page 48.

⁷ Sphere Association, *The Sphere Handbook: Humanitarian Charter and Minimum Standards in Humanitarian Response*, fourth edition, 2018. <https://spherestandards.org/wp-content/uploads/Sphere-Handbook-2018-EN.pdf>



standards, which indicates over 90 percent coverage in formal camps, for both SAM and MAM treatment.

Regarding the availability and access to vaccination services in the camp, it was reported that routine vaccination is taking place in the camp using supplies provided by the Sudan Ministry of Health (SMOH). However lately, the SMOH is struggling to deliver vaccines to that area. Moreover, there is a lack of clear information on the actual coverage in the camp. A report from a Nutrition Vulnerability Analysis (NVA) conducted in May 2024 by the Sudan Nutrition Sector, based on the use of secondary data, indicated that measles vaccination coverage in North Darfur was at 33 percent in 2023, ranging from 19 percent to 46 percent in different localities⁸.

As for health status, while acknowledging the limitations in accurately tracking epidemiological events in the camp, it is reported that there are cases of measles and, potentially, other diseases with epidemic potential. However, the incidence is probably not significantly much elevated above baseline levels in the current period, as a large-scale outbreak would likely have been reported, even with the current level of understaffing. Malaria cases are expected to increase in the coming months with the arrival of the rainy season. This is of particular concern as currently, there is no mosquito control happening in the area. Furthermore, with the rainy season and lack of access to hygienic items (particularly soap) and water, acute watery diarrhoea cases are expected to also rise. There are anecdotal reports of widespread diarrhoea in Zamzam camp, associated with the very limited water supply, which was also reported to have a high salinity.

Water, Sanitation, and Hygiene (WASH)

Before the conflict, the water supply was piped in through a public network in El Fasher city and water yards in the IDP camps. During this period, the average volume of water used for drinking and domestic hygiene per household in El Fasher town was around 37 litres per person per day and 12 – 18 litres per person per day in the IDP camps. Both in El Fasher

town and in the IDP camps, the estimates were in line with the SPHERE standards that indicate a minimum of 15 litres per person per day⁹. Currently, there are only two reservoirs available, Golo and Haluf, where water is pumped from, treated with chemicals and distributed through water-trucking services. At the end of May, fighting around the Golo reservoir erupted, with the area being taken and retaken by different armed groups. As of today, it is unclear whether the reservoir is working at full capacity. This was the main source of water for many areas previously, although, it is unclear how much water is currently available for nearby communities and displaced populations. This is also subject to increasing prices of fuel to pump water from boreholes and from the public water pipeline system. Water from Golo reservoir cannot be pumped due to fuel shortages. There is no clear information on the volume of water per household, however, the limited information indicates it to be around three to five litres per person per day in El Fasher town and the IDP camps (including Zamzam camp). While water may be treated before distribution, the quality of water was questioned by IDPs even before the rainy season materialized. Furthermore, there is no information available on the storage conditions at the household level. Boiling water or using disinfectant pills before consumption is reportedly not common.

With the rainy season, concerns are rising over the likely surge in diarrhoea and cholera cases, which are commonly reported. The combined risks of flooding and the increased population living in close proximity to wells expose the community to water contamination hazards. Access to hygiene and sanitation is severely compromised, and the already strained health services are ill-equipped to handle an additional potential medical emergency, given the number of IDPs at risk. At the time of writing this report, flooding has already been reported in Zamzam camp. As the rainy season progresses, other waterborne diseases, including infectious respiratory diseases, are likely to increase, reducing the absorption capacity of the limited food available, especially for children and

⁸ Sudan Nutrition Sector, Nutrition Vulnerability Analysis – Sudan, May 2024. Available at: <https://www.nutritioncluster.net/resources/nutrition-vulnerability-analysis-sudan>

⁹ Sphere Association, *The Sphere Handbook: Humanitarian Charter and Minimum Standards in Humanitarian Response*, fourth edition, 2018. https://handbook.spherestandards.org/en/sphere/#ch006_004

¹⁰ OCHA, HNO Sudan 2024, December 2023. https://reliefweb.int/report/sudan/sudan-humanitarian-needs-and-response-plan-2024-december-2023?gad_source=1&gclid=Cj0KCQjw-5y1BhC-ARIsAAM_oKmeXsgpVqsJUpeVifLE07hRs94S0wF9Se4JNesluuZsokfUgq5yG40aAtLBEALw_wcB

the elderly. Widespread open defecation (17 percent in El Fasher locality according to HNO 2024¹⁰, likely higher in Zamzam camp currently) and the use of heavily overused toilets are vectors for communicable diseases, further hampering proper food utilization.

Acute Malnutrition Outcomes

There is limited availability of evidence on acute malnutrition in Zamzam camp and none from Abu Shouk or Al Salam camps.

The evidence used by the FRC regarding acute malnutrition is derived from a rapid nutrition assessment conducted by MSF/Epicentre in Zamzam camp in January 2024. This assessment measured acute malnutrition using mid-upper arm circumference (MUAC). The prevalence of global acute malnutrition (GAM) was 23.1 percent (18.4 – 28.5, 95 percent CI). The plausibility of the data was verified on the original dataset and the quality was within acceptable ranges (Annex 4).

Furthermore, the FRC also explored the GAM prevalence based on MUAC-for-age z-score (MFAZ) and examined the likely relationship between the prevalence based on the absolute values of MUAC and a weight-for-height (WHZ) prevalence using recent SMART survey data conducted in West Darfur. On the former, the GAM prevalence by MFAZ was at 33.7 percent (27.5 – 40.0, 95 percent CI); on the latter, the FRC found that of all surveys examined, the WHZ-based prevalence was about two to three times higher than that calculated based on the absolute values of MUAC.

The FRC concluded that the prevalence of GAM by MUAC exceeded the IPC Phase 4/5 threshold in Zamzam camp in January and it is plausible that the GAM by WHZ was also above 30% at this time. Since January there have been several worsening negative drivers and contributing factors of malnutrition (e.g., increased conflict, increased displacement, worsening terms of trade, disruption of markets, and services). These negative factors, combined with the normal seasonality of the lean season that began in May further suggest that acute malnutrition levels now exceed the 30 percent threshold for Famine.

A mass MUAC screening was conducted by MSF between 24 March and 7 April 2024. This activity

screened 46,790 out of an estimated 66,000 children, aged 6-59 months, residing in Zamzam camp. Children identified with GAM by MUAC were admitted to a Therapeutic Supplementary Feeding Programme (TSFP) in which they received Ready-to-Use Therapeutic Food (RUTF) for a period of two to four weeks. Ready-to-Use Supplementary Food (RUSF) was distributed to all non-malnourished children to prevent them from falling into acute malnutrition. Due to lack of documentation, it was not possible for the FRC to assess the quality of the data and age distribution of screened children. While the results (29.4 percent of GAM by MUAC) are consistent with data from January and suggest a deteriorating situation, they could not be used for classification purposes.

A Joint (and multisectoral) Rapid Needs Assessment was also conducted by the State Ministry of Health and partners on the newly displaced people in the affected areas of El Fasher locality. The assessment included a total of 1,717 children (apparently using a convenience sample) and found 20% GAM by MUAC. However, due to lack of data on the MUAC measurements as well as the age distribution of the screened children, the results could not be used for classification purposes.

Acute malnutrition seasonality¹¹ in Sudan is described as having two seasonal peaks with the first, larger, peak in May through July, and a second peak in September-October. This seasonality pattern, combined with all the information available on the drivers of malnutrition, such as conflict, access, health, and WASH, makes it highly likely that the prevalence of acute malnutrition is above the Phase 5 threshold in July and that it will remain so during the projection period up to October.

Mortality

The available mortality data comes from the MSF/Epicentre report on the rapid nutrition assessment conducted in January in Zamzam camp. The FRC reviewed this report and requested MSF/Epicentre to calculate Crude Death Rate (CDR) and Under-five Death Rate (U5DR) after removal of deaths due to trauma. This analysis showed a CDR for non-trauma deaths at 1.9 (1.5 – 2.4, 95 percent CI) per ten thousand

¹¹ FAO and Tufts University, *Twin peaks: the seasonality of acute malnutrition, conflict and environmental factors – Chad, South Sudan and the Sudan, September 2019*. <https://fic.tufts.edu/wp-content/uploads/Twin-peaks-study-report.pdf>



The CDR reported from January was very close to the Famine threshold. Since that time there has been an increase in the risk factors for non-trauma mortality including the influx of displaced population from El Fasher town and Abu Shouk camp.

Detailed information regarding the current level of non-trauma mortality in Zamzam camp is not available due to the inability to conduct surveys and the disruption of the health information system, coupled with the limited capacity of personnel in the camp. There has likely been an increase in deaths and that many of these deaths may be happening at home due to the difficulties in accessing health facilities.

An analysis of satellite imagery of graves in cemeteries in and around displacement camps, including Zamzam camp, as mentioned in the FEWS NET analysis, suggested a disproportionate increase in the number of graves adjacent to the camps. In Zamzam camp, in particular, it was estimated a 26 percent faster growth in the number of graves between 18 December 2023 and 3 May 2024, compared to a similar period of last year.

4. CONCLUSIONS FOR THE CURRENT PERIOD (JULY 2024)

On acute malnutrition and mortality, the outcome data used by the FRC came from the MSF/Epicentre assessment conducted in January 2024 in Zamzam camp. Quality checks done on MUAC data revealed plausible measurements. GAM by MUAC was at 23.1 percent already exceeding the IPC Phase 4/5 threshold, and by MFAZ at 33.7 percent. The FRC concluded that it is plausible that the GAM by WHZ was also above 30 percent at this time, even with remittances and social safety nets.

Similarly, for non-trauma mortality, CDR was already very close to the Famine threshold in January (1.9 deaths/10,000 people/day). Since that time, there has been an increase in the risk factors for non-trauma mortality. With all these factors contributing to worse situation since January, and especially since April/May when violence escalated and access routes were largely blocked leading to a near collapse of the health care system, the FRC concludes that mortality has crossed the Famine thresholds.

While no direct quantitative evidence is available on the food security outcome indicators in Zamzam camp, the whole body of evidence on the food security situation, including contributing factors on food availability, access, utilisation and stability converge towards a severe situation. Given the ongoing lean season, and lack of stocks, food availability is extremely limited during the current period of analysis. Access is largely impeded due to insecurity for both commercial and humanitarian actors; no humanitarian food assistance has been distributed in the Zamzam camp since April 2024. In Zamzam camp, the markets remain the main source of food for IDPs, though these are functioning only intermittently. Even if access to the El Fasher markets is still possible, the commercial trade in the whole locality is disrupted compounded by soaring prices. The labour-to-sorghum terms-of-trade continue to decline, limiting the purchasing power of the IDPs. Livelihoods and assets are considered to be nearly depleted or largely disrupted. Access to cash via remittances or money transfer system are not expected to significantly mitigate the situation considering connectivity disruptions. Asset loss and growing inability to cope suggest that the high levels of acute food insecurity are converging towards IPC Phase 5 (Famine) conditions.

Zamzam camp. For the current period of analysis, July 2024, considering the nutrition and mortality thresholds are expected to meet or surpass the threshold for IPC Phase 5 (Famine) conditions, and also considering the convergence of the food security contributing factors. The FRC it plausible that Famine (IPC Phase 5) is ongoing with reasonable evidence.

Abu Shouk and Al Salam camps. The FRC accepts the logic of FEWS NET's inclusion of Abu Shouk and Al Salam camps in their findings, though due to a lack of outcome data and some uncertainty about population status and size, **the FRC recommends not to classify these areas; though highlights the high likelihood of similar conditions prevailing in other IDP sites in the El Fasher area.**



5. CONCLUSIONS FOR THE PROJECTION PERIOD (AUGUST-OCTOBER 2024)

FEWS NET and the Sudan TWG developed a clear set of assumptions that informed their analysis conclusions for the respective projection periods as per IPC protocols. The Sudan TWG updated their original assumptions for the most likely scenario during a risk of Famine analysis in early June 2024. The FRC considered both sets of assumptions during their review.

