IPC

Integrated Food Security Phase Classification

Evidence and Standards for Better Food Security and Nutrition Decisions

IPC FAMINE REVIEW

CONCLUSIONS AND RECOMMENDATIONS FOR PIBOR COUNTY - SOUTH SUDAN - IPC ANALYSIS - NOVEMBER 2020

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TABLE OF CONTENTS

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1. INTRODUCTION ON THE PROCESS AND KEY CONCLUSIONS

The IPC Acute Food Insecurity analysis was conducted in South Sudan from October 26th to November 16th, 2020. Due to breakdown in technical consensus in relation to the estimation of populations in IPC Phase 5 in six counties, on November 17th, 2020, the IPC South Sudan Technical Working Group partners requested the IPC Global Support Unit (GSU) to conduct a Real Time Quality Review to assess the presence of populations in IPC Phase 5 (Catastrophe) in the IPC Acute Food Insecurity analysis in the counties of Akobo, Aweil South, Pibor, Tonj East, Tonj North and Tonj South. During this process, the county of Pibor was found to present a very concerning situation, with some indicators surpassing the IPC Phase 5 thresholds. The RTQR proceeded with the activation of the Famine Review Process on November 19th, 2020, in accordance with the Famine Guidance Note[1]. The Famine Review Committee used the analysis and all evidence used by the IPC South Sudan Food Security and Acute Malnutrition Technical Working Group. The RTQR team reviewed the evidence and analysis for the other five areas and provided recommendations on the estimation of populations in IPC Phase 5 (Catastrophe) in a separate report.

It is important to note, that the main survey providing outcome indicators for the IPC analysis (FSNMS, October 2020), as well as additional evidence on nutrition, has sampled only the Western part of Pibor County (Gumuruk, Pibor, Lekuangole, Verteth payams). Pibor county's population distribution indicates that the Western payams have about 80% of the population, prior to displacements towards Maruwa Hills and Labarab, estimated to be around 74% currently. While extrapolation of data from Western payams to Eastern payams would have been possible population-wise, the FRC estimates that the diversity of the livelihood zones, the different exposure and impact from floods or sub-national conflicts, along with the different perspective of evolution in the coming months, would deserve a separate classification. This is in line with the IPC Famine Guidance Note (Section 2.7a), stating that 'any population sub-groups or areas with at least 10,000 people can be classified in Famine or Famine Likely for current or projected time periods if the minimum evidence parameters are met for the specific population sub-groups or areas. The classification of sub-groups or sub-areas may be especially important if populations are thought to be in IPC Phase 5 Catastrophe'. In summary, while the TWG classified Pibor County as a whole, the FRC analyzed smaller units of analysis comprising four of the eight payams in Pibor county, hosting about three fourths of the county population in the Western part of the county, and separately the remaining four payams in the Eastern part.

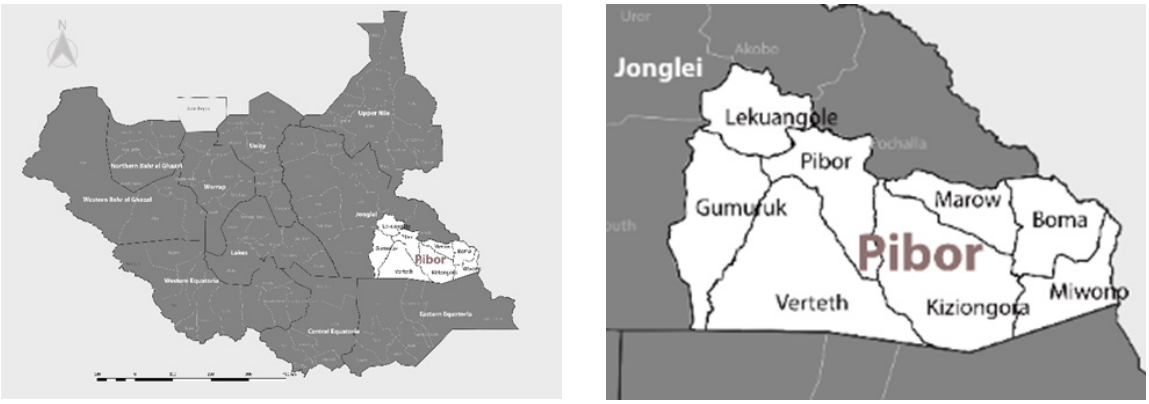
As mentioned, additional outcome evidence on nutrition to those gathered in early November at the onset of the IPC analysis became available by the time the Famine Review was initiated. This evidence further confirmed the extreme severity and highlighted the continuous deterioration of the situation. This additional evidence, together with the already available evidence, has been essential in classifying Pibor County Western payams (Gumuruk, Pibor, Lekuangole, Verteth) separately from the Eastern payams, for which the minimum evidence level is not met, to produce a classification.

1 IPC Famine Guidance Note, http://www.ipcinfo.org/fileadmin/user_upload/ipcinfo/docs/IPC-Guidance-Note-on-Famine.pdf

Table 1: Key Conclusions from the FRC on the Pibor County IPC Classification (November 2020)

Area	Period	Classification done by the IPC TWG	Classification done by the FRC
Pibor County, Jonglei State	October 2020 – November 2020	IPC Phase 4 (Emergency) – Acute Food Insecurity	Gumuruk, Pibor, Lekuangole, Verteth payams: **IPC Phase 5 (Famine Likely)**
		IPC Phase 4 (Emergency) – Acute Malnutrition	Kizongora, Boma, Maruwa, and Mewun payams: **Essential pieces of evidence are missing to be able to make a Famine classification. These areas are 'unclassified' by the FRC.**
	December 2020 – July 2021	(December 2020 – March 2021) IPC Phase 4 (Emergency) – Acute Food Insecurity IPC Phase 4 (Emergency) – Acute Malnutrition	December 2020 - July 2021 Gumuruk, Pibor, Lekuangole, Verteth payams: **IPC Phase 5 (Famine Likely)** Kizongora, Boma, Maruwa, and Mewun payams: **Essential pieces of evidence are missing to be able to make a Famine classification. These areas are 'unclassified' by the FRC.** Kizongora and Maruwa, payams: **The FRC concludes that these areas qualify for an IPC 'Risk of Famine' statement.**
		(April 2021 – July 2021) IPC Phase 4 (Emergency) – Acute Food Insecurity IPC Phase 4 (Emergency) – Acute Malnutrition	

Map 1: South Sudan and Pibor County, localization of payams



2. MAIN ELEMENTS SUPPORTING THE FRC CONCLUSION FOR THE WESTERN PAYAMS OF PIBOR COUNTY (GUMURUK, PIBOR, LEKUANGOLE, VERTETH[2])

Overview of the current situation

In 2020, Pibor was particularly affected by sub-national and localized violence and flooding, which destroyed homes, livelihoods, burned to the ground key infrastructure, caused massive displacements (estimated above 60,000 people), cut off access to humanitarian services, and created almost insurmountable operational challenges for humanitarians delivering aid. These local shocks, together with macroeconomic trends, have also brought a significant increase in prices. Coordinated attacks of unprecedented violence took place in February-March and June-July, in Lekuangole and Gumuruk payams. These attacks displayed extraordinary mobilization of forces, heavy weaponry, and different tactics, in a way that was distinct from previous raids that focused on the acquisition of cattle. The 2020 attacks rather targeted civilians (385 fatalities, more than 350 abductions, more than 800 orphans), houses (about 39,000 homes were burnt), burning crops, razing towns and destroying infrastructures, markets, schools, facilities and warehouses, including those stocking humanitarian assistance. After the attacks, a second flood affected the area.

The flood had the biggest magnitude in the history of greater Pibor and left a huge impact on people's shelters and livelihood, particularly livestock - which is considered the main livelihood for the community in the area. The households who planted after the attacks have lost most of their harvest. Thousands of people were displaced due to violence and atypical flooding and are increasingly unable to engage in livelihood activities and access food through traditional agricultural activities. Due to the high likelihood of a resurgence in conflict, the displaced population is not manifesting intentions of return. Floods, extremely violent local and sub-national conflict in 2020 and fear of retaliatory attacks severely hampered livestock production and agricultural cultivation. A continued erosion of coping capacity will likely further increase reliance on Humanitarian Food Assistance (HFA), access to which may also be restricted by flooding and insecurity.

The access to adequate quantity of water is very low at 4%, with about 88% of the people relying on river water for consumption. The immunization coverage for measles and vitamin A are around 40%, indicating poor health services in general. More than half of the health and nutrition centers have been destroyed or looted during the conflict. Although county level estimates are not available, State level information on caring and feeding practices are very low, with only one third of the children exclusively breastfed – there is a significant reduction in exclusive breastfeeding prevalence, from 67.7% in 2019 to 32.2% in 2020. Similarly, State level child food consumption indicators show very poor status, with only about 17% children meeting minimum dietary diversity requirements.

The usual mitigating factors present in the area are estimated to be insufficient to prevent a further deterioration of conditions. Fishing is currently a source of food, however, this is practiced by a limited population owning fishing equipment. Hunting is currently not possible due to the water level. Humanitarian Food Assistance and provision of basic services have been and continue to be highly disrupted in the current period and delivered at significantly lower levels than planned (or required), due to financial, logistic and protection barriers.

Due to the aforementioned elements significantly affecting food availability in markets, paired with the macroeconomic situation also exacerbated by COVID-19 market restrictions, food prices have increased dramatically.

The severe depletion of assets and livelihoods (both pastoral and agro pastoral), with the poor body conditions of the few cattle remaining and the lack of alternatives to generate income, prevents households from having effective purchasing power in accessible markets. Access to milk, blood and other livestock products is extremely limited.

Catastrophic levels of food insecurity, diseases, and availability and access to health and nutrition and water services are some of the key drivers of acute malnutrition in the western part of the Pibor county.

[2] Detailed analysis in annex 1.

Additionally, measles outbreaks have been ongoing in the area for some time, although a measles vaccination campaign is currently being conducted. There are also concerns that outbreaks of diarrheal diseases, including cholera, may occur, as the flood waters recede and contaminated water sources such as wells start to be used again. The incidence of malaria is also high, as a result of the accumulation of stagnant water. The availability and access to water, health and nutrition services have deteriorated significantly as a result of conflict and displacements. More than half the health and nutrition centers have been closed during the conflict and nutrition supplements have been looted. A total of 36 CMAM programme sites were closed between July - September 2020 and 16 sites are still being closed as of October 2020. It should be noted, that the measles vaccination and vitamin A coverage before the current conflict was already low, around 40%, according to the FSNMS.

Current food security outcome indicators

The evidence available for food consumption and livelihood change (reference FSMNS) converge on extremely high levels of food consumption gaps and severely affected and depleted livelihoods. Outcome indicators point to a very high population in IPC Acute Food Insecurity Phase 4 (Emergency) and Phase 5 (Catastrophe). According to the FSMNS survey conducted by WFP in October 2020, covering the payams of Verteth, Gumuruk, Lekuangole and Pibor, 75% of the households have a Poor Food Consumption Score (FCS below 7 is 24%) and 60% of the households consumed between zero and two meals in the 24 hours prior to the survey (18% consumed no meal in the previous day). About 33% have a very severe Hunger Households Scale equivalent to IPC Phase 5 or Catastrophe (30% reporting value of 6). The Reduced Coping Strategy Index shows that 97% of the households are restricting adult portion size to save food for children; 97% are reducing the number of meals; and 92% borrowed food. In terms of livelihood coping strategies, 66% of the interviewed households are employing Emergency Coping strategies, 31% have depleted the Emergency Coping strategy corresponding to slaughtering the last animals, 7% have depleted the migration option in search for food and begging. Cross tabulation of Household Hunger Scale and Emergency Livelihood Coping strategies show that 63% of households with very severe hunger had travelled to another village to search for or to beg for food within the past 30 days.

According to the IPC reference table, the only indicator presenting thresholds for IPC Acute Food Insecurity Phase 5 is the Households Hunger Scale – considered the most reliable method at the extremely severe end of the IPC reference table - which shows a prevalence of 33%. Cross tabulations of the HHS and other food security indicators show that 23% of the households experiencing very severe hunger also experience higher phase food security conditions. It is important to note that these cross-tabulations are useful to discard false positives (i.e. households identified in Phase 5 but whose conditions are not that extreme), but does not allow to detect false negatives (i.e. households not identified in Phase 5, but whose conditions are that extreme). This implies that the above-mentioned 23% represents a conservative estimate of the prevalence of people in IPC Acute Food Insecurity Phase 5. The same population estimate (23%) is also derived when cross-tabulating HHS with Emergency Livelihood Coping Strategies.

Considering the above factors, the FRC concludes that the food security outcomes have surpassed the IPC Phase 5 (Catastrophe) thresholds.

Current nutrition outcome indicators

Available evidence on nutrition indicates extremely critical levels of acute malnutrition in the 4 payams (namely Gumuruk, Verteth, Lekuangole and Pibor) in the Western part of the Pibor county, which account for an estimated 80% of the total population in the county. Country level FSNMS results, which only covered the Western part of the Pibor county, show a GAM based on MUAC prevalence of 17% with the following breakdown of prevalence by payams: Gumuruk 29%; Verteth 26%; Lekuangole 12%; and Pibor 11%.

According to a MUAC screening conducted as part of an IRNA rapid assessment in three payams, the prevalence of GAM by MUAC is: Gumuruk=37%; Lekuangole=33%; and Verteth=8%. The MUAC screening was conducted by trained enumerators and was exhaustive in Verteth town, but other areas of the Verteth payam were not included in the assessment. It is unclear how the sampling was conducted in the other payams (i.e. if it was done door-to-door or from a central location). Additionally, there is no narrative of the methodology and raw data is not available.

Some new and relatively more reliable information that came to light during the process of the FRC confirms the extremely critical levels of acute malnutrition. An exhaustive mass screening conducted as part of a

vaccination campaign indicates a MUAC prevalence of 24.5% in the Pibor payam, 20.4% in Lekuangole, and 24.1% in Verteth. Together, the mass MUAC screening indicates a prevalence of 21.4% for the three areas. Mass MUAC screenings are also being conducted as part of the immunization campaigns in Gumuruk, although the results are not yet available.

Based on the nutrition data collected at a health facility in Pibor Payam, the prevalence of GAM by MUAC is about 20-40% among outpatients.

According to the last three SMART surveys carried out in Pibor, the average difference in terms of prevalence estimates between MUAC and WHZ is 10 percentage points (lowest 7, highest 15), with WHZ-based prevalence estimates being higher than those based on MUAC. Applying this average difference of 10% to the currently available MUAC prevalence estimates would mean that that both the Pibor and Verteth payams would likely pass the IPC Famine thresholds of 30% for GAM based on WHZ. Based on the available contextual information, it is very likely that the MUAC prevalence from the mass MUAC screening currently being carried out in Gumuruk and Lekuangole would also show similar results. Thus, overall, even the most conservative estimates are likely to pass the GAM threshold of 30% (IPC AMN Phase 5).

Considering the above factors, the FRC concludes that the nutrition outcomes have surpassed the IPC Phase 5 (Famine) thresholds.

Current mortality outcome indicators

Only very little and circumstantial evidence is available on mortality to confirm or refute a classification of IPC Phase 5 Famine. There is no household's survey data or vital registration system. Grave counting is not possible because of high water levels. Some media reports local authorities mentioning 13 hunger-related deaths in Pibor and 37 in Maruwa Hills, but these reports cannot be used to estimate the crude or under-five death rates. When combining food insecurity, nutritional, and information regarding measles and malaria, as well as water services, delayed measles vaccination campaigns (it is ongoing now but there was no campaign until very recently due to insecurity, flooding and COVID-19 restrictions), it is plausible that the current death rate for children under five is above the IPC Phase 5 (Famine) threshold.

Projection assumption and impact

In the projected period, it is expected that the food security situation will continue to be extremely severe and most likely deteriorate. This is due to compounding contributing factors including the high likelihood of conflict intensification with the onset of the dry season; which may generate further displacements, and exacerbate operational and financial constraints on the delivery and distribution of Humanitarian Food and WASH, Health and Nutrition assistance. The seasonal calendar indicates that the January to March period is included in the lean season for the pastoral livelihoods of the Pibor Lowlands (i.e. the four payams of concern here), however, a deterioration is foreseen that exceeds the average deterioration from seasonal patterns and continues beyond this timeframe and throughout the whole projection period until July.

FRC conclusion for the current period (October – November 2020): the Famine Review Committee classifies IPC Phase 5 (Famine Likely) for the Western area of Pibor county (Gumuruk, Pibor, Lekuangole and Verteth payams).

The extreme depletion of assets and livelihoods, the missed cropping season, the very low level of livestock possession, bad livestock body conditions and diseases, the alteration of migration patterns, the exhaustion of coping strategies and the very poor food availability at market level, coupled with the extremely high food prices, will make food access extremely difficult. In addition, blood and milk availability on the market will decrease substantially.

The usual seasonal mitigating factors could not be exploited to their full potential: fishing, already not contributing much to food access due to lack of equipment, will further decrease as water recedes, and the expected increased insecurity while conducting this activity. The FRC estimates that there would be no noticeable differences between the December-March and April-July periods as the level of destitution in the first period would not allow mitigating factors to significantly improve the situation in the second projected period.

The only factors that could prevent famine from occurring would be: 1) de-escalation of conflict, and

2) the provision of Humanitarian Food Assistance well above the levels estimated and capable to surmount the existing logistical and operational barriers. However, the conflict is likely to continue in the projection period - according to the key informants, there is at least a 50% chance that conflict will continue and may even intensify. The impact that the conflict has already left on livestock would have a long-term impact on the nutritional status of children who rely heavily on livestock for food. It is highly unlikely that the humanitarian assistance and food distribution would be maintained - less than 50% chance that the planned food assistance will be delivered. Access to health facilities raises concerns over capacity to manage the current measles and malaria outbreaks and potential diarrhea outbreaks in the future. Consequently, the nutrition situation and classification is most likely to remain above IPC AMN Phase 5 thresholds during the projection period.

Some humanitarian actors are leaving the area and it is difficult to scale up humanitarian interventions due to risks related to security. There is still limited nutrition and health support in the East and the West. There is a high likelihood that conflict will increase and that the delivery of all types of humanitarian assistance will be disrupted. Even when taking out these two factors, the level of destitution and food insecurity observed in the current, and its expected deterioration in the projection period, would by itself be sufficient to estimate that nutrition will most likely remain above IPC AMN Phase 5 thresholds during the projection period.

Consideration of mortality rates during the projection period are subject to similar assumptions to those presented above about deteriorating WASH, health, nutrition, and food security conditions. Therefore, the FRC considers it feasible that both the U5DR and CDR may exceed the Phase 5 mortality thresholds during the projection period.

FRC conclusion for the projected period (December 2020 – July 2021): the Famine Review Committee classifies IPC Phase 5 (Famine Likely) the Western area of Pibor county (Gumuruk, Pibor, Lekuangole and Verteth payams).

3. MAIN ELEMENTS SUPPORTING THE RISK OF FAMINE FOR THE EASTERN PAYAMS OF PIBOR COUNTY (MAROW, KIZIONGORA, BUMA AND MWONO[3])

Overview of the current situation

The Eastern Central payams of Pibor county of Kiziongora and Marrow were affected by floods and conflict-induced displacements from Western Pibor. Estimation of displacements vary between 10,000 and 30,000. IDPs are concentrated mainly in Maruwa Hills in Kiziongora payam and Labarab village in Marrow payam. Some attacks in 2020 were extended to Labarab and villages of Maruwa Hills, characterized by looting, raiding of livestock, destruction of crops (especially in Labarab) and destruction of infrastructure. It is estimated that about 80% of the livestock has been looted in these areas, although some displaced households were able to move their cattle to other areas. The main food source is wild foods. According to the normal seasonal calendar, October and November corresponds to livestock being taken to Juba for selling, however, these livelihood patterns are no longer of much relevance, due to the low number of livestock available and being seen in the market. This has led to lack of cereal, cash and economic activities among the pastoralist population in Eastern Pibor. There have been two food distributions, in August and September, while in October and November there was no reported distribution. In these areas, there are no functional markets beside Boma.

Boma town and the Easternmost payams of Buma and Miwomo have not faced unusual shocks in 2020 and there are no reports of significant attacks and displacement in these areas.

Despite this information of contributing factors, no outcome indicator of food security is available, as the FSMNS survey only collected data in the Western Payams. Regarding nutrition, the absence of a representative survey prevents an estimate of the prevalence, however, from MUAC screening conducted, GAM in Labarab (October) is at 20.7% and in Maruwa Hills (October) at 12.3%.

Projection assumption and impact

The assumptions employed for the Risk of Famine estimation are the following:

- Reasonable chance of further, large attacks on communities around Pibor town, with the intention of generating population migration (emptying of the areas) and moving down to Labarab with the intention of stealing cattle. More displacements will happen from Pibor town to Labarab or Maruae Hills. The presence of livestock brought from the Western part during the February and June/July attacks further contributes to the risk of new attacks in these areas. Furthermore, the usual influx of livestock to Labarab during December makes the area a target for further attacks. Physical access no longer seems to be a factor preventing insecurity in the rainy season, and chances of attacks further increase in the dry season with receding water levels.
- In view of likely further movements from Western Pibor to the Central areas of the county, it is expected that the amount of displaced population will increase further, with increased burden on the host community.
- Reasonable risk that humanitarian services and food aid are most likely to be affected – impact on humanitarian access is also considerable
- Milking will become available only from April onwards, but small livestock holdings are likely to render milk unavailable for a majority of the population.
- Reasonable risk that livestock diseases might further increase due to livestock migration, poor livestock conditions and poor veterinary services available.
- Reasonable risk that normal game will not be available due to disrupted migration patterns due to flooding.
- A large part of the population, including IDPs, is almost exclusively dependent on wild foods (leaves, roots, fruits and berries) during the projection period.

[3] Detailed analysis in annex 1.

Risk of Famine in Kiziongora and Marow Payams: There is a reasonable chance that Famine may happen in the next six months among the conflict-affected populations (displaced and host populations) in the Eastern-Central parts of Pibor (especially Labarab in Kiziongora payam and the Maruwa Hills in the Marow payam) if conflict reaches levels similar to those seen in June and July of 2020.

The key driver to Risk of Famine is the possibility of new displacements from the Western part, as well as renewed attacks in the Eastern areas of Pibor. If more displaced people enter the Central parts of Pibor and new attacks occur in these areas, similar to what was seen in the past year, there is a reasonable chance of Famine happening in the projected period (December 2020 to July 2021). The increased attacks, livestock theft and destruction of homesteads, crops and properties will mean that already affected households will lose the last of their livelihoods and their source of food. This would be added to the pressure on limited resources by the continued influx of displaced people into the Eastern Central areas, who are in a dire situation as they flee Famine-affected areas in the West of the county. Accompanying this, the usual lean season during this projection period will also mean less access to food among host communities. Increases in conflict will also likely disrupt service deliveries, including humanitarian assistance and health and nutrition care.

No Risk of Famine in Buma and Mwono Payams: It is not believed that there is a reasonable chance that Easternmost parts of Pibor will go into Famine in the projected period, unless this area is also severely affected by conflict and displacement, which is not anticipated by the FRC.