FEWS NET: Most Likely Scenario – Key Assumptions (July 2024 – January 2025)

Zamzam camp, Abu Shouk camp, and Al Salam camp:

- Conflict:** FEWS NET's analysis of conflict developments reported from March through June — namely, the RSF's significant deployment of forces to the area and consolidation of control of routes in and out of El Fasher — indicate that RSF will likely continue to besiege El Fasher city in an effort to force capitulation of the SAF irrespective of the impact on civilians. As such, FEWS NET assesses that the city is likely to remain under an intense siege for several months at least through August/September 2024. SAF and SAF-aligned forces likely have the capacity and strategic imperative to hold out through at least August/September 2024, given that the division headquarters is large, well-supplied, and supported by the local population. In the event that RSF manages to capture El Fasher (moderately likely through January 2025), a significant increase in the targeting of non-Arab communities by the RSF can be expected, given the recent alignment of previously-neutral non-Arab militias with the SAF in a bid to defend El Fasher. An increase in intercommunal violence is likely in response to RSF targeting of non-Arab communities and communities perceived as having supported the SAF. This is likely to be exacerbated by the RSF's likely inability to manage and control violence between communities over land disputes. In either conflict scenario, one of continued besiegement or RSF capture of the city, the conditions for the displaced populations will remain severe throughout the projection period.
- Livelihoods:** Given current analysis that the insecurity and fighting is preventing displaced populations from accessing land or engaging in agricultural activities, these populations are not expected to benefit from their own harvests. Similarly, access to income from harvest labor in the October 2024 – January 2025 period will be severely limited for these populations given insecurity associated with population movement.
- Trade flows** are expected to remain severely disrupted by the insecurity through January 2025, resulting in continued scarcity of food supplies and exceedingly high prices.
- Availability of wild foods** will improve in the rainy season and into the October 2024-January 2025 period, but access will remain severely limited given insecurity and fear of targeting.
- Humanitarian access** is expected to remain severely limited through the projection period. While the city remains under siege (expected through at least September 2024), no food assistance deliveries are anticipated. Given the expectation of continued insecurity and violence after September 2024, it is most likely that assistance deliveries will remain severely disrupted at best. MSF has indicated efforts to resupply nutrition stocks in July; however, the ability to do so is unconfirmed and it is likely the volume and type of nutrition supplies would be unable to mitigate the scale of extreme food consumption gaps and kilocalorie deficits particularly under expectations of widespread sharing.
- Outbreaks of disease** with the start of the rains are anticipated to accelerate with the onset of the rains, in line with interannual trends and exacerbated by overcrowding, lack of health services, disruption to vaccination campaigns, very poor living conditions, and poor WASH conditions, particularly for the newly displaced.

Sudan TWG: Most Likely Scenario – Key Assumptions (updated in early June) (June 2024 – September 2024 and October 2024-February 2025)

Zamzam camp

- **Conflict:** will most likely escalate in El Fasher and expand to neighbouring areas including Zamzam camp and continue well into the second projection period. Despite some of the local militias are mobilized and active, under the most likely scenario, conflict will not evolve into intercommunal violence. Insecurity and conflict will likely curtail the flow of food (humanitarian and commercial) and restrict civilian movements.
- **Displacement:** Expected further expansion of Zamzam population in the coming weeks. Full restriction of movement in El Fasher is unlikely under the most likely scenario. The IDP flow from El Fasher will remain fluid as conflict may shift rapidly to southern neighbourhoods of El Fasher, affecting Zamzam area intermittently. As a result, some IDPs from El Fasher will continue relocating to Zamzam while some IDPs from Zamzam shall move out at the same time. The reduced access to basic services will also likely push some IDPs to displace into safer areas (Dar Al Salam, Tawila localities , etc.) Some of the IDPS in Zamzam will return to their areas of origin in Tawila and other localities as conflict intensifies in and around the camp.
- **Reduced labour opportunities:** in and around Zamzam camp during the first projection as conflict affects markets, casual labour and the cultivating season (particularly tobacco farming around El Fasher).
- **Humanitarian Food Security Assistance (HFA):** The delivery of HFA likely to continue to be disrupted by blockage of road and reduced access to affected areas. Low chances of high-scale delivery of HFA in El Fasher and Zamzam due to roadblocks, insecurity. Stocks of nutrition therapeutic and supplementary feeding in Zamzam camp MSF hospital should not run out immediately, however the increased displacement may put the assumption at strain. Even in case of the opening of corridors, a delivery of HFSA at scale will take more than two months.
- **Healthcare:** As the number of IDPs in Zamzam increases, access to food and basic services will be extremely reduced. The main challenges remain the limited functionality of SMOH hospital, limited absorption capacity of MSF clinic and reduced supply chains of medicines. Stocks of nutrition supplements – still available in early June – may soon deplete as demand increases.
- **Markets and trade:** Humanitarian and commercial traffic into North Darfur, especially El Fasher, will remain disrupted, including cross-border and crossline. The nearest main market in El Fasher is closed and will likely remain nonfunctioning. Limited food supplies will enter El Fasher/Zamzam through small traders from south and west corridors (Dar es Salam, Jebel Marra, Tawila, Kelemando, Etc). Cross-borders trade of fuel and food, and other basic commodities from Libia and Chad will remain highly disrupted.
- **Nutrition:** Decreasing absorption capacity of health centres due to limited staff and increasing number of IDPs; likely increasing morbidity for malaria, cholera and water-borne diseases during the rainy season; potential depletion of stocks of RUTF in clinics.



During the first projection period (August-October 2024), the acute malnutrition thresholds are expected to remain above the Famine (IPC Phase 5) thresholds due to a continued lack of access to food, an increased risk of infectious disease, and very limited access to health care and nutrition services. There will be a heightened risk of waterborne diseases, the possibility of a measles outbreak due to low vaccination coverage, and an increased incidence of malaria associated with the rainy season.

The health care system has largely collapsed. Due to insecurity, NGOs and humanitarian actors had to scale down their operations, including screening activities, and the remaining health facilities are ill-equipped. As a result, the vulnerable populations cannot be adequately served, and treatment for acute malnutrition is likely to be compromised due to lack of capacity and supplies.

As for WASH, access to hygiene and sanitation is severely compromised and water supply is likely to remain below Sphere minimum standards.

Taken together, these issues are likely to sustain the elevated mortality incidence above Famine thresholds.

On the food security side, the situation is expected to further deteriorate with the on-going lean season and stocks already depleted in the current period. Food availability is likely to remain limited in Zamzam camp especially if delivery of HFA continues to be disrupted. While food commodities supplies will continue to be limited due to the conflict situation, the purchasing power of the IDPs is likely to keep on deteriorating over the period, mainly due to the declining terms of trade labour-to-sorghum and the food and commodity prices that are expected to keep on increasing over the period. The income opportunities will be limited for the IDPs that rely on emergency coping strategies to get access to food.

Considering the deterioration of all the contributing factors compared to the current period, the food security is likely to remain above the IPC Phase 5 (Famine) threshold.

For Zamzam camp, the FRC concludes that Famine (IPC Phase 5) will persist with reasonable evidence for the projected period of August - October 2024.

Abu Shouk and Al Salam camps. The FRC accepts the logic of FEWS NET's inclusion of Abu Shouk and Al Salam camps in their findings, though due to a lack of outcome data and some uncertainty about population status and size, **the FRC recommends not to classify these areas; though highlights the high likelihood of similar conditions prevailing in other IDP sites in the El Fasher area.**

CONCLUSIONS FOR THE NOVEMBER 2024 TO JANUARY 2025 PERIOD

Given all the uncertainty, notably on the upcoming harvest season, the current rainy and lean season, the evolution of the conflict, and the level of humanitarian and commercial access, **the FRC is unable to make a determination on the plausibility assessment for the period from November to January in Zamzam camp.**

However, the FRC finds that the likelihood of famine continuing remains high based on the likely continuation of conflict, access restrictions for humanitarian and commercial actors, the expected poor harvest and further declining terms of trade and labour opportunities. In addition to the potential for disease outbreaks during this period.

6. RECOMMENDATIONS FROM THE FAMINE REVIEW COMMITTEE

For Senior Decision Makers and Resource Partners

- As the conflict is the predominant factor driving this famine, all means to reduce or resolve the underlying conflict between the parties involved in Sudan should be exhaustively explored. The cessation of hostilities in conjunction with the sustained restoration of humanitarian access are essential requisites in mitigating the deterioration of food security, nutrition, WASH and health conditions faced by the populations in El Fasher locality and across Sudan.
- Immediate halt by warring parties to any attacks on hospitals, humanitarian organizations, and civilian infrastructure in accordance with the International Humanitarian Law, and ensure the full delivery of services to mitigate the likelihood and severity of Famine.
- Ensure unhindered access routes into, and within Greater Darfur states for humanitarian and commercial actors.

In particular:

- Ensure unhindered access through all the Chad-Sudan and South Sudan-Sudan border crossings for large-scale humanitarian assistance and commercial deliveries, particularly those using primary all-season roads like Adre-Maragibir.
- Create a safe airspace enabling the resumption of operations through the international airports of El Fasher and Nyala for the delivery of medical supplies, non-food items and emergency therapeutic foods.
- Ensure a safe route for commercial and humanitarian convoys towards the most critical IDP/refugee settlements, and urban centres in Greater Darfur and Greater Kordofan states.
- Fully re-establish telecommunication networks to enable the flow of remittances, and lobby for unhindered use of Starlink or other global and local providers of internet connectivity at global, regional, and local levels.

- Restore the functionality of banking systems and credit-access facilities, before the end of the cultivation season.
- Promote and protect community-based local response systems given their vital role in ensuring the survival of vulnerable populations in Sudan. In particular:
- Carefully examine the efficacy of localized actors and consider channelling the international humanitarian response through these for a high-scale distribution of humanitarian assistance, particularly in hard-to-access areas.
- Support the immediate scale up of Emergency Response Room programmes and communal kitchens through direct financial support, and advocate for unhindered supply chains and their safe operational environment.

For the Humanitarian Country Team

- Ensure a well-coordinated and multi-sectorial response, including food security, nutrition, health, WASH, shelter, livelihoods and protection sectors.
- Revise the implementation plans of the UN's Famine Prevention Plan in inaccessible areas like El Fasher, where prolonged access challenges have led to a likely depletion of assets, requiring mid-term support to agro-pastoral livelihoods alongside life-saving food security, nutrition, and health initiatives.
- Support relief efforts on WASH including the rehabilitation of the water pumping and treatment systems from local reservoirs into El Fasher to reduce the risk of water borne and water washed infections, and to mitigate poor food utilization.
- Monitor food availability in local markets in support of the expansion of Cash-based programmes, which should prioritise targeting populations with access to markets with stable food availability, especially those in areas that are inaccessible for humanitarian actors but can be supplied by private traders.
- While the focus of this famine review was on the



IDP camps around El Fasher, continue planning for increased humanitarian assistance, including agricultural and livelihood support, to all the areas in Greater Darfur, Greater Kordofan and other states with populations in IPC Phase 5 and at risk of famine, with particular focus on IDP and refugee settlements.

- The FRC strongly recommends that OCHA publishes weekly updates on the humanitarian situation in Sudan, and utilising its mandate for inter-cluster coordination, draws together key indicators from the food, health, nutrition, WASH and shelter clusters to provide an integrated overview of the situation, including the areas identified as a risk of famine in the IPC report.
- The FRC strongly recommends that the analysis team establish a real time monitoring system of the main risk factors and drivers of food insecurity and nutrition, such as conflict, displacement, food prices, trade flows, crop production, labour opportunities, remittances and humanitarian assistance, and update the IPC analysis in October or as needed.
- Advocate for immediate, safe and unhindered access to collect representative data on food security, nutrition, and mortality, with particular focus on areas with extreme food insecurity, to inform new analysis by IPC in September/October 2024.

Recommendations on Data Collection and Analysis

- Should physical access for field surveys not be viable, utilize any available methods to collect information on vulnerable populations. (e.g., satellite imagery, social media, remote phone surveys, and others).
- Food security surveys should be strengthened through a series of suggested action:
 - Systematically include modules to track indicators that are sensitive to extreme food insecurity conditions such as the Household Hunger Scale (HHS);
 - Better contextualize the Livelihood Coping Strategy module, and consider different re-

sponse options to avoid highly non-applicable responses

- Enhance questions on income sources, including the scale, type, and timing of remittances that people receive
- Ensure representative data is available to conduct disaggregated analysis on IDP/refugee populations like Zamzam, Abu Shouk, Al Salam (El Fasher) and others facing high severity.
- Nutrition surveys/screenings: Complete planned SMART surveys and ensure that additional nutrition screenings systematically include methodological notes and records (including tally sheets) of children screened, enabling ex-post plausibility checks.
- Conduct nutrition and health screening of new arrivals in the refugee camps in Chad and provide weekly reports on the number of new arrivals and the proportion with GAM by MUAC and any notable health conditions.

Closely monitor the following risk factors and indicators:

- Entry of food and other essential items into Greater Darfur states; including entry of commercial trucks (formal and informal trade imports)
- Food prices in reference markets;
- Wages (Terms of trade casual labour to reference commodities);
- Crop planting and crop development through satellite and remote sensing data, with a special focus on the El Fasher rural locality, including the plots around the city and around Zamzam camp, as well as the main destination camps of IDPs from El Fasher (Tawila, Dar el Salam, Jebel Marrah localities);
- Displacement and migration patterns;
- Burial sites;
- Conflict and thermal scarring.



ANNEX 1: KEY SOURCES USED BY THE FAMINE REVIEW COMMITTEE, INCLUDING THE EVIDENCE FROM THE SUDAN TWG ANALYSIS AND FEWS NET COMPATIBLE ANALYSIS

Yale School of Public Health, Special Reports on El Fasher - 11 publications so far released between mid-April and mid-June, 2024. <https://medicine.yale.edu/lab/khoshnood/publications/reports/>

Centre for Informational Resilience, More than 200 villages and towns damaged or destroyed by fire since the start of the war in Sudan, with April the worst month on record. 13 May, 2024. <https://www.info-res.org/post/more-than-200-villages-and-towns-damaged-or-destroyed-by-fire-since-the-start-of-the-war-in-sudan-w>

OCHA, Conflict in El Fasher, North Darfur – Flash Update No. 01, 12 May 2024. <https://reliefweb.int/report/sudan/sudan-conflict-al-fasher-north-darfur-flash-update-no-01-12-may-2024-enar>

OCHA, Conflict in El Fasher, North Darfur – Flash Update No. 02, 23 May 2024. <https://www.unocha.org/publications/report/sudan/sudan-conflict-al-fasher-north-darfur-flash-update-no-02-23-may-2024-enar>

IOM DTM, Sudan monthly update, 11 June 2024. <https://dtm.iom.int/reports/dtm-sudan-focused-flash-alert-north-darfur-update-002?close=true>

IOM DTM, Sudan Focused Flash Alert North Darfur, 2 June 2024. <https://dtm.iom.int/reports/dtm-sudan-focused-flash-alert-north-darfur-update-002?close=true>

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ANNEX 2: TERMS OF REFERENCE FOR THE IPC FAMINE REVIEW FOR THE FEWS NET IPC COMPATIBLE AFI ANALYSIS CONDUCTED IN JUNE 2024

Introduction

The FRC may be activated under four different scenarios as detailed in the IPC Famine Guidance Note. The review by the FRC is a neutral and independent process aimed at supporting IPC quality assurance and ensuring technical rigour and neutrality of the analysis. The activation of the FRC provides an additional validation step before the release of the analysis results.

In June 2024, FEWS NET conducted an IPC compatible analysis¹² for Sudan and classified the displaced population in Zamzam, Abu Shouk and Al Salam camps in El Fasher locality in IPC Phase 5 (Famine, with reasonable evidence) for the current (June 2024) and projected period (July 2024 through January 2025). This classification resulted in the activation of the Famine Review Committee for the assessment of the plausibility of the classification.

Famine Reviews are triggered when at least one of the following conditions is met: (i) the country IPC Technical Working Group (TWG) concludes that at least one area is classified in IPC AFI Phase 5 Famine, Solid Evidence or Famine Reasonable Evidence; or (ii) in case of a breakdown in technical consensus within the country IPC TWG regarding possible Famine classifications; or (iii) in case the IPC GSU, acknowledging the presence of evidence above IPC AFI Phase 5 thresholds, decides to activate a Famine Review; or (iv) in case, for similar reasons, an IPC Global Partner officially requests the IPC GSU to activate it¹³.

As stated in the IPC Technical Manual 3.1, “famine reviews are mandatory for both IPC products and IPC compatible products and are to be conducted before the release of the findings”.

In line with IPC Technical Manual 3.1 and the IPC Famine Guidance Note, FEWS NET requested a Famine review on 27 June and shared the necessary documents on 28 June 2024. This specific review was activated at the request of FEWS NET in line with IPC protocols requiring a Famine review for IPC and IPC compatible analyses meeting at least one condition for Famine review activation. The FRC was requested to assess the plausibility of a Famine (IPC Phase 5) with reasonable evidence classification and projection for the displaced population in Zamzam, Abu Shouk and Al Salam camps in El Fasher locality.

The IPC Famine Review process consists of the following steps:

- (i) the IPC GSU and IPC global partners review available analysis and evidence in preparation of the FRC’s review; and
- (ii) review by the FRC. The review by the FRC is a neutral and independent process aiming at supporting IPC quality assurance and helping to ensure technical rigour and neutrality of an analysis. Review by the FRC is a specific procedure activated to endorse or not endorse Famine classifications when IPC AFI analyses show a potential or already identified situation of Famine.

¹² IPC compatible refers to an analysis that adheres to all IPC protocols with the exception of technical consensus (Function 1, Protocols 1.1 and 1.2). IPC compatible analysis may be undertaken outside of a recognized IPC Technical Working Group, such as by a single organization. The only Function 4 – Quality Assurance protocol that applies to IPC compatible analysis is external quality review. This may be requested by a national IPC Technical Working Group of a country for which publicly released IPC compatible classifications have been conducted if there are concerns about a lack of adherence to protocols for an area level Phase 4 classification. Any IPC compatible analysis is the sole responsibility of the organizations conducting it. Publicly released IPC compatible analysis must include the following disclaimer or similar text: “This is an IPC compatible classification, which uses key IPC protocols but is not built on multi-partner technical consensus”.

¹³ IPC, Famine Guidance Note, February 2024. <https://www.ipcinfo.org/ipcinfo-website/resources/resources-details/en/c/1152897/>

Purpose

The IPC FRC review is an important mechanism of the global, regional and national partnership and governance structures. The committee is formed as needed and on demand and its activation represents an additional validation step before IPC results are released to clear the IPC Phase 5 classification (i.e. IPC Phase 5 Famine with solid or with reasonable evidence) estimated to support quality assurance and technical consensus building. The committee is to be convened at the request of the IPC GSU.

Composition

The IPC Global Famine Review Committee (IPC FRC) will be composed of five independent technical experts. Members are identified at the activation of IPC FRC and selected based on the following criteria: I. Globally recognized as leading technical food security and nutrition experts II. Neutral to the IPC outcome, who have not participated in the analysis under review.

Documentation needed

As part of this standard process, the partner(s) who participated in the analysis are requested to confidentially share key information to allow the FRC to conduct the review. This includes:

- I. The worksheets of the areas requested to be reviewed by the FRC,
- II. The population estimates per phase for all areas covered by the analysis. These are required for the FRC to contextualize the situation of the specific areas under review into the broader IPC analysis at country level.
- III. The area population, possibly indicating resident and IDP (this latest can be an estimation of actual)
- IV. The IPC map showing the final classification for all areas covered by the analysis. The entire map is required for the FRC to contextualize the situation of the specific areas under review into the broader IPC analysis at country level.
- V. The raw data that allowed to produce the Food Security related indicators as well as the raw data from Nutrition SMART surveys that was used in the IPC classification for the areas under review. This is of critical importance as this will allow the FRC to assess by themselves both the reliability and validity of the data that feeds the IPC.
- VI. The repository of all the evidence employed in the classification of the area under review. This should include all reports and evidence employed in the analysis. WASH and Health reports are also requested for these areas if available. Any additional report from any partners supporting better contextualization will be welcome.
- VII. Information regarding Humanitarian Food and other type of Assistance (actual tonnage distribution, typology of beneficiaries, targeting method, etc.).

All the documentation is treated confidentially.



Tasks

During their review, the FRC will assess the time and method validity of the evidence supporting the IPC classification, appreciate the interpretation and documentation of evidence and analysis and the overall conclusion on Phase classification and population figures based on the parameters presented in this guidance note. The FRC will then conclude by confirming or disproving Famine classifications. Process and Timeline. The proposed timeline for the Quality Assurance process is presented below.

Step	Activity Description	Dates
0	FEWS NET request for FRC activation on their IPC compatible analysis on three IDP camps (Zamzam, Abu Shouk, and Al Salam) and sharing.	27 to 28 June 2024
1	FRC preparation team constituted and received Analysis Team (AT) data, Analysis Worksheets, and conclusions for areas under review. FRC activated and received completed analysis for areas under review.	5 July 2024
2	FRC preparation team reviewed all AT data, and Analysis Worksheets, completed the FRC Matrix Tool, identified main areas requiring FRC review, and submitted conclusions to the FRC. Presentation by FEWS NET of their analysis to the FRC.	5 to 9 July 2024
3	Teleconferences held among FRC preparation team, FEWS NET, key informants, and the FRC.	10 to 19 July 2024
4	FRC activation on Sudan TWG analysis and incorporation of Sudan TWG analysis into ongoing Famine Review.	19 July 2024
5	Additional teleconferences held among key informants and the FRC.	20 to 25 July 2024
6	FRC presented the results of the review to FEWSNET, Famine Review Preparation Team, the Humanitarian Country Team, and the IPC Global Steering Committee. The Sudan TWG declined to meet with the FRC.	30 to 31 July 2024

ANNEX 3: TERMS OF REFERENCE FOR THE IPC FAMINE REVIEW FOR THE SUDAN TECHNICAL WORKING GROUP AFI ANALYSIS PUBLISHED IN JUNE 2024

Introduction

The FRC may be activated under four different scenarios as detailed in the IPC Famine Guidance Note. The review by the FRC is a neutral and independent process aimed at supporting IPC quality assurance and ensuring technical rigour and neutrality of the analysis. The activation of the FRC provides an additional validation step before the release of the analysis results.

In June, the IPC Global Steering Committee agreed to publish the Sudan TWG analysis due to concerning outcomes of the analysis across Sudan. While in July 2024, a Famine Review was also activated by the IPC Global initiative for the IPC AFI analysis conducted by the IPC TWG of Sudan after acknowledging the presence of evidence above IPC Phase 5 (Famine) thresholds in Zamzam IDP camp.

Famine Reviews are triggered when at least one of the following conditions is met: (i) the country IPC Technical Working Group (TWG) concludes that at least one area is classified in IPC AFI Phase 5 Famine, Solid Evidence or Famine Reasonable Evidence; or (ii) in case of a breakdown in technical consensus within the country IPC TWG regarding possible Famine classifications; or (iii) in case the IPC GSU, acknowledging the presence of evidence above IPC AFI Phase 5 thresholds, decides to activate a Famine Review; or (iv) in case, for similar reasons, an IPC Global Partner officially requests the IPC GSU to activate it¹⁴.

The IPC Famine Review process consists of the following steps:

- (i) the IPC GSU and IPC global partners review available analysis and evidence in preparation of the FRC's review; and
- (ii) review by the FRC. The review by the FRC is a neutral and independent process aiming at supporting IPC quality assurance and helping to ensure technical rigor and neutrality of an analysis. Review by the FRC is a specific procedure activated to endorse or not endorse Famine classifications when IPC AFI analyses show a potential or already identified situation of Famine.

Purpose

The IPC FRC review is an important mechanism of the global, regional and national partnership and governance structures. The committee is formed as needed and on demand and its activation represents an additional validation step before IPC results are released to clear the IPC Phase 5 classification (i.e. IPC Phase 5 Famine with solid or with reasonable evidence) estimated to support quality assurance and technical consensus building. The committee is to be convened at the request of the IPC GSU.

Composition

The IPC Global Famine Review Committee (IPC FRC) will be composed of five independent technical experts. Members are identified at the activation of IPC FRC and selected based on the following criteria: I. Globally recognized as leading technical food security and nutrition experts II. Neutral to the IPC outcome, who have not participated in the analysis under review.

¹⁴ IPC, Famine Guidance Note, February 2024. <https://www.ipcinfo.org/ipcinfo-website/resources/resources-details/en/c/1152897/>



Documentation needed

As part of this standard process, the partner(s) who participated in the analysis are requested to confidentially share key information to allow the FRC to conduct the review. This includes:

- I. The worksheets of the areas requested to be reviewed by the FRC,
- II. The population estimates per phase for all areas covered by the analysis. These are required for the FRC to contextualize the situation of the specific areas under review into the broader IPC analysis at country level.
- III. The area population, possibly indicating resident and IDP (this latest can be an estimation of actual)
- IV. The IPC map showing the final classification for all areas covered by the analysis. The entire map is required for the FRC to contextualize the situation of the specific areas under review into the broader IPC analysis at country level.
- V. The raw data that allowed to produce the Food Security related indicators as well as the raw data from Nutrition SMART surveys that was used in the IPC classification for the areas under review. This is of critical importance as this will allow the FRC to assess by themselves both the reliability and validity of the data that feeds the IPC.
- VI. The repository of all the evidence employed in the classification of the area under review. This should include all reports and evidence employed in the analysis. WASH and Health reports are also requested for these areas if available. Any additional report from any partners supporting better contextualization will be welcome.
- VII. Information regarding Humanitarian Food and other type of Assistance (actual tonnage distribution, typology of beneficiaries, targeting method, etc.).

All the documentation is treated confidentially.

Tasks

During their review, the FRC will assess the time and method validity of the evidence supporting the IPC classification, appreciate the interpretation and documentation of evidence and analysis and the overall conclusion on Phase classification and population figures based on the parameters presented in this guidance note. The FRC will then conclude by confirming or disproving Famine classifications.

Process and Timeline

The proposed timeline for the Quality Assurance process is presented below.

Step	Activity Description	Dates
1	FRC activation on Sudan TWG analysis and incorporation of Sudan TWG analysis into ongoing Famine Review of the FEWS NET compatible AFI analysis conducted in June 2024.	19 July 2024
2	As standard practice, a meeting between the FRC and the Sudan TWG was organized to provide opportunities for the TWG to present their analysis, technical considerations and overall conclusions to the FRC. However, the Sudan TWG declined to engage with the FRC.	19 July 2024
3	Additional teleconferences held among key informants and the FRC.	20 – 25 July 2024
4	FRC presented the results of the review to FEWS NET, Famine Review Preparation Team, the Humanitarian Country Team, and the IPC Global Steering Committee. The Sudan TWG declined to meet with the FRC.	30 to 31 July 2024
5	FRC concluded the Famine Review and shared the FRC report with the GSU for its publication.	31 July 2024

ANNEX 4. SUMMARY OF KEY OUTCOMES AND METHODS

Disclaimer: This annex has been prepared by the IPC Global Support Unit based on inputs from the multi-partner Famine Review Preparation Team in support of the work of the Famine Review Committee.