It is not expected that conflict displaced populations will go as far Buma and Miwomo payams, unless conflict escalates to a level even higher than the one experienced in mid-2020. It is also not likely that new significant attacks will happen in the area over the next six months.

4. RECOMMENDATIONS FROM THE FAMINE REVIEW COMMITTEE

Recommendations to Decision Makers

1. Take all necessary measures to halt the violence in Pibor and other parts of South Sudan and protect civilians from ongoing and future insecurity.

2. Prevent any resurgence of the conflict through support to conflict resolution at all relevant levels.

3. Take all necessary steps to protect civilians in Pibor, whether still in their home areas or displaced to other parts of the county.

4. Take all necessary steps to ensure continuous access for humanitarian organizations to all populations in need of assistance and overall respect for the humanitarian space, so that the basic rights of the people can be fulfilled. This includes unhindered access to set up humanitarian assistance pipelines and prepositioning of stocks and includes ensuring uninterrupted delivery of services and that people have access to the services and assistance that is available.

5. Ensure unhindered mobility for people to carry out their livelihood activities and access markets and basic services.

6. Facilitate the flow of basic commodities. Ensure that additional resources allocated to Pibor are not diverted from resources originally planned for other areas, in line with the "Do No Harm" principle.

Recommendations to Country Humanitarian Stakeholders

1. Scale up humanitarian assistance to address food security, health, nutrition and water services needs of populations throughout South Sudan in IPC Phase 3 (Crisis) or above; and not only those in IPC Phase 5 (Famine). The rapid response may involve prioritizing immediate provision of lifesaving health and nutrition services, including the delivery of higher nutrition value commodities to the most food insecure populations as an immediate famine prevention measure.

2. Scale up humanitarian protection in Pibor.

3. Pre-positioning commodities for delivering humanitarian assistance in the eastern part of Pibor is essential to respond to the needs of the anticipated influx of displaced people should the conflict increase in the Western part of the county.

4. Enhance the provision of reliable health and nutrition services in the area to provide adequate coverage of OPD and IPD services for primary and secondary care, as well as timely preventative activities including immunization for children and ANC services for women. Ensure emergency preparedness in case of outbreaks of diarrheal diseases including cholera.

5. Restore access to clean water and to an acceptable level of sanitation for both Internally Displaced Populations and host communities.

6. Immediately conduct data collection of food security and health and nutrition outcomes as well as mortality across Western and Eastern Pibor, in particular amongst the displaced populations.

7. Conduct regular (weekly) combined monitoring and report on key assumptions about risk factors used for the projection of Famine Likely across Western and Eastern Pibor including:

   i. Conflict and population movements;

   ii. Access to markets, basic food commodity prices, volumes and flows in the area, and coping strategies;

   iii. Public health factors including disease outbreaks, admissions in nutrition programmes, availability and utilization of medical and nutrition services and supplies, WASH.

8. Data collection methods:

   i. Ensure that sampling for data collection allows for adequate representativeness of areas identified as current or future hotspots;

   ii. Ensure that data collection methods selected for the FSNMS adhere to standard procedures for nutrition assessments by following the relevant parts of SMART guidelines on team training, measurement standardization, data cleaning and quality assessment, and full documentation of sampling methods and challenges encountered in the field;

   iii. Ensure that MUAC data collection methods used in IRNA rapid assessments follow standard protocols and IPC guidance, including for data recording and systematically include MUAC screenings in field missions, ensuring appropriate documentation of training, data collection methods and challenges encountered in the field.

Recommendations to the South Sudan IPC Technical Working Group

1. Ensure regular (weekly), frequent and vigilant monitoring and reporting of the assumptions factored into the projection analysis and update IPC analyses in real time as needed.

2. Deepen the analysis of the impact of conflict and insecurity on the delivery of humanitarian assistance (food and basic services) in IPC projection analyses.

3. Widen the evidence base of IPC analyses through more in-depth data scanning and gathering, in particular in IPC Acute Malnutrition analyses including mortality.

4. Improve IPC Acute Malnutrition analyses through adequate inclusion of the WASH and health dimensions and documentation of the analytical reasoning.

5. Ensure systematic integration of Acute Food Insecurity, Acute Malnutrition and mortality analyses.

DETAILED ANALYSIS OF WESTERN PIBOR (PIBOR, VERTETH, LEKUANGOLE, AND GUMURUK)

Context, hazards, vulnerabilities

Pibor county is part of the Jonglei state and it is divided in two main livelihood zones: a lowland area (LZ05 - EASTERN SEMI ARID PASTORAL) in the Western part of the county Pibor (including the payams of Pibor, Verteth, Lekuangole, and Gumuruk), and a highland area (LZ03 - HIGH LAND FOREST AND SORGHUM) in the Southern East part of the county (including the payams of Kizongora, Boma, Maruwa, and Mewun around Boma)[4]. Most populations in this area are fully engaged in a pastoralist or agro-pastoralist economy centered on cattle keeping. This necessitates semi-annual transhuman migration between relatively permanent, wet-season settlements – scattered across small outcroppings of slightly higher ground – and larger, more condensed, temporary dry-season cattle camps, located along major rivers or permanent inland pools. In the Pibor area, mobility is key to survival and any restriction on mobility has disastrous humanitarian implications.

The lowland area, predominantly pastoral, presents traditionally more severe food insecurity conditions and a lean season usually between January and April, while the highland area presented in the past less severe food security conditions and a lean season usually between April and July. Both areas have been affected by floods, conflict and spiking prices, however the lowland area in the North-West seems to present currently more dire conditions, such as extreme food gaps, livelihood depletion and higher levels of acute malnutrition. The highland area, nonetheless, is currently hosting a large amount of displaced population, mainly concentrated in Maruwa hills (approximately five to six thousand people) and Labarab (approximately nine thousand people).

Defining the total population in each Payam is a complex exercise due to displacements. According to the 2020 census projections[5], Pibor County hosts 241,015 people, 80% in the western payams and 20% in the eastern payams. Considering the IPC Technical Working Group (TWG) utilized a population of 222,297 for Pibor area, taking into account inflows and outflows, the population distribution among the two Pibor areas have been applied to the IPC TWG population estimates. Approximately, 15,000 people were displaced from the Western to the Eastern area and have not returned, therefore, these have been discounted. It can be estimated that around 164,000 people live in the Western part of the Pibor County and 58,000 in the Eastern part of Pibor County.

Table 1. Estimation of population in Pibor County payams

Pibor County payams	Population Census projected for 2020 - NBS	Population adjusted to IPC TWG estimates	Population adjusted for displacements
Lekuangole	68,411		Outflow to Eastern of approx. 15,000 people
Gurumuchi (Gumuruk)	47,933		
Pibor	66,836		
Verteth	10,802		
Total western payams	**193,982 (80%)**	**178,916**	**163,916 (74%)**
Boma	9,227 (5,000-6,000 IDP)		Inflow from Western of approx. 15,000 people
Mewun	18,003		
Marow	5,626 (9,550 with IDP)		
Kiziongoma	14,177		
Total eastern payams	**47,177 (20%)**	**43,380**	**58,380 (26%)**
Total Pibor County	**241,015**	**222,297**	**222,297**

[4] Source: FEWS NET, *Livelihood Profile*, 2013 and 2018.
[5] Source: NBS, *Population Projections for South Sudan by Payam, April 2015.*

Overview of the Key Drivers

In 2020, Pibor was particularly affected by sub-national and localized violence and flooding, which destroyed livelihoods and key infrastructure, cut off access to humanitarian services, and created almost unsurmountable operational challenges for humanitarians delivering aid. These local shocks, together with macroeconomic trends, have also brought a significant increase in prices.

The number of people affected from conflict and floods are estimated to about 26,000 in Lekuangole, over 29,000 in Gumuruk, and over 7,000 in Verteth. Females and children living in villages were the most affected and moved to the centers of Lekuangole, Pibor, while in Verteth moved to government facilities and to abandoned humanitarian facilities in Lekuangole[6].

Despite conflict and floods being the most evident shocks, the major shocks declared by households in the flooded and insecure payams of Lekuangole, Gumuruk and Pibor, are the unusually high food prices (43%), followed by the insecurity and raiding (31%), the livestock diseases (15%), the crops destroyed (15%) and flooded houses (27%). Households declared having coped with these shocks majorly by reducing food consumption (31%) and other non-food consumption expenses (23%) or through assistance (23%). About 37% of the households declared to be unable to buy food, while about 22% bought less food, since COVID-19 restrictions were introduced in April[7].

Insecurity. Major attacks took place in mid-February, March and then in July, in two separate locations, in Lekuangole and Gumuruk payams. From January to mid-February, the youth mobilized an offensive of about 6,000 to 10,000 people in the two payams, resulting in at least 101 fatalities, 371 injured, dozens of raids, and thousands of cattle stolen. On July 7th, 2020, attacks from Greater Bor deserted Gumuruk and continued attacking cattle camps to South East in areas of River Lotila and Kengen River in Verteth and further to areas of Labarab and some villages in Maruwa Hills. Between July 16th-23rd, 2020, another coordinated attack from the Northern axes was conducted by heavily armed youths on Nanam grazing areas/cattle camps, Gumuruk and Lekuangole towns, causing displacements towards Pibor town or Gumuruk and Lekuangole urban areas[8].

Timeline of shocks

- **June 2019 – January 2020.** Unprecedented flooding.
- **February 2020.** Sub-national violence broke out in the settlements of Lekuangole, Gumuruk, and Manyabol, displacing over 8,000 people to the UNMISS base in Pibor Town.
- **April 2020.** COVID-19 movement restrictions and border closures further restricted both physical and financial access to food across Jonglei State.
- **May – August 2020.** Sustained and widespread sub-national violence took place across Pibor County and surrounding areas. Gumuruk town was captured on June 18th, 2020 and was subsequently destroyed. Between July 16th and 23rd, 2020, the second coordinated attack was conducted on the Nanam grazing areas/ cattle camps and Gumuruk and Lekuangole towns.
- **May-July.** Insecurity increased in May, June and July as several attacks took place along the Bor - Juba road. Many drivers refused to travel the road, and the ones that continued to travel pushed up their prices.
- **July 2020.** Heavy flooding began for a second year in a row. Widespread flooding across the State has resulted in mass internal population movement and severely limited access to crops and cattle.
- According to OCHA, 60,850 people were internally displaced within Pibor in June and July.

[6] Source: IRNA, *Lekuangole, Gumuruk, Verteth/Doren,* GPAA, September 21st & 22nd, 2020.
[7] Source: WFP, *FSMNS* Round 26, October 2020, 91 observations, 9 clusters, 18 villages.
[8] Source: IRNA, *Lekuangole, Gumuruk, Verteth/Doren,* GPAA, September 21st & 22nd, 2020.

While previous outbreaks of violent conflict between communities have tended to selective targeting of livelihoods and combatants, more recent attacks have involved a more widespread destruction of infrastructure and targeting of civilians. These attacks were characterized by an exceptional coordination and mobilization of forces, heavy weaponry, and different tactics, no longer uniquely targeting livelihoods and resulting in raiding, but rather targeting civilians, houses, burning crops, razing towns and destroying infrastructure, markets, schools, facilities and humanitarian warehouses, where all food items were looted or destroyed. The attacks lasted longer and continued all the way to the East (Boma) and close to Ethiopia border. During this time, many households from Gumuruk and Lekuangole displaced from rural areas towards more secure urban areas and around Pibor – which was not or less directly affected by the attacks. By the time the attacking forces withdrew in early August, Lekuangole and Gumuruk towns had been razed, and so were field crops.

These latest attacks resulted in abductions (166 women and 187 children), fatalities (128 man, 28 women, 128 children) and caused more than 800 orphans. 315,962 head of cattle were lost, about 39,000 homes were burnt[9]. After humanitarians returned to Gumuruk, Lekuangole, Verteth and Labarab in August 2020, they found most compounds, warehouses, containers, food, and medicine burned or stolen.

According to the FSNMS, about 80% of the surveyed households have declared their house being partially damaged and 10% reported their house having been completely destroyed. Among households who reported a damaged shelter, the main cause has been conflict or fighting (41.9%) and the second cause has been floods (36%) and rain (14%). About 42% of the respondents have shelter damaged/destroyed by conflict, 36% by floods (14% by rain) and 52% of the surveyed households declared living in an improvised shelter[10].

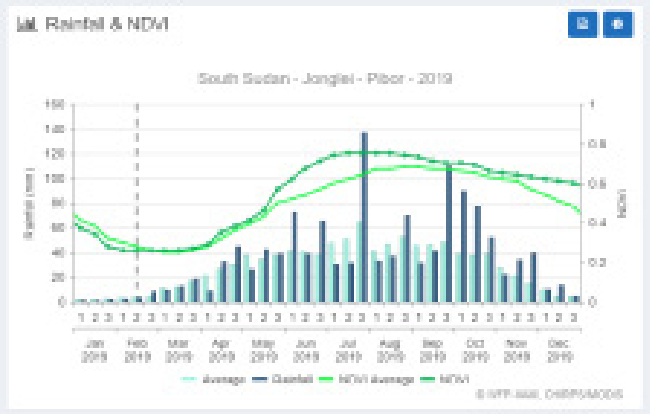
Expected evolution in the projected period: The timing of a potential high impact coordinated attack in retaliation for the latest June – August offensive on lowland Pibor is difficult to predict. While rains and flooding makes movement challenging in the short term, reports from previous years suggest that further offensives may wait until the sorghum harvesting period in October or November to conduct (larger scale) raids and attacks, since this would give an opportunity to raid grain in addition to cattle. Movement may be easier during this period, with drier paths to traverse, but thick vegetation still providing the necessary cover. Indeed, the spate of attacks and killings in greater Jonglei may be indicative of a resurgence of violence as the rainy season comes to an end. Displaced communities have little intention of returning, following rumors of further attacks likely to happen in Christmas, especially in Pibor, which has been referred to as an 'unfinished business', considering the previous attacks mainly targeted Gumuruk, Lekuangole. It is expected a further escalation of violence, targeting not only livelihoods but also civilians. The conflict is expected to exacerbate in the projected period as a result of conflict dynamics and water recession, which will make the area of Pibor more accessible. This will likely result in additional fatalities and displacements. Although usually the rainy season coincide with a relative decrease in insecurity, the events in Pibor during the past rainy season have demonstrated that seasonality alone will not prevent further violence to occur. Traditionally, the rainy season corresponds to a decrease in the severity of insecurity. However, 2020 events have shown that even in presence of rainfall above normal and floods, attacks have continued to be perpetrated.

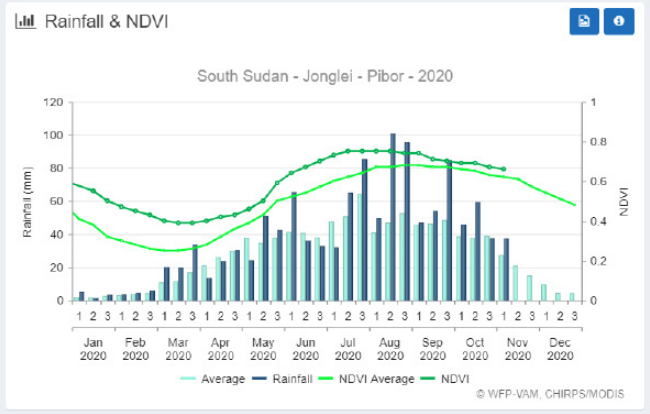
Floods. Unprecedented flooding across the State between June 2019 and January 2020 resulted in widespread cattle disease and death as well as large-scale crop loss. Excessive pluviometry, causing the floods in 2019, have been located in the months of July and then from late September through the end of October. In 2020, excessive pluviometry is observed between July and October.

The floods in 2019 generated a cereal production loss of about 3,000 tons, equalling 35% of the expected cereal production; 2,554 ha had cereal areas destroyed, 1,789 had medium damage and 766 had low damage, for a total of 5,107 ha damaged out of 8,512 ha of cereal areas in Pibor. Floods also caused the death of 9,174 animals (5% of total livestock - mostly cattle) and affected 434,846 livestock (49% of total livestock - mostly cattle and goats)[11]. Field visits conducted in September in Gumuruk, Lekuangole and Verteth additionally reported that most of the crop fields including maize and sorghum are still submerged in water[12].

[9] Source: *Ibid.*
[10] Source: WFP, *FSMNS Round 26*, October 2020.
[11] Source: FAO, *Flood Impact Assessment in Jonglei*, August 2020.
[12] Source: IRNA *Lekuangole, Gumuruk, Verteth/Doren, GPAA*, September 21st & 22nd, 2020.

Graph 1. Rainfall anomalies and NDVI in Pibor County





In the projection period, it is expected that water will keep receding, making roads gradually accessible. In a normal year, this would happen around January, while given the extraordinary magnitude of flooding in 2020, it is expected that flood recession this year will happen towards February-March. The areas in which the lean season corresponds with the December to March period will have large food stock gaps, if not absence of stock, as a combined effect of harvest loss due to floods and attacks, that have used as a technique burning or devastating crop fields. Flood recession will decrease availability of fish and increase access to wildlife hunting, however, other constraints reduce access to these mitigating factors. In addition, the erratic rainfall pattern characterizing this livelihood zone in the past two years does not exclude the occurrence of further floods during the rainy season.

Expected evolution in the projected period: In the projection period, it is expected that water will keep receding, making roads gradually accessible. In a normal year, this would happen around January while given the extraordinary magnitude of flooding in 2020 it is expected that floods recession this year will happen towards February-March 2021. Apart from these elements, the areas in which the lean season corresponds with the period between December and March, will have large food stock gaps, if not absence of stock, as a combined effect of harvest loss due to floods and attacks that have used as a technique burning or devastating crop fields. Flood recession will decrease availability of fish and increase access to wildlife hunting, however, other elements hamper access to these mitigating factors. In addition, the erratic rainfall patterns characterizing this livelihood zone in the past two years do not exclude the occurrence of further floods during the rainy season.

Displacements. The floods that affected Pibor in 2019 and 2020 with the conflict exacerbation in February and June/July 2020 have caused massive displacements, around 15,000 people from Western Pibor in March. By June/July 2020, further displacements occurred towards the Marowe Hills and Labarab, which are considered remote and safer regions further South and East of Pibor, Gumuruk and Lekuangole.

In February, sub-national violence in the settlements of Lekuangole, Gumuruk, displaced over 8,000 people to UNMISS in Pibor Town and thousands more to other remote rural areas, simultaneously disrupting trade flows and the delivery of, and access to, humanitarian assistance.[13] While approximately 2,500 IDPs reportedly returned to their settlements in the aftermath of the attack, most remained in Pibor Town. Insecurity and perceived access to food resulted in the reported arrival of an additional 1,500 IDPs to Pibor town by March 11th.[14] Sub-national violence and persistent insecurity have continued to drive population movement in Pibor County throughout the year. According to PLAN International and the NGO CIDO, 33,668 Individuals (11,443 households) were registered in early August 2020 at the UNMISS Adjacent Area (AA) and several spontaneous displacement sites throughout Pibor Town (see map) because of the attacks in June and July.[15] Many people from Pibor Town, Gumuruk, Lekuangole and Verteth/Durren were also displaced to IDP camps in

[13] Source: USAID, *South Sudan - Crisis Fact Sheet #5. March 2020*
[14] Source: *Ibid.*
[15] Source: IOM, *Pibor UNMISS Adjacent Area Flow Monitoring Summary. September 2020.*

Labarab, remote villages to the Southeast of Pibor town nearby rural areas, and as far as villages in Marowa Hills and Boma.[16] Nearly all households displaced to Pibor Town were reported to have returned to Lekuangole and Gumuruk by the end of August (IOM).[17] Nevertheless, questions remain regarding the locations of populations in Pibor, as both Gumuruk and Lekuangole have since been heavily affected by flooding.[18]

According to the FSMNS[19], about 32% of the population is currently displaced. Returnees (and IDPs from other locations) surrounding main towns in Lekanguole do not have food or water and do not have fixed plans to move to another location. Small children, infants, and nursing mothers are in a weakened state, reportedly from exhaustion, lack of food, and diarrhea. The displaced persons characteristically lacked food and depend on wild fruits and water from the river, which is contaminated with many dead cows and possibly dead bodies. The worst off people, and those who are most likely to experience severe food consumption gaps in the wake of a shock, are the people who are unable to undertake typical livelihood activates, implement coping strategies or receive humanitarian food assistance. These people are often old, physically disabled, pregnant women, and single-headed households[20].

According to the FSMNS[21], which sampled only these Western payams, in the last six months, 45% of the households surveyed declared having some household members who migrated. The main reason for migration has been lack of food (61%), followed by house or property destroyed (18.4%). Supposedly, the members of the family who migrated have reached the Eastern part of the county.

According to IRNA[22], the condition of the affected people are very worrying, as a result of the devastating sub-national conflict and flooding, which forced many people to move to safe or secured places and high grounds and are exposed to an unhealthy environment as per this period of COVID-19 pandemic, with very limited or zero public and households pit latrines. Most of the affected populations are currently relying on fishing, with some who had their cows for milk for children. The condition of displaced population in Lekuangole, Gumuruk and Verteth are dire, and according to the IRNA, characterized by lack food and dependence on wild fruits, occasional fishing and water from the river, which is contaminated with many dead cows and possibly dead bodies[23]. Displaced households mostly live in shelters provided by humanitarians and are placed within the relatives' homes, next to churches, schools, airport, where they feel safer. Displaced populations currently rely on food assistance and fishing, which is however only accessible to the minority having fishing equipment.

It could be estimated that after the February and the June attacks, about half of the rural population moved to urban centers in Lekuanguole, Gumuruk and Pibor, and part of them move further to the Eastern part of the county. Following the conclusion of the attacks, the displaced populations were supposed to return to their villages, pastures and cultivations. However, the floods set in and besides the lack of road accessibility, the displaced population had little to come back to, as crops were destroyed and cattle raided. Displaced populations are not willing to return as they still feel insecure and evidently there is no harvest stock, livestock or shelter they could safely return to.

Expected evolution in the projected period: Considering both the threats of further attacks and the destruction of livelihoods and shelter in home villages, displaced populations will likely not return. In addition, the villages of origin would hardly be accessible for humanitarian food assistance; therefore, their safest choice is to remain in Maruwa Hills and Pibor town, as well as close to urban centres. Nonetheless, if the conflict further intensifies, these populations may further flee from Pibor town towards the Eastern payams. During the rainy season, population movements will be more difficult.

Food availability and stability

Floods, the high levels of inter-communal conflict in 2020 and fear of retaliatory attacks severely hampered livestock production and agricultural cultivation. The usual mitigating factors present in the area are fishing, wild foods and Humanitarian Food Assistance (HFA). The main source of cereal in Pibor is food assistance (67%), followed by market supply (23%), and the main source

[16] Source: IRNA, Labarab, October 2020.
[17] Source: Ibid.
[18] Source: FAO, *Flood Impact Assessment in Jonglei. August 2020.*
[19] Source: WFP, *FSMNS Round 26*, October 2020.
[20] Source: REACH, *Jonglei profile*, October, 2020.
[21] Source: WFP, *FSMNS Round 26*, October 2020.
[22] Source: IRNA, *Lekuangole, Gumuruk, Verteth/Doren, GPAA*, September 21st & 22nd, 2020.
[23] Source: *Ibid.*

of meat, fish and eggs is market purchase (54%), with 25% fishing and 0% hunting[24].