Food Security Outcome indicators

The FRC analysis used two main sources of food security data, both collected by World Food Programme (WFP) between December 2023 and May 2024:

- i. **mVAM surveys (Computer-Assisted Telephone Interviewing- CATI)**, covering a mix of residents and IDPs in inaccessible areas due to insecurity. Food security information for the locality of El Fasher (as all localities in North Darfur) come from the **mVAM survey** conducted between 8 December 2023 and 6 February 2024.
- ii. **Food Security Monitoring Survey (FSMS)**, covering IDPs and refugees in camps and settlements, conducted between January and March 2024, in person and representative at IDP camp level (e.g. El Neem Camp) or as a cluster of camps within a locality (more frequent). The FSMS survey covering IDPs was not conducted in IDP camps in the El Fasher locality due to insecurity. The TWG and FEWS NET analyses refer to the extrapolation of data for the IDP camps of Zamzam, Abu Shouk and Al Salam from the FSMS conducted in El Neem camp (East Darfur) between 22 February and 3 March 2024. Additionally, combined **historical FSMS series data from 2018-2023** (seven data points) for the three IDP camps of Zamzam, Abu Shouk, and Al Salam were available.

1. WFP, mVAM survey

General overview

The complete mVAM survey was conducted by WFP through a third-party company (Geopoll) between 8 December 2023 and 27 May 2024. A total of 3,688 questionnaires were completed successfully focusing on the inaccessible areas of Sudan. Households were randomly selected through Random-Digit Dialing. The data was collected by nine trained enumerators with the oversight of one supervisor. The last training of enumerators took place in December 2023, with a refresher training in May 2024 when the tool was updated.

Data on the response rate and reason for unsuccessful calls, for the period from 2 February 2024 to 8 July 2024, indicate that of the more than 110,000 calls administered, only 2 percent resulted in completed surveys. See details of reasons for non-response in the table below. Remote data collection faced several interruptions due to shutdowns in the four main phone networks (MTN, a Sudatel mobile unit, Sudani, and Zain). The main shut-down occurred between 20 February and the end of March, as reflected by the blind spot for this period in the frequency of completed questionnaires, below. Note that while the data on the response rate are not specific to El Fasher locality, this can be considered as indicative for the mVAM survey.

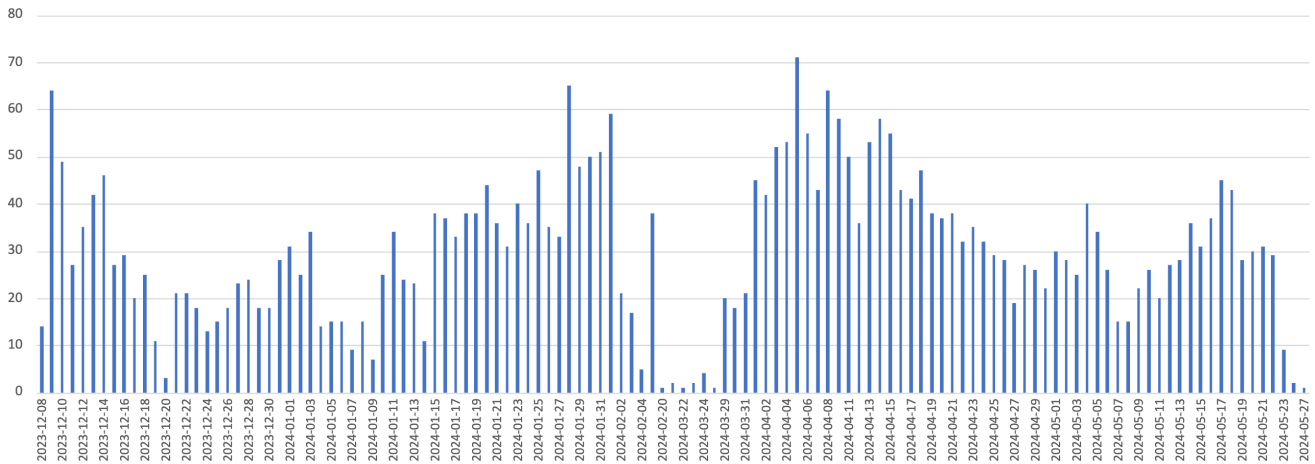
Table 1. mVAM survey response rate and reason for refusal

	Percentage (%)
Completed questionnaires	2%
Disconnected during the call	55%
Answering machine	30%
No answers	11%
Declined/refused	1%
Quota reached-interrupted by Geopoll	1%

Source: Data quality checks on WFP data



Figure 1. Distribution of completed mVAM questionnaires per day

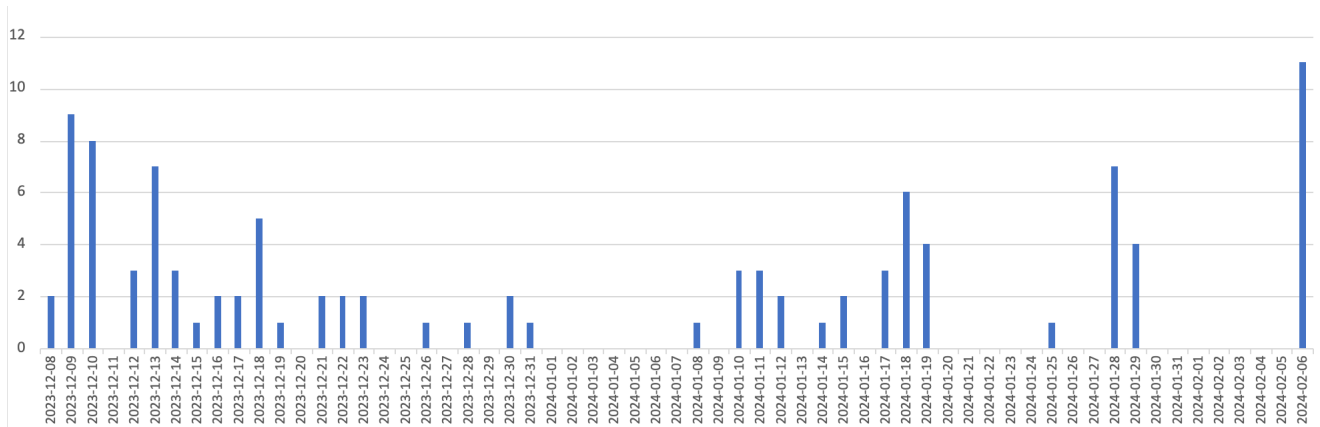


Source: Data quality checks on WFP data.

Sample review of El Fasher locality

Remote data in El Fasher locality was last collected between 8 December 2023 and 6 February 2024. There were some notable blind spots at the beginning and end of January and into February. However, the period when this data was collected was a relatively peaceful period in the locality, coinciding with the postharvest period. Thus, it is unlikely that the blind spots are masking any increased vulnerabilities due to increased conflict. It is more likely that the frequencies of the data collected represent the difficulty in reaching respondents despite the best efforts of WFP and their data collection partners due to network connectivity issues; thus, these gaps in data collection do not jeopardize the quality. Additionally, it is likely that the data presents a better picture of the food security situation than it would have been after May 2024, when conflict was at its peak.

Figure 2. Distribution across time for El Fasher locality



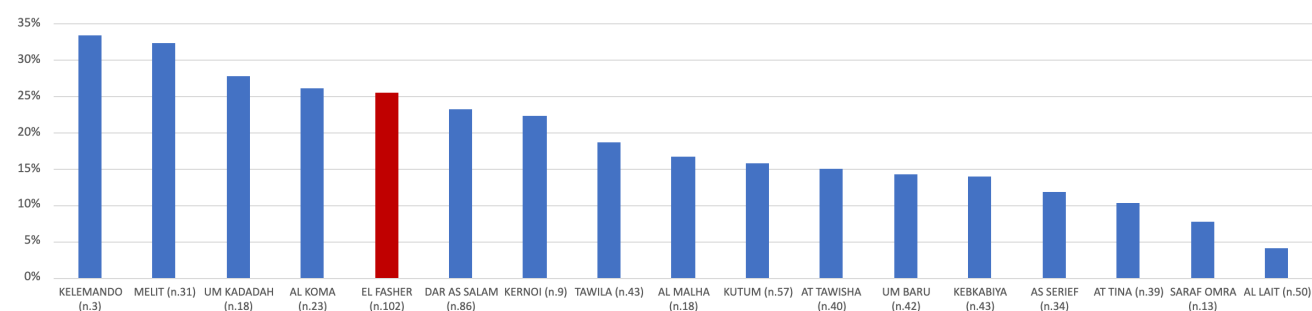
Source: Data quality checks on WFP data

Sampling frame

In the whole locality, 102 respondents were reached during the data collection period. This sample includes a mix of residents (75 percent, urban and rural) and IDPs (25 percent) including from the three main camps of Abu Shouk, Al Salam and Zamzam. Abu Shouk and Al Salam camps are integrated into the periphery of El Fasher locality and are connected through the same network as the rest of the city and locality. Zamzam is also linked to the same networks and phone lines. There is no information on network coverage nor disfunctions selectively affecting Zamzam during the mVAM data collection period. Therefore, there is no reason to believe that respondents from Zamzam camp were not excluded. In essence, mVAM data may be representative of the block of areas in and around the city and camps during the data collection period.

Residence status, geographical and mode biases: The mVAM dataset does not allow the clear identification of where respondents are located within El Fasher locality (i.e. IDP camps vs. El Fasher town). However, it is possible to detect the number of IDPs vs. residents in the locality. Of the 102 respondents from El Fasher, 26 (25.5 percent) are IDPs. Despite the small sample size, the percentage of IDPs seems plausible and consistent with the other localities of North Darfur, as shown by the graph below (only El Fasher has a representative sample).

Figure 3. Distribution of IDPs by locality in North Darfur



Source: Data quality checks on WFP data

IDP vs. resident population: Half (50 percent) of IDP respondents in El Fasher affirmed living in camps or settlements dedicated to IDPs, while the rest are hosted within the local communities. Although the time frame is different, this information is consistent with the latest data from IOM DTM data, with about 46 percent living in camps, while the rest reported having lived in host communities (27 percent), gathering sites (16 percent) and public buildings (8 percent)¹. Thus, the data appears to be plausible in terms of IDP shelters and the ratio of IDPs versus residents.

Time of arrival and origin of IDPs: The majority of the 26 IDP respondents interviewed had arrived in El Fasher locality in 2023 (73 percent). Most of them (20) were originally from other localities in North Darfur, while others are from Greater Darfur, which was more directly affected by conflict in 2023.

¹ IOM, Displacement Tracking Matrix, Focused Flash Alert: Conflict in El Fasher, North Darfur State, Update 003, 7 July 2024.



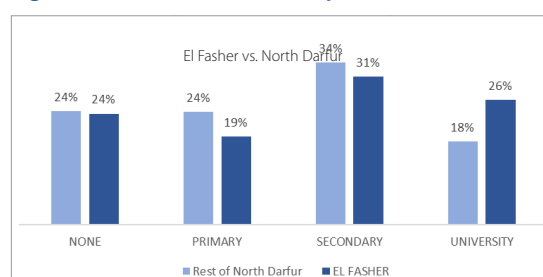
Education and age bias: The mVAM sample (in El Fasher and arguably in all localities of North Darfur) is believed to be skewed towards young, educated cohorts of respondents who are more likely to own a functioning phone. About 61 percent of respondents are 35 years old or younger, and over 50 percent of respondents reported having a secondary or tertiary (university-level) degree. Phone penetration is expected to be high. As of 2014, 61 percent of people in North Darfur owned a functioning phone², expected to have increased to up to 75 percent by 2017. The mode bias might be more associated to the profile of respondent than to actual phone ownership.