Livestock. Floods and, most of all, conflict have severely affected livestock. Typically, in the Northern payams of Lekuangole, Gumuruk, Pibor and the Northern part of Verteth, livestock production constitutes one of the most important food and income sources for poor pastoral and agro-pastoral households in this area. However, livestock asset losses have been significant in 2019 and 2020. Floods caused the death of 9,174 livestock (5% of total livestock - mostly cattle) and affected 434,846 livestock (49% of total livestock - mostly cattle and goats)[25]. Trend analysis of FSMNS shows that while only 23% of the surveyed household did not possess any livestock in August 2019, 78% hold no livestock in January 2020 and 80% hold no livestock in October 2020. The percentage of households with high holding (>4 TLU) moved from 63% in August 2019 to 6% in October 2020. Of the households holding livestock in October 2020, 6% hold medium quantity (>1 to 4 TLU), 3% have low holding (0.5 to 1 TLU) and 6% hold a negligible quantity (<0.5 TLU)[26]. Body conditions and milk production are generally poor due to the destruction of pastures by flooding in late 2019 and 2020, restricted access to grazing areas from conflict and raids[27], and higher disease incidence after the floods, exacerbated by the impossibility to run large scale vaccination programs.

Only 12% of the surveyed households hold more than one Tropical Livestock Unit (TLU), despite the survey having sampled mainly the payams of Lekuangole, Gumuruk and Pibor, which are pastoralism livelihood areas. In fact, 54% of the surveyed households declared their livestock having largely decreased and 18% having suffered small decreases. Only 10% of the surveyed households are able to get milk for consumption and less than half of them from their own cows (44%). Of the households having declared a large decrease in livestock, 50% declared the cause as disease outbreak, 33% by intercommunal raiding and 17% due to flooding. The 12% of surveyed households holding livestock have used it in the past 3 months for milk/dairy products (64%), dowry (54%), selling for food (36%). The major challenges in relation to keeping livestock have been the lack of veterinary services (64%), conflict and insecurity and lack of grazing pastures (54% in both responses)[28]. The few remaining animals are reported to be concentrated mostly in villages surrounding Pibor namely Wunkok, Manyirany, Kilo, Thangajon, Kavachoch and Bee.

In summary, Lekuangole and Gumuruk lost the great majority of the livestock. Most of the remaining cattle have been brought South to the agro-pastoral zone close to the Maruwa hills and West in Labarab or around Pibor, where conditions for breeding are not optimal.

Agriculture. Agriculture activities, which per se do not constitute the main livelihood and are practiced mostly in the Southern part of Verteth and the Eastern part of Pibor, have also been severely impacted by floods and by insecurity. Crop loss due to floods have been significant: 35% of cereal losses has been estimated by FAO[29]. FAO estimates that the 2020 crop production in Pibor will be 17% below the five-year average and 19% below 2019. Land is accessible for about 69% of respondents, however only half of these have cultivated (46%), mostly sorghum and maize. The main perceived challenges to farming are currently floods (mentioned by 65% of respondents), Fall Armyworm and locust infestation (69% and 55% respectively) and insecurity (31%). Those who did not cultivate mentioned as primary reasons insecurity (63%) and the weather condition not being conducive for farming (56%)[30] due to the floods. Although the population remaining in Lekuangole and Gumuruk made attempts of cultivating in May, further attacks happened in June/July before the population could harvest (normally in August). During these attacks, many crop fields have been either destroyed as part of the raid or because of the cattle transiting in the crop fields while being displaced south. At the end, the very small stocks that they harvested after the attacks have been washed away by the floods.

Considering the above elements on livestock and agriculture, the current source of food of the households in the area are milk, fish, wild food and hunting. In fact, according to the FSMNS, 45% of households have access to fish, 35% of households are eating more wild foods than normal for this time of the year, 30.8% of households engage in hunting; 16.5% rely on it as their primary livelihood and only 10% of households have access to milk for consumption.

[24] Source: WFP, *FSMNS Round 26*, October 2020.
[25] Source: FAO, *Flood Assessment in Pibor*, August 2020.
[26] Source: WFP, FSMNS *Round 24, 25, 26*, October 2020.
[27] Source: FEWS NET, *Pibor summary*, October 2020.
[28] Source: WFP, *FSMNS Round 26*, October 2020.
[29] Source: FAO, *Flood Assessment in Pibor*, August 2020.
[30] Source: WFP, *FSMNS Round 26*, October 2020.

Fishing. The main mitigating factors to reduce the extreme food gaps in the area are traditionally fishing and hunting wild foods. However, 55% of the surveyed households declared not being able to get fish for consumption, 96% of them due to lack of fishing equipment. The 45% of households that were able to access fish for consumption are households who fish themselves, with equipment provided by humanitarian organizations (44%) or purchased (32%). Even the households who fish declared that the lack of fishing equipment constitute a challenge for 73% of them, together with unpredictable water levels (43%)[31]. Besides food assistance, fish remains currently the main source of protein (25%) due to the abundance brought in by floods, however, this strategy highly relies on the availability of fishing gears which are poorly accessible (only 4% of FSNMS surveyed households own fishing equipment).

Wild foods and hunting. While 31% of the FSNMS surveyed households went hunting in the 30 days preceding the survey, no households reported hunting being the primary source of protein. Around 81% of the surveyed households mostly ate or only ate wild foods between 0 to 2 days in the past seven days, with 20% citing wild food source exhaustion, although 43% of the households reported eating more wild food than usual. The reason for low consumption of wild foods is that these are located too far away (32%) or in a dangerous location (24%)[32] – likely meaning that wild food is possibly available, but rarely hunted/gathered and consumed. For households eating less wild foods than a normal year, 21% had household members capable of collecting, areas were too far away for 7%, areas in unsafe areas 14%, sources exhausted for 7% or too much time needed to collect for 7%. In a normal year, with the dry season towards December-January, gazelles and antelope would become more and more available, however, this year this phenomenon is delayed due to excessive flooding and water recession that is expected to happen later in the year, towards February and March. It has also been reported a shortage of bullets in the market – likely due to use in recent conflict or due to low trade in the area. This hinders the possibility of hunting as a strategy to obtain food. Further displacement of wild animals from flooding may prevent normalization of hunting activities.

Humanitarian Food Assistance: The third mitigating factor food unavailability is HFA. According to WFP plans, in June/July there were no distributions in the Western part of Pibor, and only the displaced population from this village was assisted in Boma. For the following months, the distributions in the area have been as follows:

While assistance was never fully disrupted in Maruwa Hills, Gumuruk and Verteth beneficiaries were only partially assisted in September. Until late September, assistance was transferred via airlift, but since October, only airdrops are possible. The main airdrop centres would be in Pibor, Gumuruk and Lekuangole. The farthest person would have to walk about one or two days to reach the distribution site. Currently, the distribution cannot be communicated to intended recipients by community radios nor telephone so it is only word of mouth.

Table 2. Humanitarian Food Assistance delivered in Pibor town, Lekuangole, Verteth and Gumurk

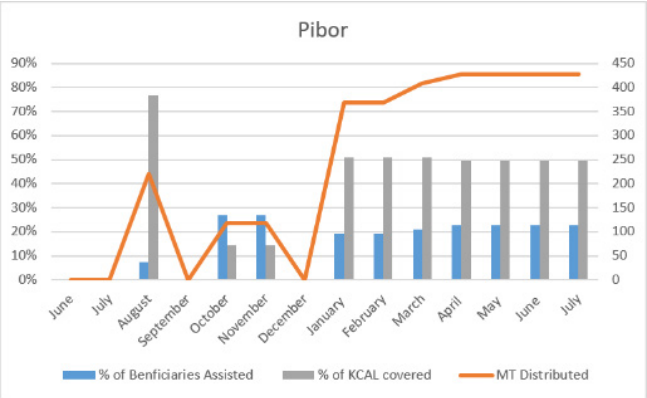
	August			September			October & November		
Payams	Beneficiaries assisted	MT distributed	% kcal delivered per month	Beneficiaries assisted	MT distributed	% kcal delivered per month	Beneficiaries assisted	MT distributed	% kcal delivered per month
Pibor Town	0	0	0%	20,123	174.79	50%	20,123	174.79	25%
Lekuangole	6,243	68.39	63%	0	0	0%	21,714	154.9	20%
Gumuruk	5,200	59.96	67%	0	0	0%	22,265	177.02	23%
Verteth	0	0	0%	0	0	0%	6,621	approx 60MT	26%
total	**11,443**	**128.35**	**33%**	**20,123**	**174.79**	**13%**	**70,723**	**506.71**	**24%**
beneficiaries over total population (163,916)			**7%**			**12%**			**43%**

The graph shows that, in August, 7% of the area population received about one third ration in average, however, in reality, Pibor town and Verteth were not covered. In September, 12% of the area population received about 12% of the KCal requirement in average, however, in reality, only Pibor town was covered. In October and November there was a single distribution exercise, aiming at covering 43% of the total population of the area with one fourth ration.

Overall, WFP plans for Humanitarian Food Assistance provision show that only from February onwards distributions are planned.

[31] Source: *Ibid.*
[32] Source: *Ibid.*

Graph 2. Delivered and Planned Humanitarian Food Assistance, Metric Tonnes, beneficiaries assisted and Kcal coverage.



The road networks to remote locations have been cut off by floods since May 2020. The airstrips in Lekuangole, Gumuruk and Verteth and Pibor are accessible for helicopters, depending on the weather and airstrip conditions. Lekuangole, Gumuruk and Verteth food assistance storage facilities / warehouses were destroyed during the attacks and as a consequence, commodities cannot be prepositioned in the area[33].

According to the FSNMS, 50% of the surveyed households have received some form of in-kind assistance. Among those who received assistance, 33% declared having received within the week prior to the survey (20-27 October), 57% about 2-3 weeks prior to the survey and 10% about one month ago. The main sources of cereal in the seven days prior to the survey have been food assistance for 67% of the respondents, followed by market purchase (23%). About 39% of the households that received HFA experienced a safety concern[34]. It is important to note that comparing the percentage of FSMNS respondents declaring having received aid in the past month (50%) and the actual distributions population coverage (27% with 14% of Kcal provided), there might have been an oversampling of assisted population in the survey. The average amount distributed leads to an estimate of 7.5Kg, which represents an 80% Kcal coverage for about 15 days or 40% coverage for a whole month. As shown above, however, distributions did not happen in all the months.

According to the FSMNS, the percentage of households having humanitarian food assistance as a main source of food is 67%, and far higher that the percentage of households having received assistance in the month prior to the survey (50%). This might indicate a certain degree of sharing or community safety nets. Key informants confirmed that displaced populations are quite integrated within the host communities, however, it cannot be considered that community safety nets can hold for long; especially in Pibor, the residents in town have also depleted their resources and they do not have enough food to share. Typically, familial and social networks can be employed to access food, usually during the lean season, however, compounding shocks have eroded these networks, increasing vulnerability and widening food consumption gaps, particularly for these groups[35].

Expected evolution of food availability in the projected period:

Livestock. Usually, from May to July, livestock returns to areas near homesteads, improving access to livestock products and therefore improving food security. However, given widespread livestock asset losses, it is likely that this improvement will be less significant than normal in 2021. Farmers with remaining livestock may be unlikely to return cattle to settlements due to fear of attack. It is estimated that it would be a difficult for the lowland population to move their cattle up to Boma, therefore for the households still owning livestock safe havens, options are limited. At the same time, in the Maruwa Hills, the pasture is becoming too dry to remain in these locations during the dry season, the cattle owners will be then forced to move at least the cattle elsewhere during the dry season. The body conditions of the remaining few animals will continue to deteriorate further, as a combination of disease and lack of adequate pasture. The few (12%) households that still own livestock will likely be forced to further slaughter their animals and try to sell them in the market before they die, with significant financial loss.

Agriculture. The harvests have been extremely limited if not inexistent in September, due to floods and the conflict having intervened before harvest; the stocks for the projected period are significantly poor or none. Agriculture could be practiced at flood recession and the next planting season will be in May, with a harvest potentially in August in the Southern part of Pibor county. However, the lack of seeds from the precedent harvest and the high constraints in distributing these bring to an estimation that the next cropping season will also be lost, unless the situation is reverted and assistance become deliverable.

[33] Source: IRNA, *Lekuangole, Gumuruk, Verteth/Doren, GPAA,* September 21st & 22nd, 2020.
[34] Source: WFP, *FSMNS Round 26*, October 2020.
[35] Source: REACH, *Jonglei State Profile,* September 2020.

Mitigating factors. The main mitigating factors are fishing, hunting and the humanitarian assistance. In the first projected period, **fishing** will still be relatively accessible at the beginning of the projected period, but will significantly reduce, as water will recede towards February and March. **Wild food**, namely from hunting gazelles and antelopes, is usually an alternative source of food. However, the passage of game will be delayed by the floods in the first months, perhaps becoming more available towards the end of the projection period and not in a stable way. **Humanitarian assistance** will face extremely hard conditions of delivery, due to logistical constraints and the protection risks of concentrating populations for distributions. In fact, as WFP warehouses were destroyed in the attacks, only airdrops can be done and no prepositioning is possible. Similarly, UNICEF and international NGOs also have no prepositioned stock. Air dropping / airlifting is extremely costly and the current financial plan would not allow this scale-up without significantly affecting assistance in other parts of the country.

Food access and Stability.

Markets and Financial Access. According to the FSMNS[36], in the last month, only half of the surveyed households purchased cereals in the market, and 35% only once or twice a month. Roughly, 37% of the households declared having being unable to buy cereals from the market at all. This reduction in purchase was due mainly to increased prices (43%) and absence of cash or credit to buy (46%). Households normally purchase their staple food in a local market within the village (35%) or in a neighbouring village (16%). The major challenge in accessing the market is distance (53.8%), flooded area on the way to the marketplace (41.8%) and insecurity (23.1%).

Further to high intensity of conflict and the flooding, price spikes are also affecting access to food in the market, on which 67% of households depend for staple food. About 43% of the surveyed households declared unusually high food prices as a primary shock, followed by violence/looting (45%). The cost of food baskets in Jonglei has increased 265% from the five-year average, 25% from Jan 2020 and 10% from Sep 2020. The cost of multi-sector minimum expenditure basket increased in Pibor town by 132% since October 2019.

Markets are generally operational across the counties of concern, but local market supply levels vary between markets. In fact, the last commercial flight that allowed supplying the Pibor market was in September. Currently, the market is still having some supply available, namely fish and some meat from the little livestock available, and as non-food commodities, charcoal and wood are available. Market analysis (JIMMI) suggests that there are no available cereals for purchase in Pibor and they are unable to restock these goods - though larger traders reportedly have supplies of other basic goods such as rice, wheat flour, beans, sugar and soap. Main markets have been destroyed in the attacks and currently, markets are mainly composed of kiosks near the main administrative area.

Income sources would normally come from selling livestock or agricultural products/vegetables. However, animal body conditions are very poor and the demand side cannot afford purchase of meat (only 50% declared the market as the main source of protein).

Markets and Physical access. According to the FSMNS, 54% of the households reported markets being too far away; 23% reported poor access to market due to conflict/fear of conflict and 42% declared that flooding limited access to the market. Market access has been limited, both physically and financially, due to flooding and insecurity, with income generating activities also impacted. In the rainy season, there is very limited movement around Pibor county due to poor road conditions, and Pibor Town typically receives imported goods via plane from Juba. There is currently no road connection between Pibor town - Bor and Pibor town - Ethiopia[37]. Roads are likely to remain closed until December/January, when receding water levels may make them passable.

Expected evolution of food access in the projected period: Prices are expected to further increase globally, as an effect of the currency devaluation. With the dry season coming, potentially more suppliers could provide food in the market of Pibor, however, security remaining of great concern, the traders are not keen to return / preposition stocks in the area. Despite the possibility, still considered unlikely, of increased availability of food commodities in the market, households will likely have completely depleted their financial resources. Some selling of woods and charcoal will still be possible, though the demand will have few resources to afford

[36] Source: WFP, *FSMNS Round 26*, October 2020.
[37] Source: WFP, Logistic Cluster, *Physical access constraints map*, September 2020.

any purchase.

Physical access. With the dry season, it is expected physical access to improve and the market will become more accessible. However, it has to be considered that infrastructure will unlikely be rebuilt in the short term.

Contributing factors to acute malnutrition

Available information on immediate and underlying causes of malnutrition, both pre and post conflict and flooding, show very poor conditions.

According to an epidemiological analysis by Medair, malaria is 10 times higher during this time of the year compared to the same time since 2015. Malaria accounts for over 60% of morbidities treated in outpatient clinics. Compared to the flooding season of 2019, the number of malarial cases are 3 times higher in 2020. There is a measles outbreak in the area, although a measles campaign has recently started. At least six confirmed cases, one probable case of measles were recorded in health centres. About 18% of children under 5 years of age were suffering from ARIs according to the FSNMS. Although not verified, cholera was also reported during the key informant interviews.

Food consumption among children was generally poor. Although county level data on child food consumption is unavailable, FSNMS State level data shows Minimum Dietary Diversity (MDD) and Minimum Meal Frequency (MMF) among children 2-23 months are 17.2% and 25.8% respectively. Minimum Acceptable Diet (MAD) among children 6-23 months is 3.7%, according to the State level FSNMS estimate. Although there are no big changes in the MDD and MAD between the FSNMS in rounds 25 and 26, the MMF has dropped from 33.7% FSNMS in round 25 to 25.8% in round 26.

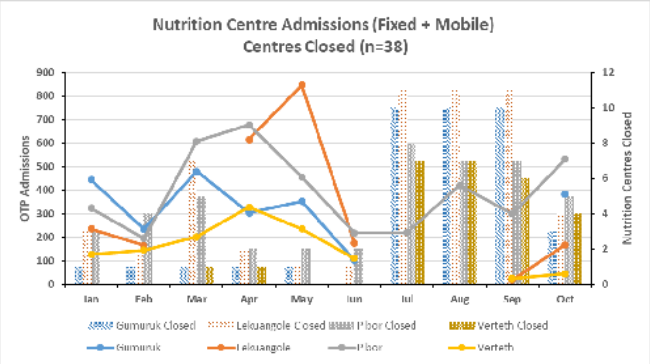
Child caring practices are also of concern in the area with State level FSNMS estimates of exclusive breastfeeding at 32.3%. Similar to MMF, there is also a large decrease in exclusive breastfeeding in between FSNMS round 25 and 26, from 67.7% in round 25 to 32.3% in round 26.

Health and nutrition services have been severely affected by the conflict. More than half of the health and nutrition centres have been looted and/or damaged as a result of the conflict.

A total of 36 health and nutrition centres had to be closed down during the course of July – September 2020 as a result of the conflict and insecurity in the four Payams. It should be noted that over 1,800 children were admitted for treatment for malnutrition in May 2020 alone (before the close) in the four counties. The number of admissions are likely to be an underestimation of the total number of cases since the admission is only based on MUAC – i.e. WHZ is no longer used as admission criterion as a result of COVID-19 adaptation and all children only showing low-WHZ will not be admitted for treatment.

Immunisation coverage was low at about 40% children being vaccinated against measles and provided with vitamin A supplementation prior to the conflict, according to the FSNMS data. However, there is a measles and vitamin A campaign currently ongoing. Only about 44% of households can access a health facility within half a day. Access to sufficient quantity of water is extremely low at 4% in Pibor country – the lowest in the State – according to the FSNMS data.

Graph 3. Nutrition Centre Admissions (Fixed + Mobile)



Water, Hygiene and Sanitation conditions are the worst of the country. The main sources of drinking water are rivers/streams for 88% of the surveyed households, followed by boreholes and unprotected wells (5%). 96% of surveyed households take less than one hour to collect water. The majority (91%) of the households do not have access to a shared or community latrine and 97% do not have soap at home. In term of access to basic services, both the IDPs and the host community displaced by internal communal conflict and flooding have overstretched the available services in the area. The most vulnerable groups at risk include women, children and the elderly, because they are much more affected by the extreme cold, also lack mosquito nets, sleeping mats and soap for laundry. However, if the crisis is prolonged, they will be more exposed to the risk of contracting waterborne diseases/illness, while children and elderly nutrition will also be compromised[38].

[38] Source: IRNA, *Lekuangole, Gumuruk, Verteth/Doren, GPAA*, September 21st & 22nd, 2020.

Expected evolution in the projected period: The conflict, which is one of the basic drivers of acute malnutrition, is likely to continue in the projection period - according to the key informants, there's at least 50% chance conflict will continue and may even intensify. The impact that the conflict has already left on livestock would have a long-term impact on the nutritional status of children, who rely heavily on livestock for food. It is highly unlikely that the humanitarian assistance and food distribution would be maintained - less than 50% chance that the planned food assistance will be delivered realistically.

Lack of access to health facilities raises concern over the capacity to manage the measles. Although there is measles and a vitamin A campaign currently underway, it is noted that the routine measles coverage and vitamin A before the conflict was around 40%.

Additionally, access to a sufficient quantity of water is 4.4% and only 44% of the households can access a health facility in less than half a day. The destruction of health and nutrition centers during the conflict would further reduce access to health and nutrition services. There is a likely increase of malaria in the projection period and potential outbreak of cholera. Humanitarian actors are leaving and it is difficult to scale up humanitarian interventions in the area due to risks related to security.

The level of destitution observed in the food security situation in the current period is expected to deteriorate in the projection period and given the high levels of acute malnutrition at present, by itself is sufficient to estimate that the nutrition situation will remain above IPC Phase 5 thresholds.

There are no significant improvements expected in WASH when floods will recede.

OVERVIEW OF THE OUTCOME INDICATORS

Current Food Security Outcome Indicators

The evidence available for food consumption and livelihood change (reference FSMNS) converge on extremely high levels of food consumption gaps and severely affected and depleted livelihoods. Outcome indicators point to a very high population in IPC Acute Food Insecurity Phase 4 (Emergency) and Phase 5 (Catastrophe). According to the FSMNS survey conducted by WFP in October 2020, covering the payams of Verteth, Gumuruk, Lekuangole and Pibor, 75% of the households have a Poor Food Consumption Score (FCS below 7 is 24%) and 60% of the households consumed between zero and two meals in the 24 hours prior to the survey (18% consumed no meal in the previous day). About 33% have a very severe Hunger Households Scale equivalent to IPC Phase 5 or Catastrophe (30% reporting value of 6). The Reduced Coping Strategy Index shows that 97% of the households are restricting adult portion size to save food for children; 97% are reducing the number of meals; and 92% borrowed food. In terms of livelihood coping strategies, 66% of the interviewed households are employing Emergency Coping strategies, 31% have depleted the Emergency Coping strategy corresponding to slaughtering the last animals, 7% have depleted the migration option in search for food and begging. Cross tabulation of Household Hunger Scale and Emergency Livelihood Coping strategies show that 63% of households with very severe hunger had travelled to another village to search for or to beg for food within the past 30 days.