Table 2. Age group of mVAM survey respondents

Age group	Count	Percentage (%)
18-25	24	24%
26-35	38	37%
>35	40	39%
Sum	102	100%

Source: Data quality checks on WFP data

Figure 4. Education level of respondents



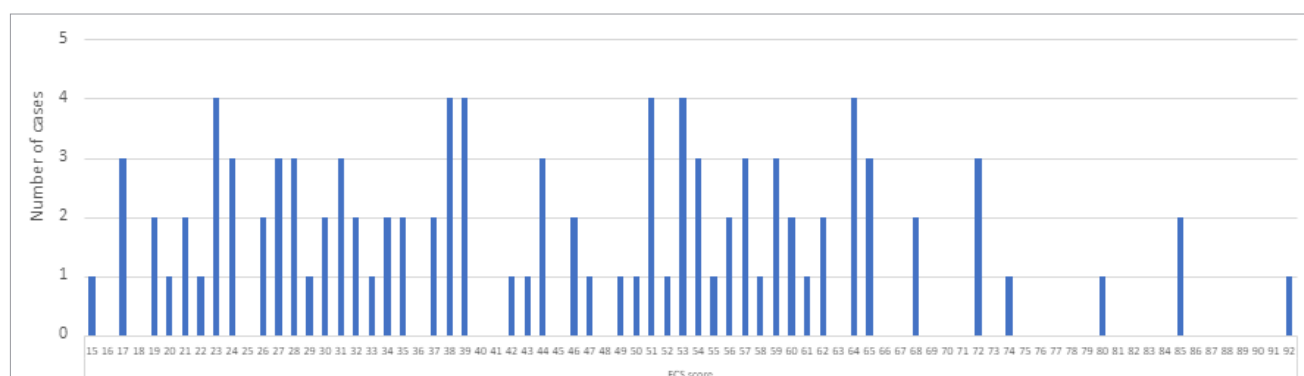
Source: Data quality checks on WFP data

Data quality checks

Recalculation of indicators: the data that was used and analyzed during the IPC analysis conducted by the Sudan IPC Technical Working Group was reviewed, reanalyzed and subject to quality checks for the Famine Review. Results confirm the outputs used by the analysis team (outcome indicators and contributing factors).

Frequency distribution of outcome indicators: The analysis of food security outcome indicators shows a quasi-normal, plausible distribution of 1) Food Consumption Score; and 2) Reduced Coping Strategy Index (rCSI). No noticeable outliers are identified, except the value zero for rCSI (5 percent of respondents). There are no missing cases for any outcome indicator. More concerns remain over the quality of the results of LCS given the high number of not applicable (N/A) answer options recorded (with 5 of 10 strategies reporting 50 percent or more as N/A). High responses for N/A are a recurrent pattern, even for coping mechanisms where the non-applicability is hard to justify (e.g. begging, where even if it is socially unacceptable to do so, it is usually possible to engage in begging as a coping strategy, unless there is no one else in the area to beg from). Nevertheless, the combined 'Yes' and 'No, because this strategy is exhausted' reaches plausible, high levels for many strategies indicating that results are not fully off-target.

Figure 5. Food Consumption Score distribution

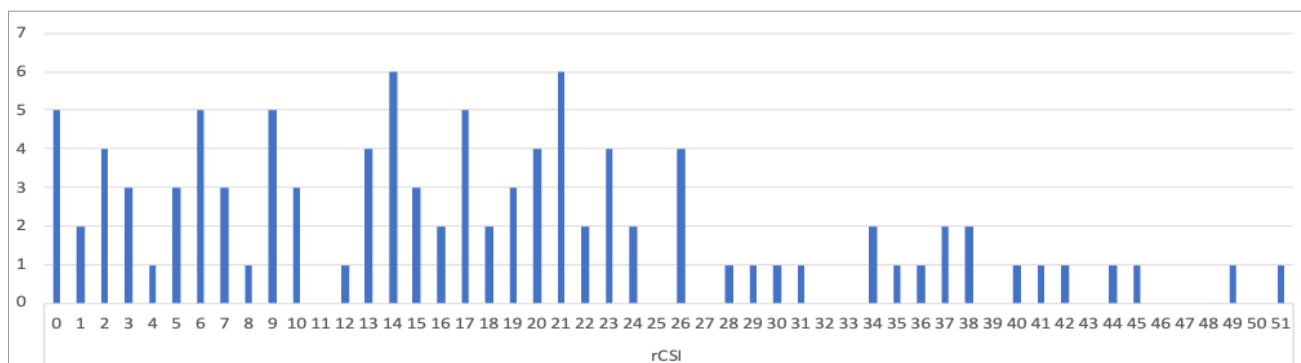


Source: Data quality checks on WFP data

² Global Data Lab, GDL Area Profile Report, 2022,

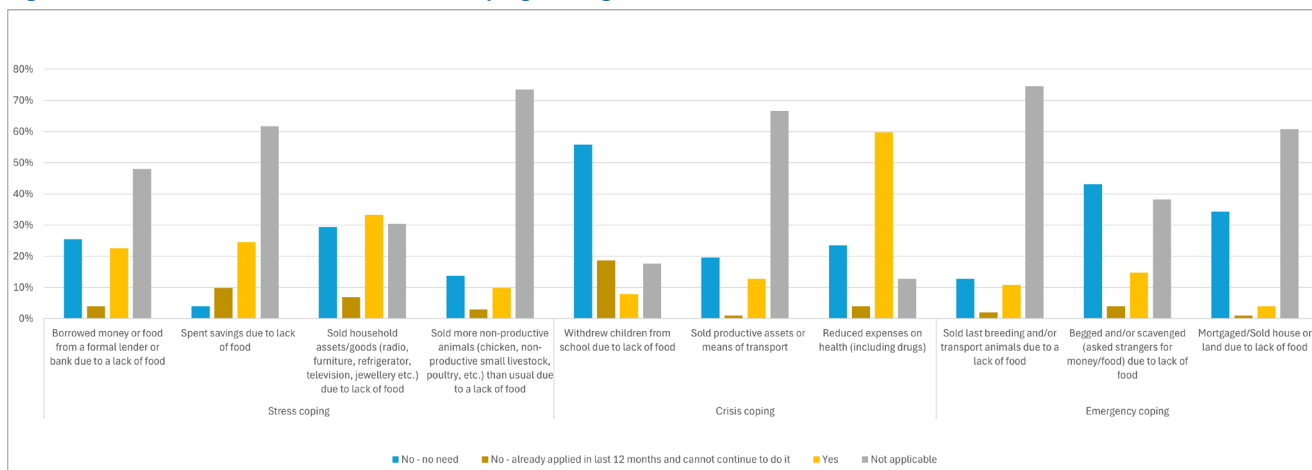
<https://globaldatalab.org/areadata/profiles/SDNr113/>

Figure 6. Reduced Coping Strategy Index distribution



Source: Data quality checks on WFP data

Figure 7. Detailed breakdown of Livelihood Coping Strategies



Source: Data quality checks on WFP data

Cross-tabulations among key indicators: standard cross-tabulations were conducted between the three food security outcome indicators (FCS, rCSI, and LCS). In El Fasher locality, there is not a statistically significant convergence of households under the most severe categories. However, there is a strong convergence among less vulnerable households, which do not show severe results for any of the three indicators. In other words, food insecurity seems more spread across medium and high categories of severity for each indicator, while the less vulnerable seem more uniformly portrayed by all outcome indicators. Arguably, the low convergence of severity for each indicator within the same households also depends on the sample size. It is believed that a stronger convergence on the severe categories could apply for mVAM surveys carried out more recently given the likely deterioration of food security status of people in the locality after the beginning of hostilities in April 2024.

**Table 3. Cross-tabulations among key indicators**

		FCS Categories								
		Acceptable			Borderline			Poor		
		rCSI Categories			rCSI Categories			rCSI Categories		
		Low	Medium	High	Low	Medium	High	Low	Medium	High
LCSI Categories	None	1	5	0	2	0	0	1	2	1
	Stress	5	3	3	0	0	2	0	0	1
	Crisis	2	10	7	1	3	6	1	5	7
	Emergency	0	9	8	1	5	4	0	2	5
		FCS Categories								
		Acceptable			Borderline			Poor		
		rCSI Categories			rCSI Categories			rCSI Categories		
		Low	Medium	High	Low	Medium	High	Low	Medium	High
LCSI Categories	None	1%	5%	0%	2%	0%	0%	1%	2%	1%
	Stress	5%	3%	3%	0%	0%	2%	0%	0%	1%
	Crisis	2%	10%	7%	1%	3%	6%	1%	5%	7%
	Emergency	0%	9%	8%	1%	5%	4%	0%	2%	5%

Source: Data quality checks on WFP data

Chi-squared tests: FCS, LCS and rCSI were disaggregated into binomial indicators showing the highest severity IPC category (e.g. FCS 28³ and below against all other values, LCS emergency category and rCSI 19+). Chi-squared tests were conducted to assess non-random distribution and convergence of population across the same phases by couples of indicators, within El Fasher locality. Only values of the Person P value 0.05 or lower show statistically relevant correlation. Results show no significant correlation between any pair of indicators (FCS-rCSI, rCSI-LCS, LCS-FCS). This is partly due to the low sample size reducing the likelihood of statistical correlations. At the same time, this also proves the absence of full overlap between high severity of indicators within the same households. In other words, some households may be more exposed to some of the angles of food insecurity covered by one indicator, while other households may be more sensitive to those of the other two, or one of them.

Table 4. mVAM survey - Chi-squared P values for El Fasher locality

El Fasher mVAM – Chi square P value			
	FCS	rCSI	LCS
FCS		0.135*	0.515*
rCSI	0.135*		0.322
LCS	0.515*	0.322	

Source: Data quality checks on WFP data

Main results from WFP mVAM survey

Outcome Indicators

In El Fasher locality, for the data collection period, 25 percent of respondent households had a poor Food Consumption Score (FCS), 23 percent had borderline food consumption, and 52 percent of households had acceptable food consumption. This is indicative of a high IPC Phase 4 and above. Moreover, 43 percent had a high reduced Coping Strategy Index (rCSI), and 43 percent had medium coping, while 14 percent had low coping. Further, 33 percent of households surveyed reported high emergency coping at 33 percent, followed by 41 percent in crisis coping, followed by 14 percent experiencing stress and only 12 percent of households reporting no livelihood coping strategies.

³ Note that in contexts of high oil and sugar consumption, such as Sudan, the adjusted threshold is used for FCS (28/42).

Table 5. Recalculation of food security indicators

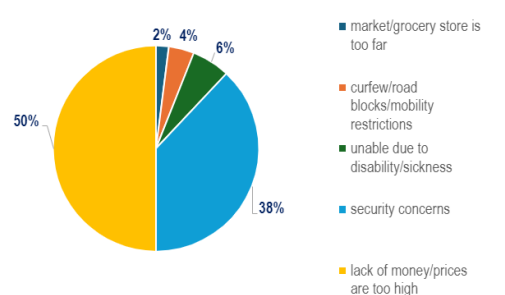
Food security outcome indicators - El Fasher		Count	% of cases
FCS Categories	Poor	25	25%
	Borderline	24	23%
	Acceptable	53	52%
rCSI Categories	Low	14	14%
	Medium	44	43%
	High	44	43%
LCSI Categories	No coping	12	12%
	Stress coping	14	14%
	Crisis coping	42	41%
	Emergency coping	34	33%

Source: Data quality checks on WFP data

Contributing factors

Of the 51 percent of respondents in El Fasher that indicated that they had barriers to accessing the market, half indicated that it was largely due to lack of money or that prices were too high, followed by nearly 40 percent indicating security concerns.

Figure 8. Barriers to Market Access



Source: Data quality checks on WFP data

Figure 9. Main Source of Income for mVAM respondents in El Fasher locality



Source: Data quality checks on WFP data

In terms of main source of income for the population respondents, nearly 40 percent were involved in small business, followed by 24 percent engaged in non-agricultural wage labour (such as raksha/ wheelbarrow/porter/ tradition mining), and 18 percent engaged in salaried work. Only 10 percent of those reached earned their primary income from agricultural crops. No respondents in the area mentioned having received remittances as their primary/main source of income, and there was no follow-up question asking the second source of income.

Conclusion

- **Sample size and disaggregation:** The sample size (102 observations) meets the IPC minimum requirements (>90) for El Fasher locality and has a good degree of geographical representativeness for the period of data collection (Dec 2023-Feb 2024). However, the sample size does not allow for disaggregation by resident status, into IDPs (26) and residents (76). The dataset also does not allow the identification of IDPs from the camp of origin; thus, it is impossible to detect the respondents from these camps (Zamzam, Abu Shouk or Al Salam).



- **Periodicity:** Data collection took place two to four months before the start of the TWG analysis, and five to seven months from the period of Famine Review. During data collection, El Fasher locality was receiving IDPs from other areas of Darfur under conflict but was not directly affected by conflict. Also, the period coincides with harvest and therefore might show better-than-reality outcomes for food security and contributing factors.
- **Continuity of data collection:** While some blind spots were recorded during the data collection window, these interruptions only partially affected the accuracy and representativeness of results, as no exceptional driver or mitigating factors to food insecurity like conflict, displacement or HFA distribution materialized during data collection in El Fasher locality.
- **Outcome indicators:** Checks on the dataset showed that the results used by the analysis team are correct, and plausible, yet likely skewed towards younger, more educated households, presenting a better-than-average food security situation. Age and education are typically a proxy of a comparatively better food security status, potentially biasing the representativeness of mVAM results.
- **Other potential biases:** The high phone penetration and ownership (75 percent in 2017) in North Darfur does not constitute a relevant source of bias for CATI surveys. On the contrary, it ensures good randomization of interviews. A potential source of bias is the higher connectivity in urban areas that curtails the proportion of rural respondents, which is impossible to quantify with data available in the mVAM survey.

Overall assessment of reliability

The FCS, rCSI, and LCS indicators are only representative for the El Fasher locality - not investigated as a unit by this Famine Review – and not usable for Abu Shouk, Al Salam and Zamzam camps, due to the impossibility to disaggregate IDPs by camp. The low sample size for the locality (102) makes it impossible to have reliable evidence for each camp, even if this level of disaggregation using the data available were possible. The timeliness is T1, since the data collection started seven months before the FRC proceedings, in a different season and conflict scenario than the current one.

In conclusion, the mVAM survey does not inform thoroughly the current situation in the camps. It does, however, serve as a snapshot of baseline data, and a good starting point for inference of food security in the locality. This is particularly true if filtered through the lens of recently acquired contributing factors on conflict-related displacement, access to income, agricultural production, food availability in markets, remittances and HFA.

2. WFP, FSMS survey

General overview

The WFP FSMS is typically conducted on an annual basis, focusing on camp-based IDP and refugee households. Prior to the conflict, WFP contracted enumerators in each state who carried out the data collection under the supervision of a WFP team leader. The last FSMS was conducted between January and March 2024. It covered 6,612 households, clustered into 39 strata of IDPs (22), refugees (15) and mixed (2). Most of these strata comprise clusters of IDP settlements or camps within a single locality or, more frequently, within a group of 3-4 adjacent localities. Only one settlement, the IDP camp of El Neem in East Darfur state, reached the minimum IPC data requirements and could be classified by the TWG in the last IPC Acute Food Insecurity (AFI) analysis as a standalone unit of analysis. All the other camps and clusters of IDPs and refugees were analyzed as a group for the locality or at the state level (e.g. East Darfur IDPs).

The FSMS carried out in 2024 could not cover IDP camps in North Darfur due to insecurity, including the three camps located in and around the El Fasher locality. The latest food security information available from Abu Shouk,

Al Salam and Zamzam date back to the FSMS 2023. In order to analyze Zamzam camp, the IPC TWG analysis decided to extrapolate the food security outcome data from the FSMS 2024 conducted in El Neem camp. The TWG considered Zamzam camp as a single unit of analysis, disaggregated from the rest of El Fasher locality, owing to a list of differences, including the distance from El Fasher town and to the predominant presence of newly displaced IDPs. Similarly, FEWS NET also considered Zamzam as a separate unit of analysis, using the food security outcome data from El Neem Camp in East Darfur; however, FEWS NET went a step further to extrapolate FSMS 2024 food security outcome data from El Neem (and thus also Zamzam camp) to two other camps in El Fasher locality: Abu Shouk and Al Salam camps, which were not considered as separate to El Fasher by the TWG.

Sample review

In access constrained states, such as in East Darfur, where El Neem camp is located, WFP hired cooperating partners to execute the data collection. In this case, the partner for data collection in East Darfur was Alswaid Alkhadra Organization (AAO). Data collection for the FSMS in East Darfur took place from 22 February to 3 March 2024.

Sampling frame

The sample covered 302 interviews equating to around 28 interviews per day. El Neem was considered as one camp, and one stratum. Field-level techniques were applied to ensure the random selection of respondents within El Neem. Respondents were selected through a two-stage cluster sample whereby the different sectors of the camp were randomly selected first, and then the households were randomly selected within the sectors.

Data quality checks

Recalculation of indicators: the data that was used and analyzed during the IPC analysis conducted by the Sudan IPC TWG was reviewed, reanalyzed and subject to quality checks for the Famine Review. Results confirm the outputs used by the analysis team (outcome indicators and contributing factors).

Frequency distribution of outcome indicators: The analysis of food security outcome indicators shows a plausible distribution for 1) Food Consumption Score; 2) Household Hunger Score (HHS) and 3) Reduced Coping Strategy Index (rCSI). There are no missing cases for any outcome indicator. The value of 21 for FCS (22 percent of respondents) and the score of zero for rCSI (27 percent of respondents) appear to be outliers, however, both can be explained. The FCS value of 21 is equivalent to the score given for daily (7 days a week, for one week) consumption of oil, sugar and cereals. If this base diet of oil, sugar and cereals is combined, FCS is 21, leaving no households with a poor FCS. However, as this diet clearly cannot be classified as a borderline given the very low nutritional value, in contexts of high oil and sugar consumption, such as Sudan, the adjusted threshold are used⁴. The high prevalence of the FCS 21 justifies the use of the adjusted threshold for FCS as there is clearly high consumption of sugar and oil, combined with daily cereal consumption. The distribution of HHS is also normal, showing a high prevalence of 0 and 2 (indicative of Phase 1 and 3, respectively). While HHS is best suited for capturing the most severe food insecurity, and we might expect to see higher prevalence of severe scores, there are no data quality issues detected, and the results are plausible. Regarding an rCSI score of zero, this is normal as not all households are expected to engage food-based coping strategies; a prevalence of one-third reporting no coping is plausible, and the distribution is considered normal.

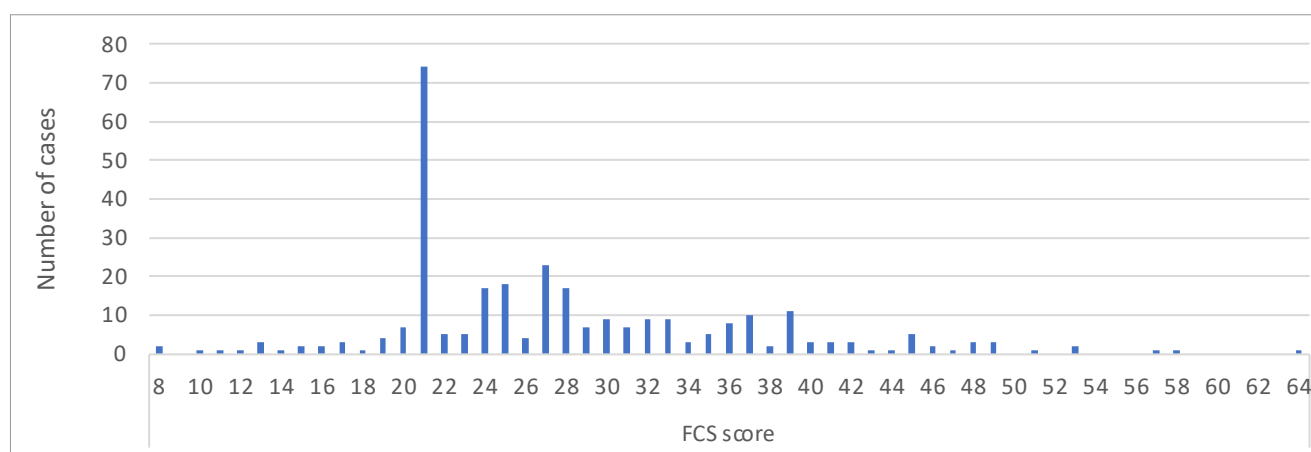
There are, however, significant concerns over the quality of the results for livelihood coping strategies given the very high number of not applicable (N/A) response options recorded, where 75-99 percent of respondents indicated that for all 10 strategies, that they were not applicable to them in the last 30 days. Considering that data were collected in an IDP camp made up of protracted IDPs, it makes sense that many of the asset-related strategies proposed

⁴ WFP, VAM Resource Centre, *Food Consumption Score*, 16 May 2024, <https://resources.vam.wfp.org/data-analysis/quantitative/food-security/food-consumption-score>

would be not applicable to the population of interest (e.g. sold household assets/goods, sold productive assets, sold house or land). Further, given that banks are closed, borrowing from a formal lender or bank would not be possible, and it is also plausible that the IDPs interviewed either never had savings, or exhausted them more than a year ago, resulting in the high prevalence of N/A responses. However, there was a notable lack of engagement in emergency coping, where one in five households reporting not needing to engage in begging (20 percent) and one in four reported not needing to sell their house or land (25 percent). The combined responses of 'yes' and 'no, exhausted' were never more than 15 percent (on reduced expenses on health). Thus, while the results are plausible, they do not seem to capture the reality of livelihood coping for the population.

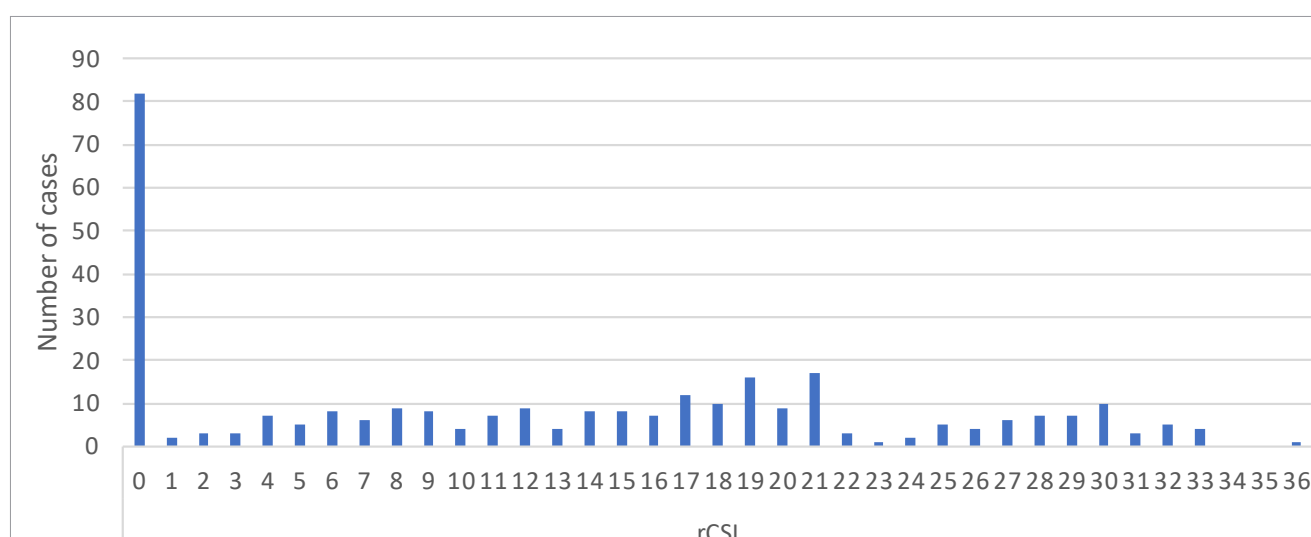
Finally, it is important to note that while some data on the Household Dietary Diversity Score (HDDS) was collected, the data collection methodology was not aligned to the standard methodology for HDDS as per the IPC reference table (i.e. 12 food groups), and so no further quality checks were conducted on this outcome indicator.