According to the IPC reference table, the only indicator presenting thresholds for IPC Acute Food Insecurity Phase 5 is the Households Hunger Scale – considered the most reliable method at the extremely severe end of the IPC reference table - which shows a prevalence of 33%. Cross tabulations of the HHS and other food security indicators show that 23% of the households experiencing very severe hunger also experience higher phase (Phase 4 - Emergency) food security conditions. It is important to note that these cross-tabulations are useful to discard false positives (i.e. households identified in Phase 5 but whose conditions are not that extreme), but does not allow to detect false negatives (i.e. households not identified in Phase 5, but whose conditions are that extreme). This implies that the above-mentioned 23% represents a conservative estimate of the prevalence of people in IPC Acute Food Insecurity Phase 5. The same population estimate (23%) is also derived when cross-tabulating HHS with Emergency Livelihood Coping Strategies.

Considering the above factors, the FRC concludes that the food security outcomes have surpassed the IPC Phase 5 (Catastrophe) thresholds.

Expected evolution in the projected period: In the projected period, it is expected that the food security situation will continue to be extremely severe and possibly further deteriorate, as an effect of compounding contributing factors portraying the high likelihood of conflict intensification, generating further displacements, and severe operational and financial constraints in the operationalization of Humanitarian Food Assistance Plans. The seasonality indicates the period December to March as the lean season, however a deterioration is foreseen beyond and besides the seasonal patterns, and therefore continue beyond this timeframe and throughout the whole projection period until July. The extreme depletion of assets and livelihoods, the missed cropping season, the very low livestock possession and bad livestock body conditions and diseases, the alteration of migration patterns, the exhaustion of coping strategies, the very poor food availability at market level coupled with the extremely high food prices will make food access extremely difficult. The usual seasonal mitigating factors could not be exploited in its potential: fishing (already not contributing much to food access due to lack of equipment) will further decrease as water recedes; and hunting will be hardly hindered by the poor availability of bullets in the market and the expected increased insecurity while conducting this activity. The FRC estimates that there would be no noticeable differences between December-March and April-July as the level of destitution in the first period would not allow mitigating factors to intervene in the second projected period. The only factor that could prevent famine to happen would be the provision of Humanitarian Food Assistance well above the levels estimated and capable of surmounting the existing logistical and operational barriers.

Considering the above factors, the FRC concludes that the food security outcomes will remain above IPC Phase 5 (Catastrophe) thresholds.

Current Nutrition Outcome Indicators

Reliable Information on nutrition outcomes that meets the IPC AMN criteria is limited in Pibor county. However, available evidence points to extremely critical levels of acute malnutrition in the four Payams (namely Gumuruk, Verteth, Lekuangole, and Pibor) located in the Western part of the Pibor county – in total, these counties account for 80% of the population in the county. Country level FSNMS results, which only covered the western part of the Pibor county, show a GAM based on MUAC prevalence of 17%. Further analysis of the data indicated the following Payam level prevalence: Gumuruk=29%; Verteth=26%; Lekuangole=11.6; and Pibor 10,5%. There are several limitations in the FSNMS MUAC data: MUAC measurements have been done by mothers rather than trained enumerators, the MUAC measurements were not recorded in numbers so it is impossible to check the quality of the data, oedema is not reported, and children between 0-59 have been included.

According to the screening conducted as part of the IRNA with a total of 390 children in three payams, the following prevalence is shown: Gumuruk=37%; Lekuangole=33%; and Verthek=8%.

Although the screening was carried out by trained enumerators, the following limitations are noted in the IRNA MUAC data, so it does not meet the IPC minimum requirements for screening data. Additionally, there is no narrative of the methodology or raw data available to verify.

Although it does not meet the IPC criteria for reliability, analysis of data at a health center in Pibor Payam shows a GAM based on MUAC of about 20-40% among outpatients.

Relatively more reliable information on nutrition that came out during the FRC review confirms the extremely critical levels of acute malnutrition. An exhaustive mass screening conducted as part of a vaccination campaign show the following results: Pibor Payam = 24.5, Lekuangole = 20.4, and Verteth = 24.1%. Results of the screening are yet to be made available for Gumuruk.

It is known that there are significant differences in the prevalence of GAM when calculated using MUAC or weight for height z-score (WHZ). These differences are seen within the same population, but may differ over time. To assess whether the Phase 5 threshold for GAM had been exceeded in the area of analysis, the estimates obtained using MUAC were converted to reflect the expected prevalence using WHZ. Previous SMART and FSNMS surveys in GPAA were reviewed and the mean difference in prevalence estimates obtained using MUAC and WHZ was calculated. This showed that, on average, prevalence estimates obtained using WHZ were 10 percentage points greater than those obtained using MUAC, with a mean ratio of 1.9. The expected GAM WHZ prevalence estimate to be used for phase classification was derived by adding 10 percentage points to the prevalence estimate obtained using MUAC.

Applying this average difference of 10% to the currently available MUAC prevalence estimates would make Pibor, Lekuangole, and Verteth payams above famine thresholds (i.e. WHZ 30%). Given the context and contributing factors, high MUAC prevalence (similar to the one observed in Pibor, Lekuangole, and Verteth payams) is also expected from the mass MUAC screening being carried out in Gumuruk as well. Nevertheless, even most conservative estimates are likely to pass the WHZ threshold of 30% (IPC Phase 5).

The FRC concludes that the acute malnutrition outcome is likely to be above IPC AMN Phase 5 (Extremely Critical) threshold.

The data available:

Graph. 4 Trend in anthropometric indicators

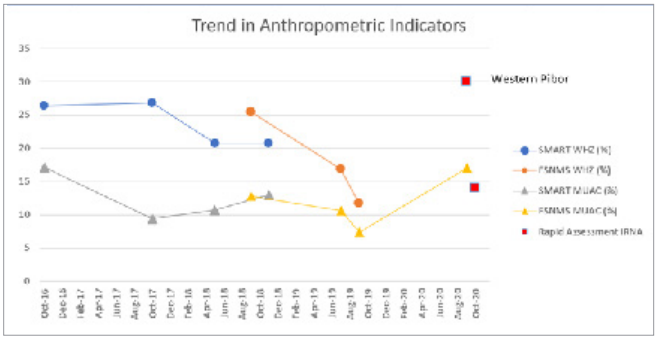


Table 3. MUAC and WHZ available screening data

Source	Type of screening	Area covered	Date	Children screened	Area population estimated	GAM (%)	SAM (%)	MUAC or WHZ	Reliability comment
Nutrition Cluster/ UNICEF	Modelling and expert consultation of WHZ	Pibor County	Historical data	N/A	N/A	15.7		WHZ	modelling
WFP/ FSNMS	Family MUAC, 9 clusters	Pibor County	Oct 2020	141	Unknown	17	2.8	MUAC	<R1
WFP/ FSNMS	Family MUAC	Gurumuk	Oct 2020	31	38,793*	30	6.2	MUAC	<R1
WFP/ FSNMS	Family MUAC	Verteth	Oct 2020	20	Unknown	25	0	MUAC	<R1
WFP/ FSNMS	Family MUAC	Lekuangole	Oct 2020	43	34,527***	12	4.6	MUAC	<R1
WFP/ FSNMS	Family MUAC	Pibor Payam	Oct 2020	48	37,833****	10.4	0	MUAC	<R1
IRNA	Central location	Lekuangole	Sept 2020	114	25,959	33.3	9.6	MUAC	<R1
IRNA	Central location	Gurumuk	Sept 2020	201	29,167	37	12	MUAC	<R1
IRNA	Central location	Verteth	Sept 2020	75	7,217α	8	2.6	MUAC	<R1
Mass screening from measles vaccination campaign	Exhaustive	Verteth	Nov 2020	1,384	9,600**	24.1	8.18	MUAC	R1
Mass screening from measles vaccination campaign	Exhaustive	Lekuangole	Nov 2020	5,018	34,527***	20.4	7.89	MUAC	R1
Mass screening from measles vaccination campaign	Exhaustive	Pibor Payam	Nov 2020	4,662	37,833****	24.5	8.64	MUAC	R1

Note: Mentioned in the IRNA report; *estimated based on WHO estimation of 6-59 months of 5,819; **estimated based on WHO estimation of 6-59 months of 1,440; ***estimated based on WHO estimation of 6-59 months of 5,179; ****estimated based on WHO estimation of 6-59 months of 5,675.

Expected evolution in the projected period: The conflict, which is one of the basic drivers of acute malnutrition, is likely to continue in the projection period - according to the key informants, there's at least 50% chance conflict will continue and may even intensify. The impact that the conflict has already left on livestock would have a long-term impact on the nutritional status of children who rely heavily on livestock for food. It is highly unlikely that humanitarian assistance and food distribution would be maintained - less than 50% chance that the planned food assistance will be delivered realistically.

Lack of access to health facilities raises concern over the capacity to manage the measles outbreak. Although there is a measles and vitamin A campaign currently underway, it it is noted that the routine measles coverage and vitamin A before the conflict was around 40%.

Additionally, access to a sufficient quantity of water is 4.4% and only 44% of the households can access a health facility in less than half a day. The destruction of health and nutrition centers during the conflict would further reduce access to health and nutrition services. There is a likely increase of malaria in the projection period and a potential outbreak of cholera. Humanitarian actors are leaving and it is difficult to scale up humanitarian interventions in the area due to risks related to security.

The level of destitution observed in the food security situation in the current period is expected to deteriorate in the projection period and given the high levels of acute malnutrition at present by itself is sufficient to estimate that the nutrition situation will remain above IPC Phase 5 thresholds.

FRC concludes that the acute malnutrition situation will remain above IPC AMN Phase 5 (Extremely Critical) threshold.

Current mortality outcome indicators

Only very little and circumstantial evidence is available on mortality to confirm or refute a classification of IPC Phase 5 Famine. There is no household's survey data or vital registration system. Grave counting is not possible because of high water levels. Some media reports local authorities mentioning 13 hunger related deaths in Pibor and 37 in Maruwa Hills, but these reports cannot be used to estimate the crude or under-five death rates. When combining food insecurity, nutritional, and information regarding measles and malaria, as well as water services, delayed measles vaccination campaigns (it is ongoing now but there was no campaign until August due to insecurity, flooding and COVID-19 restrictions), it is plausible that the current death rate for children under five is above the IPC Phase 5 (Famine) threshold.

DETAILED ANALYSIS OF EASTERN PIBOR (KIZONGORA, BOMA, LABARAB, MARUWE AND MEWUN PAYAMS).

Context, hazards, vulnerabilities

Whereas the population residing in the Western Pibor is mainly pastoralist with livelihoods and seasonal patterns revolving around livestock, livelihoods in Eastern Pibor are more focused on agriculture, with some livestock, especially in Maruwa and Labarab. Eastern Pibor is a remote highland area with a low population and typically less severe food insecurity conditions (compared to Western Pibor), with a lean season between April and July. Due to the relative peace in Eastern Pibor, and less flooding, the area is currently hosting a large amount of IDPs from Western Pibor, amounting to around 20,000 (Maruwa Hills 5,000-7,000 and Labarab 15,000). The total population in Eastern Pibor, accounting for the IDP influx, is estimated to be approximately 60,000. The population numbers and numbers of displaced are, however, not reliable, with contradicting reports on both Maruwa Hills and Labarab IDP numbers.