Figure 10. Food Consumption Score distribution



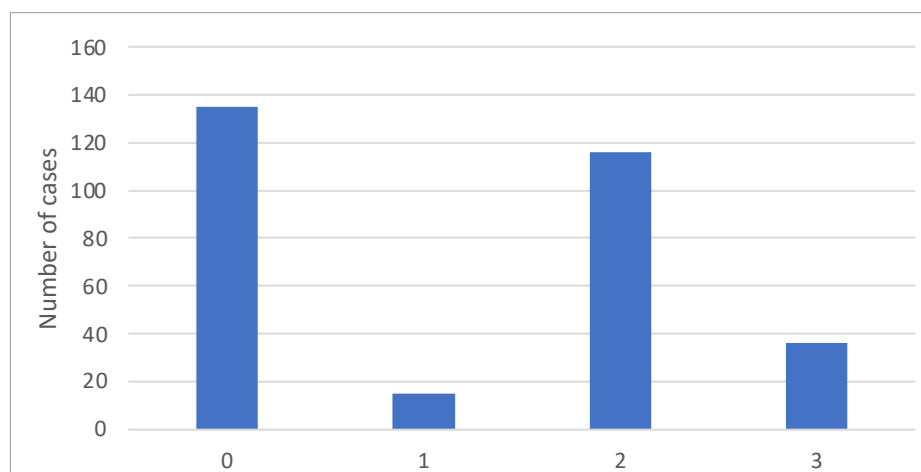
Source: Data quality checks on WFP data

Figure 11. Reduced Coping Strategy Index distribution



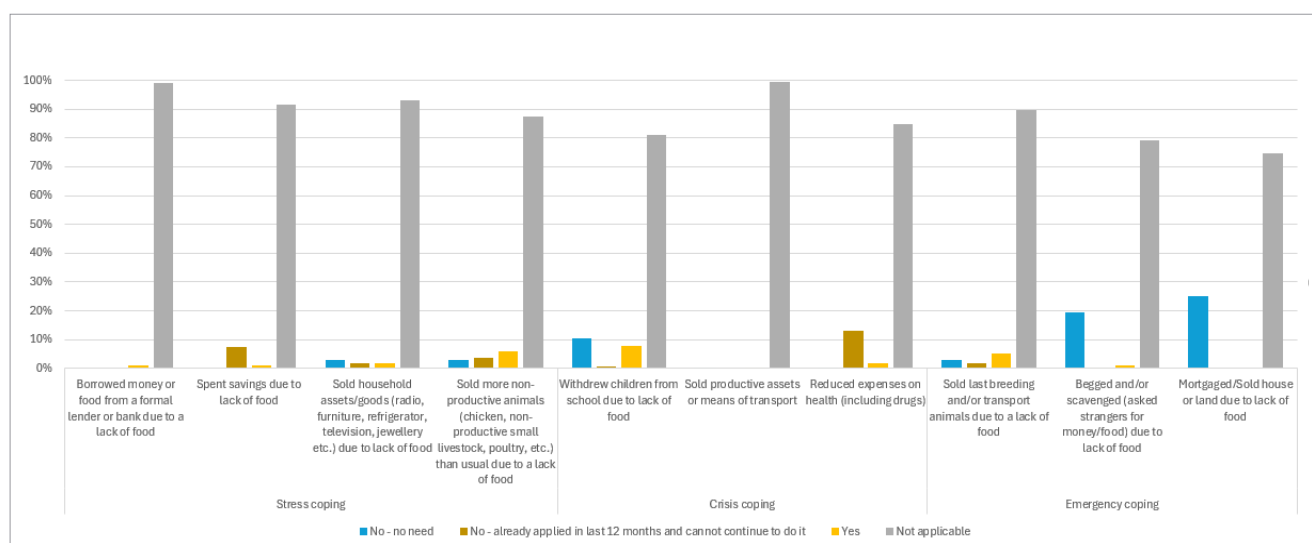
Source: Data quality checks on WFP data

Figure 12. Household Hunger Scale (HHS) distribution



Source: Data quality checks on WFP data

Figure 13. Detailed breakdown of Livelihood Coping Strategies



Source: Data quality checks on WFP data

Cross-tabulations among key indicators: Standard cross-tabulations were conducted between the four food security outcome indicators (FCS, HHS, rCSI, and LCS). In El Neem camp, there was statistically significant convergence of households under the most severe categories, particularly when comparing food consumption to coping on an individual basis – i.e. FCS compared to rCSI and FCS compared to LCS. That said, there is no convergence between rCSI and LCS, which makes sense as households that have exhausted or do not have access to almost all their livelihood coping strategies (as evidenced by the largely N/A responses) are more likely to be engaging in more short-term food based coping strategies, captured in rCSI. HHS shows some convergence at the lower end of vulnerability, but it is not possible to make this comparison to the more vulnerable households.



Table 6. Cross-tabulations among key indicators

				FCS Categories: 28/42 thresholds								
				Acceptable			Borderline			Poor		
				rCSI Categories			rCSI Categories			rCSI Categories		
				Low	Medium	High	Low	Medium	High	Low	Medium	High
LCSI	HH not adopting coping strategies	Household Hunger Score IPC Categories	No hunger in the household	4	1	0	29	7	0	51	6	0
			little hunger in the household stress	0	1	0	0	0	1	2	1	1
			Moderate hunger in the household crisis	0	1	0	0	14	15	0	18	76
			Severe hunger in the household emergency	0	0	0	0	0	0	0	0	0
			Very severe hunger in the household catastrophe	0	0	0	0	0	0	0	0	0
	Stress coping strategies	Household Hunger Score IPC Categories	No hunger in the household	0	0	0	0	0	0	1	2	0
			little hunger in the household stress	0	0	0	0	1	0	0	0	0
			Moderate hunger in the household crisis	0	0	0	0	1	2	0	2	0
			Severe hunger in the household emergency	0	0	0	0	0	0	0	0	0
			Very severe hunger in the household catastrophe	0	0	0	0	0	0	0	0	0
	Crisis coping strategies	Household Hunger Score IPC Categories	No hunger in the household	1	4	0	1	8	0	1	12	0
			little hunger in the household stress	0	2	0	0	1	0	0	4	0
			Moderate hunger in the household crisis	0	1	0	0	1	0	0	5	2
			Severe hunger in the household emergency	0	0	0	0	0	0	0	0	0
			Very severe hunger in the household catastrophe	0	0	0	0	0	0	0	0	0
	Emergencies coping strategies	Household Hunger Score IPC Categories	No hunger in the household	0	2	0	1	2	0	0	2	0
			little hunger in the household stress	0	0	0	0	1	0	0	1	0
			Moderate hunger in the household crisis	0	3	2	0	5	0	0	2	2
			Severe hunger in the household emergency	0	0	0	0	0	0	0	0	0
			Very severe hunger in the household catastrophe	0	0	0	0	0	0	0	0	0

				FCS Categories: 28/42 thresholds								
				Acceptable			Borderline			Poor		
				rCSI Categories			rCSI Categories			rCSI Categories		
				Low	Medium	High	Low	Medium	High	Low	Medium	High
LCSI	HH not adopting coping strategies	Household Hunger Score IPC Categories	No hunger in the household	1%	0%	0%	10%	2%	0%	17%	2%	0%
			little hunger in the household stress	0%	0%	0%	0%	0%	0%	0%	1%	0%
			Moderate hunger in the household crisis	0%	0%	0%	0%	5%	5%	0%	6%	25%
			Severe hunger in the household emergency	0%	0%	0%	0%	0%	0%	0%	0%	0%
			Very severe hunger in the household catastrophe	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Stress coping strategies	Household Hunger Score IPC Categories	No hunger in the household	0%	0%	0%	0%	0%	0%	0%	1%	0%
			little hunger in the household stress	0%	0%	0%	0%	0%	0%	0%	0%	0%
			Moderate hunger in the household crisis	0%	0%	0%	0%	0%	1%	0%	1%	0%
			Severe hunger in the household emergency	0%	0%	0%	0%	0%	0%	0%	0%	0%
			Very severe hunger in the household catastrophe	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Crisis coping strategies	Household Hunger Score IPC Categories	No hunger in the household	0%	1%	0%	0%	3%	0%	0%	4%	0%
			little hunger in the household stress	0%	1%	0%	0%	0%	0%	0%	1%	0%
			Moderate hunger in the household crisis	0%	0%	0%	0%	0%	0%	0%	2%	1%
			Severe hunger in the household emergency	0%	0%	0%	0%	0%	0%	0%	0%	0%
			Very severe hunger in the household catastrophe	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Emergencies coping strategies	Household Hunger Score IPC Categories	No hunger in the household	0%	1%	0%	0%	1%	0%	0%	1%	0%
			little hunger in the household stress	0%	0%	0%	0%	0%	0%	0%	0%	0%
			Moderate hunger in the household crisis	0%	1%	1%	0%	2%	0%	0%	1%	1%
			Severe hunger in the household emergency	0%	0%	0%	0%	0%	0%	0%	0%	0%
			Very severe hunger in the household catastrophe	0%	0%	0%	0%	0%	0%	0%	0%	0%

Source: Data quality checks on WFP data

Chi-squared tests:

FCS, HHS, LCS and rCSI were disaggregated into binomial indicators showing the highest severity IPC category (e.g. FCS 28 and below against all other values, very severe HHS, LCS emergency coping category and high rCSI). Chi-squared tests were conducted to assess non-random distribution and convergence of population across the same phases by pairs of indicators, within El Neem camp. Only values of the Person P value 0.05 or lower show statistically relevant correlation. Results show significant correlations between FCS-rCSI and LCS-FCS; indeed, the FCS is often correlated with coping indicators like rCSI and LCS. However, the relationship between rCSI-LCS was not statistically significant. It was not possible to make this comparison of the other indicators with HHS, as there were no households in this sample reporting the most severe hunger category for HHS.

Table 7. El Neem FSMS – Chi-squared P values

El Neem FSMS – Chi-squared P values				
	FCS	HHS	rCSI	LCS
FCS		–	0.000*	0.001*
HHS	–		–	–
rCSI	0.000*	–		0.096
HHS	0.001*	–	0.096	

Source: Data quality checks on WFP data

Main results from FSMS

Outcome Indicators

In El Neem camp in 2024, 63 percent of households reported poor food consumption, corresponding to an indicative IPC Phase 4 and above, followed by 30 percent with borderline consumption, meaning that 97 percent of households in El Neem camp had inadequate food consumption. Meanwhile, 50 percent of households fell into the moderate category for the household hunger scale (HHS), which is linked to Phase 3 (Crisis). Looking at food-based coping strategies (i.e. rCSI), one in three households (33 percent) reported high coping. However, in terms of livelihood coping strategies, only 8 of households reported emergency coping strategies and a stark 75 percent of households were categorized as not having engaged in livelihood coping strategies. This is largely due to the very high percentages of households reporting that the strategies are not applicable. This is understandable considering the situation of the protracted IDPs in El Neem camp, and indeed confirmed by the low asset ownership. However, this also partly due to a high percentage reporting not having engaged in emergency coping strategies (e.g. not needing to sell their house, and begging). While some data on the HDDS was collected, it was impossible to verify the results based on the methodology applied and misalignment to the IPC reference table, so it has not been included herein.

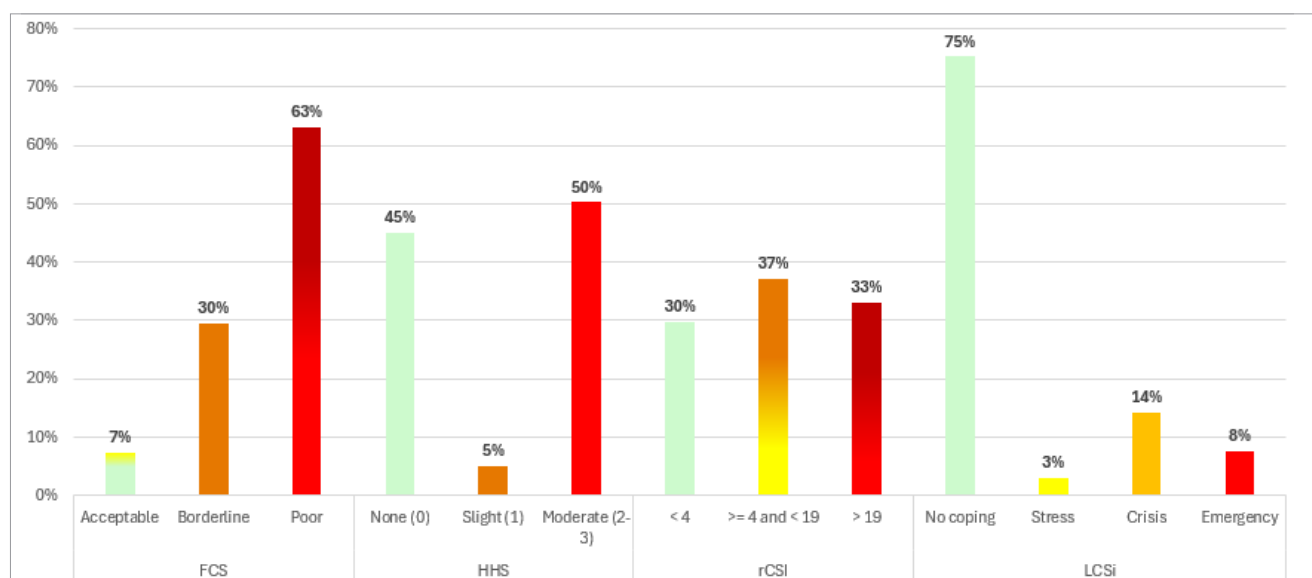
Table 8. Recalculation of food security indicators

Food security outcome indicators - El Fasher		Count	% of cases
FCS Categories	Poor	191	63%
	Borderline	89	30%
	Acceptable	22	7%
HHS Categories	None (0)	135	45%
	Slight (1)	15	5%
	Moderate (2-3)	152	50%
	Severe (4)	0	0%
	Severe (5-6)	0	0%
rCSI Categories	Low	90	30%
	Medium	112	37%
	High	100	33%
LCSI Categories	No coping	227	75%
	Stress coping	9	3%
	Crisis coping	43	14%
	Emergency coping	23	8%

Source: Data quality checks on WFP data



Figure 14. Recalculation of food security outcome indicators



Source: Data quality checks on WFP data

Conclusions

- Sample size and disaggregation:** The sample size (302 respondents) meets the IPC requirements. Nearly the entire sample of El Neem was made up of IDPs in the camp 97.7 percent and 2.3 percent were classified as refugees outside the camp.
- Sample composition:** Demographic information seems plausible, considering the average household size is 6, corresponding to the average in Sudan. The majority of household heads (61 percent) reported having no education, followed by 29 percent with a primary school education. Thus, data were deemed plausibly representative of the sample.
- Outcome indicators:** The data quality checks showed that FCS, HHS, rCSI, and LCSi outcome indicators results are plausible. However, the LCSi had a very large proportion (75 percent of households) reporting no coping, largely due to the high level of not applicable responses. The LCSi module for the FSMS does not seem to have been aligned to camp settings such as in El Neem camp, which has protracted IDPs and therefore low asset ownership. For the HDDS, the quality checks could not be conducted due to methodological misalignment.

Extrapolation of El Neem to Zamzam, Abou Shouk and Al Salam camps

El Neem camp sits in the Western AgroPastoral millet and groundnuts livelihood zones, not dissimilar from the Western agro-pastoral millet zone of El Fasher and Zamzam. IDPs depend largely on the casual labour opportunities in nearby towns (El Daein for El Neem and El Fasher for Zamzam), and agricultural casual labour for plots around the camps. Both have a mixed population of protracted IDPs (around 42,000 for El Neem, around 170,000-250,000 for Zamzam) and newly displaced IDPs (91,000 and 200,000, respectively). They share similar ethnic groups and networks inside and outside the camps. Both camps have vibrant markets largely dependent on the main markets in the nearby capitals, and on food supplies from local productions, as well as imports from Chad and Libya. In terms of health and WASH, both camps rely on clinics managed by humanitarian actors, and depend on water trucking for the supply of fresh water.

There are also several differences between the two camps, partly structural and partly relating to the negative conjuncture linked to conflict. While both Zamzam and El Neem have not experienced direct fighting within the camps, conflict has affected the nearby localities in East Darfur, and in North Darfur. Conflict hit parts of East Darfur including El Daein in November 2023. However, the magnitude and intensity were not at all comparable to the ongoing fighting in El Fasher. The supply routes for El Neem from East and West are less exposed to disruptions of the flow of goods, and easier to reach for humanitarian assistance given the proximity to Nyala and Geneina. For businessmen, traders and humanitarians, reaching El Fasher, especially in times of conflict is more costly, risky and complicated. This is reflected in the prices spikes observed in Zamzam market, presumably lower than El Neem for the same commodities. Lastly, the prospects of labour opportunities and harvests around El Neem camp and in Al Daein town are exceedingly more promising than in any corner of El Fasher city, camps and rural areas within the locality.

Table 9. Comparison of Zamzam, Abu Shouk and Al Salam camps to El Neem camp

	Zamzam	Abu Shouk/ Al Salam	El Neem (East Darfur)
IDPs profile	Protracted plus influx from El Fasher surroundings.	Protracted	New IDPs are mostly from Khartoum and South Darfur (likely wealthier than those from El Fasher)
Conflict	Not directly attacked but in June 2024, there was reported shelling in nearby areas	Peak of hostility in mid-June. • Abu Shouk looting and violence in May and June, leading to mass displacement. • Al Salam surrounded but no active conflict now.	Not directly affected.
Displacement	120,000 pre-escalation 400,000 estimated around March 600,000-800,000 estimated as of June, with the additional influx of 150-200,000 IDPs (NB: WFP uses 170,000)	• Abu Shouk : 105,000 pre-escalation (NRC, Oct.22); Likely emptied with May-June incursions/shelling • Al Salam : 83,000 pre-escalation (NRC, Oct 22). Likely similar now. More stable than Zamzam camp	42,500 pre-escalation 135,000 estimated as of February
Food availability	AGRO ZONE: Millet, Sorghum, Tobacco. Increased production in 2023 (North Darfur) compared to last year and the 5-year average, still likely cereal deficit (mostly wheat).		AGRO ZONE: Agropastoral, Millet, groundnut significantly decreased production in 2023 compared to last year and the 5-year average (East Darfur); likely due to insecurity
Market functionality	Depends on small / mobile traders and farmers supply for weekly markets, functionality compromised , only 1 route (12km from town) with checkpoints	Main market of El Fasher close-by but intermittently functioning due to active fighting and shelling	Close markets (El Daein) regularly functioning
Food access	In-kind HFA provided by WFP to 22,000 people, with the last distribution in April. Multi-purpose cash assistance, last round in March (250 USD) to 10-15,000 people. Last main round in April.	Small amount of Food Aid in kind (22,000 BNF with half ration in April). Last round was in April.	Some quantity of HFA in transit to El Daein, including 461 MT of sorghum/millet. Delivered in May.
Medical Services	Two Ambulatory Therapeutic Feeding Centers (ATFCs) and one Inpatient Therapeutic Center (ITC). No epidemics, measles at usual levels, dengue fever but no outbreak reported; Vaccination (prev. 30% coverage) disrupted with the escalation.	Saudi Hospital and South hospital functioning (not fully), Abu Shouk: clinics hit by mortal projectile and explosive weapons run by volunteers	Some health centers unable to provide service due to insecurity, shortage of drug (drug supply interrupted)
Water	6-7 wells. Some organizations are water trucking and water on market is available, but at a high cost. No electricity and no fuel hamper water availability.	No information available.	Households in El Daein locality mainly relying on water trucking.
Outcome indicators	FS: Extrapolated from El Neem NUT/MORT at or above Phase 5	FS: included in mVAM (general El Fasher) : FCS poor: 25%, rCSI high coping: 43%; LCS emergency coping: 43%.	FS: FCS poor: 63%, rCSI high coping: 33%, HHS: 50%, LCS emergency: 8%. GAM/CDR N/A.



Nutrition and mortality indicators

There is limited evidence available on acute malnutrition and mortality in Zamzam camp, including recent evidence that may reflect current conditions. Only two pieces of evidence are available and accessible from within Zamzam camp: a Mass MUAC screening conducted by Sudan Ministry of Health and MSF in January and April 2024, respectively, both conducted by Médecins Sans Frontières (MSF).

1. MSF, Rapid nutrition and mortality assessment (RNA)

Conducted by MSF/Epicentre, the rapid nutrition and mortality assessment (RNA) was a two-stage cluster sampling where in stage one, 20 spatial points (clusters) were randomly sampled, then in stage two, 20 households were sampled within each point selected in stage one. Children were measured from within the sample households. Acute malnutrition was measured on children aged 6 to 59 months and pregnant and/or breastfeeding women (PBW) based on mid-upper arm circumference (MUAC), using different cut-offs, as expected, and the presence or absence of nutritional oedema and nutritional program coverage. In total, 660 children were measured from 400 households. As for mortality, the head of the household was asked if any members of their household died during the recall period (1 October 2023 to the date of assessment). Demographic variables of deceased individuals were collected as well as reported cause, date, and place of death. Information was additionally collected on the total number of household members (by sex) and the total number of members under five years old. The interviewers were trained over two days and a standardization test was carried out at the end of the training to check the interviewers' ability to take MUAC measurements.

Data quality checks

The quality of the MUAC data was checked using MUAC-for-age z-score (MFAZ), which enabled a more comprehensive statistical tests checks similar to those done when using weight-for-height z-score (WHZ), namely: percent of flagged, age and sex ratio, digit preference score, standard deviation, skewness. Outliers were detected and removed on the last two tests using the SMART flagging criteria. The overall quality results are as presented below.

Table 10. Summary results of the data quality check on children's MFAZ

Test name	Percent of flagged data	Sex ratio's p-value	Age ratio's p-value	Digit preference score	Standard deviation of MFAZ	Skewness
Result	0.6%	0.087	0.677	18	1.08	-0.12
Classification	Excellent	Good	Excellent	Acceptable	Excellent	Excellent

Source: MSF/Epicentre data

Acute malnutrition among children aged 6-59 months

Prevalence of acute malnutrition was originally calculated using the standard approach of the absolute values of MUAC in the ENA for SMART software. The results are presented in table 11.

Table 11. Prevalence of acute malnutrition by MUAC in Zamzam

	GAM n, % (95% CI)	SAM n, % (95% CI)	MAM n, % (95% CI)	% of oedema n, %	Design effect
All (659)	125, 23.1% (18.4 – 28.6)	47, 7.1% (4.7 – 10.8)	105, 15.9% (12.4 – 20.2)	2, 0.3%	2.2

Source: MSF/Epicentre

Table 12 displays the prevalence of acute malnutrition based on MUAC-for-age z-score (MFAZ) with the same case-definition as that of weight-for-height z-score (WFHZ) where acute malnutrition is defined as MFAZ < -2 z-score and/or presence of oedema and WFHZ < -3 z-score and/or presence of oedema for SAM. Based on this method, the prevalence of global acute malnutrition by MFAZ was at 33.7 percent (27.5 - 40.0, 95 percent CI).

Table 12. Prevalence of acute malnutrition by MFAZ in Zamzam

	GAM n, % (95% CI)	SAM n, % (95% CI)	MAM n, % (95% CI)	% of oedema n, %	Design effect
All (655)	222, 33.7% (27.5 – 40.0)	82, 12.4% (9.3 – 15.4)	140, 21.3% (17.0 – 25.7)	2, 0.3%	2.6

Source: MSF/Epicentre data

The assessment also reported on the proxy coverage of access to nutrition treatment programme measured by asking the caregivers whether the child was enrolled in treatment or supplementary nutrition programme. The results showed a proxy coverage of severe acute malnutrition at 28 percent (13/47) and of moderate acute malnutrition at 29 percent (30/105).

Acute malnutrition among pregnant and breastfeeding women (PBW)

The point prevalence estimate of global acute malnutrition by MUAC among PBW's was at 40.8 percent (32.5 – 49.5, 95 percent CI) as shown in Table 13. GAM was defined as MUAC < 230 mm and/or oedema, SAM as MUAC < 210 mm and/or oedema and MAM as MUAC ≥ 210 and < 230 mm.

Table 13. Prevalence of acute malnutrition among pregnant and breastfeeding women in Zamzam

	GAM n, % (95% CI)	SAM n, % (95% CI)	MAM n, % (95% CI)
All (314)	128, 40.8% (32.5 – 49.5)	43, 13.7% (9.7 – 18.9)	85, 27.1% (21.3 – 33.7)

Source: MSF/Epicentre data

Mortality

In the original assessment report, the estimate of Crude Death Rate (CDR) reported at 2.5/10,000 people (1.9 – 3.9, 95 percent CI) and under-five death rate of 2.3/10,000 people/day (1.3 – 3.9, 95 percent CI). These included trauma related deaths. As this was not in line with the CDR definition for the famine analysis, a re-analysis of the CDR estimates was done by MSF team excluding the trauma related deaths. The re-calculated CDR was at: 1.9 (1.5 – 2.4, 95 percent CI), as further described below:

Table 14. Crude and under-five death rate in Zamzam

	Number of deaths recorded	Rate/10,000/day % (95% CI)	Design effect
Crude death rate	64	1.9 (1.5 – 2.4)	1.0
Under-five death rate	15	2 (1.1 – 3.6)	1.2

Source: MSF/Epicentre data



As mentioned in the table below, the most reported leading causes of death were malaria (34.4 percent) followed by other causes (21.8 percent) and acute respiratory infections (14.1 percent).

Table 15. Reported causes of death after excluding trauma related deaths

Causes of death	Under-five years n (%)	Over five years n (%)	Total n (%)
Dengue fever	1 (6.7)	6 (12.2)	7 (11.0)
Diarrhea	2 (13.3)	3 (6.1)	5 (7.8)
Malaria	2 (13.3)	20 (40.8)	22 (34.4)
Malnutrition	2 (13.3)	2 (4.1)	4 (6.2)
Measles	0 (0.0)	3 (6.1)	3 (4.7)
Respiratory infections	5 (33.3)	4 (8.2)	9 (14.1)
Other	3 (20.0)	11 (22.4)	14 (21.8)
Total	15 (100)	49 (100)	64 (100)

Source: MSF/Epicentre with proportions re-calculated using the total on non-trauma deaths

Conclusion

The quality checks conducted on the MUAC data indicate that the measurements are plausible. However, for the mortality, no quality checks were conducted due to the unavailability of the data.

2. MSF, Mass MUAC screening

In April 2024, two months after the RNA, MSF and the Sudan Ministry of Health conducted a mass MUAC screening targeting children aged 6-59 months and pregnant and breastfeeding women (PBWs) in Zamzam camp. They initially planned to cover approximately 66,000 children and 24,000 PBWs. However, by the end of the exercise, they managed to screen 46,790 children and 16,469 PBWs, achieving coverage rates of 70.8 percent and 68.6 percent, respectively. During the screening process, children diagnosed with any form of acute malnutrition were given a dose of Ready-to-Use Therapeutic Food (RUTF). Ready-to-Use Supplementary Food (RUSF) was distributed to all non-malnourished children to prevent them from falling into acute malnutrition. Both RUTF and RUSF were distributed for a period of two to four weeks.

Unlike the RNA, the data from this screening was not available in any form of either individual level dataset or as tally sheet with a breakdown on number of children measured by sex not available. As a result, no form of quality check could consequently be done on the data received.

Main results

The GAM prevalence among children aged 6-59 months was at 29.4 percent, with SAM and MAM at 8.2 percent and 21.4 percent respectively, as shown in Table 16.

Table 16. Acute malnutrition prevalence estimates among children 6-59 months from a mass screening in Zamzam camp

	GAM n, %	SAM n, %	MAM n, %
All (46,790)	13,762, 29,4%	3,814, 8,2%	9,948, 21,4%

Source: MSF report

As for PBW's, GAM prevalence was at 33.3 percent with SAM and MAM at 9.9 percent and 23.3 percent respectively.

Table 17. Acute malnutrition prevalence estimates among PBW's from a mass screening in Zamzam camp

	GAM n, %	SAM n, %	MAM n, %
All (16,469)	5,476, 33,3%	1,637, 9,9%	3,839, 23,3%

Source: MSF/Epicentre data

Conclusion

The quality of data could not be assessed due to lack of documentation; therefore, they were not used for classification purposes.



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