Overview of the Key Drivers. The main shock facing Eastern Pibor has been the influx of IDPs, coupled with raiding and looting that extended to Labarab and some villages of Maruwa Hills. Humanitarian food assistance is largely absent in the area, and resources are scarce. Therefore, feeding the IDP population places an extra burden on the host community and the natural resources in the area, especially as resources are already being harvested by the host population for food and income. Furthermore, many of the IDPs are women with small children, who do not have the capacity or equipment to e.g. hunt or fish to secure better access to food. Humanitarian assistance deliveries are rare in Eastern Pibor: due to flooding there is no road access, and practically the only way to deliver assistance is through aid drops. There have been two rounds of assistance to IDPs: one in August covering around 5,500 people, and another in September, targeting around 10,000 IDPs.

Insecurity. While the attacks taking place in the first half of the year did not extend to Eastern Pibor, the attack on Gumuruk on July 7th, 2020 from Greater Bor spread to cattle camps and continued to the South East in the areas of River Lotila and Kengen River in Verteth and further to areas of Labarab and some villages in Maruwa Hills. During the raiding, women and children were abducted, many people were killed and large families were displaced from Pibor, Gumuruk, Lekuangole and Verteth/Durren to IDP camps in Labarab, remote villages South East of Pibor town, nearby bushes and as far as to remote villages in Marowa Hills and Boma. In Labarab, the attackers destroyed houses and looted all livestock, as well as destroyed crops in the fields. After humanitarians returned to Gumuruk, Lekuangole, Verteth and Labarab in August, they found most compounds, warehouses, containers, food, and medicine burned or stolen.

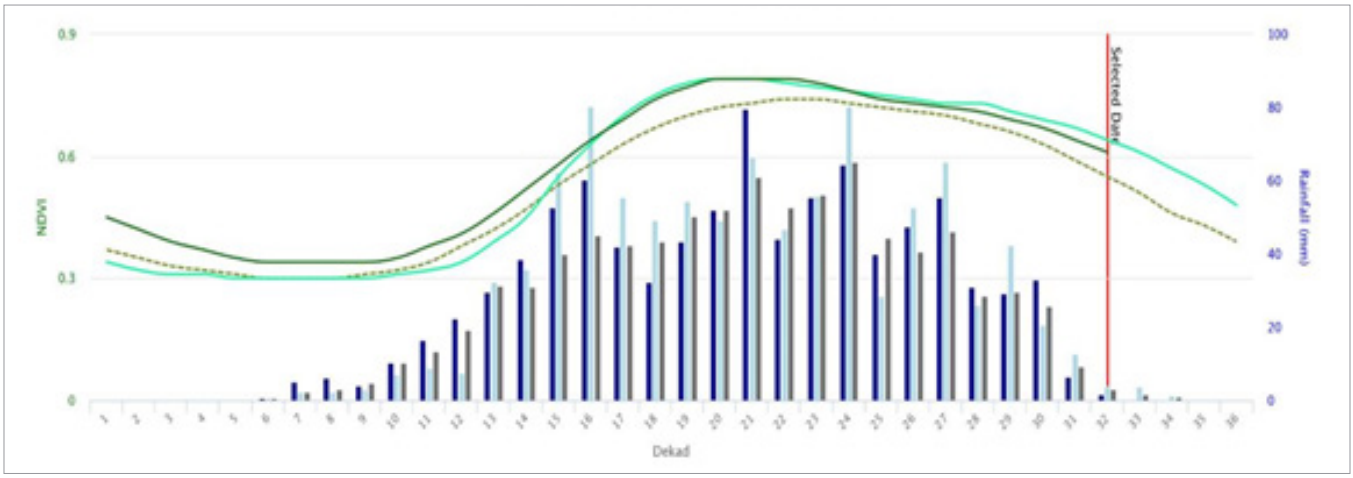
Timeline of shocks

- **March 2020.** COVID-19 movement restrictions and border closures further restricted both physical and financial access to food across Jonglei State.
- **May – August 2020.** Sustained and widespread sub-national violence took place across Pibor County and surrounding areas. While attacks focused mainly on Western Pibor, some attacks also took place in Labarab and some villages in Maruwe Hills of Eastern Pibor.
- **July 2020.** Heavy flooding began for a second year in a row. Widespread flooding across the State has resulted in mass internal population movement and severely limited access to crops and cattle. Combined effect of insecurity and flooding has led to IDP influx in Eastern Pibor since July - August.

Expected evolution in the projected period: A further escalation of violence is expected, targeting not only livelihoods but also civilians. There are rumors of further attacks likely to happen at Christmas, especially in Pibor, which has been referred to as an 'unfinished business'. While it is not known how far new attacks may extend, the conflict is expected to exacerbate in the projected period as a result of conflict dynamics and water recession. This will likely result in additional fatalities and displacements, also in/towards Eastern Pibor.

Floods. Eastern Pibor has experienced good rainfall in 2020, but there has not been excessive flooding. Based on satellite imagery there do not seem to be extensive areas under water at the moment, whereas rainfall and especially the vegetation situation have been above average for most of 2020.

Graph 5. Eastern Pibor RFE and NDVI



Expected evolution in the projected period: Flood waters in Western Pibor are expected to recede in the projection period, making roads gradually accessible and improving access to humanitarian actors also in Eastern Pibor. In a normal year, this would happen around January, while given the extraordinary magnitude of flooding in 2020, it is expected that flood recession this year will happen towards February-March.

Displacements. The floods and insecurity in Western Pibor by June-August 2020 caused displacements towards the Maruwa Hills and Labarab, which are considered remote and safer regions further South and East of Pibor.

Expected evolution in the projected period: Displaced populations are apparently not willing to return to their place of origin. There are fears of further insecurity and new attacks, and due to flooding and looting, there are no crops, food stocks, livestock or shelter they could return to. Spontaneous returns are not likely to be possible for some time to come. In addition, the villages of provenance would be hardly accessible for humanitarian food assistance; therefore, the safest choice for IDPs in Eastern Pibor is to remain there. Nonetheless, if conflict intensifies further, more populations may flee towards the Eastern payams.

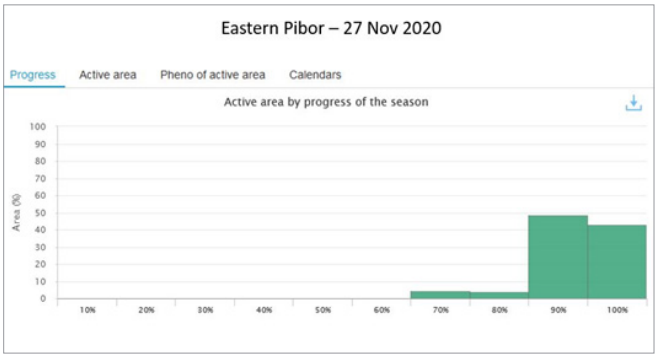
Food availability and stability

Current food availability is largely limited to wild foods: households gather wild foods (roots, grasses, fruits and berries) and practice some fishing and hunting. Humanitarian assistance as a food source is generally not available.

Livestock. The host population in Eastern Pibor outside Maruwa and Labarab does not own a lot of livestock, as the main livelihood is crop production. The Murle in Maruwa (especially the better off) do have access to some milk and meat through their livestock, although the elders estimated that up to 80% of livestock grazing in Baz (one of the main grazing areas) was raided during the attack in July-August. Furthermore, IDPs from Western Pibor have brought most of their remaining livestock (those who retained some) to Maruwa Hills and Labarab. Not that much livestock is left in Labarab (raids in July-August), and households are reluctant to take remaining cattle there for fear of further raiding. Livestock have also been affected by diseases, as in 2015.

Agriculture. Agriculture is practiced in Eastern Pibor, especially around Boma, by farming Murle, Jie and Kachapo. In contrast to Western Pibor, where many crops were lost due to flooding, this was not the case in Eastern Pibor. Instead, a dry spell during a critical period of crop development affected the crop yield negatively around Maruwa Hills and Labarab. Crops in Labarab were also destroyed by the attackers during the

Graph 6. Eastern Pibor active area by progress and season



raid. Existing crops of maize and cassava were harvested between April and August, whereas sorghum harvest takes place between September and December and is therefore ongoing. Although the soils are appropriate for agriculture in Eastern Pibor, annual rainfall is often too low for good production; the average rainfall in 2020, however, was above average and hence may have offset some of the problems caused by the dry spell during crop development, and may have increased production in and around Boma.

Overall, vegetation and rangeland conditions are good, and any cultivated crops have either been harvested or are at senescence stage at the moment.

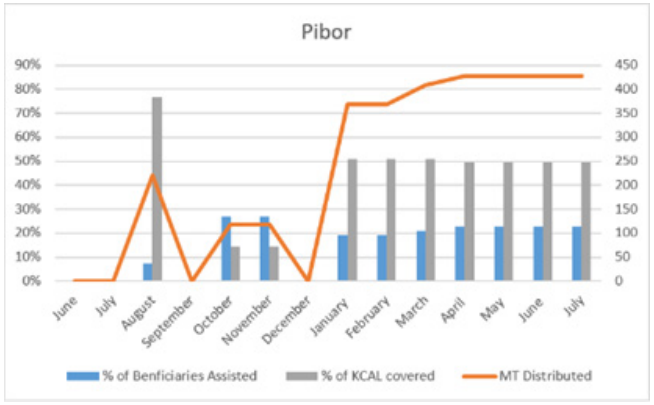
Fishing. Some households access fish from River Lekazat, which is 1-2 days walk from Murawe Hills. This option is generally not available to women or to poorer households with no fishing gear. Labarab is located close to the river, and this enables households in Labarab to practice fishing, albeit with rudimentary methods as they lack modern fishing gear.

Wild foods and hunting. Wild foods (bush okra, grasses, palm tree fruit, cassava and pumpkin leaves, roots, berries, fruit) constitute the main food source for poorer households with no access to livestock or fish. Access to wild foods is reducing due to the end of the rainy season and the fact that IDP populations are also using wild foods as a food source. Some bush meat is available, but access is reducing as animals are migrating to Kapoeta East.

Humanitarian Food Assistance. In August, 9% of the Eastern PIbor population were assisted, with a full basket coverage. In September, only 20% of the population were assisted with half a basket, while in October there was no distribution and for November it has been planned, but the actual delivery has not yet been communicated.

Overall, WFP plans for Humanitarian Food Assistance provision show that distributions are expected to take place from January onwards.

Graph 7. Humanitarian Food Assistance Delivered and planned in Pibor



Expected evolution of food availability in the projected period:

Livestock. In the Maruwa Hills, the pasture will be too dry in the projection period for grazing purposes, and cattle owners will move at least the cattle elsewhere during this period (likely Lekazat river first followed by Labarab around December, and then further to Chau and Kuetit towards Pochalla). Furthermore, due to low quantity of livestock, virtually no livestock products are expected in the projection period until calving in the late dry season next year (starting in March).

Agriculture. The sorghum harvest is ongoing, whereas harvest of maize was completed 2-3 months ago. The harvest benefits mainly better-off households in Maruwa Hills (e.g. soliders and their families) during the projection period, and households more generally in payams around Boma where cultivation is more

Table 4. Humanitarian Food Assistance distributed in Maruwa Hills

	August			September			October & November		
Payams	Beneficiaries assisted	MT distributed	% kcal delivered per month	Beneficiaries assisted	MT distributed	% kcal delivered per month	Beneficiaries assisted	MT distributed	% kcal delivered per month
Boma (Maruwa Hills)	5,491	96.37	102%	10,913	95.76	51%	0	0	0%
Eastern Pibor population: 58,380	% population assisted		9%	% population assisted		19%	% population assisted		0%

widespread. Very little, if any, harvest was available in Labarab due to razing of crops. The next planting season will be in May. IDPs (and other households) need seeds and tools in order to benefit from the next cultivation period.

Mitigating factors. The main mitigating factors are food stocks, fishing, hunting and humanitarian assistance. **Food stocks** benefit those households that were/are able to harvest crops. These consist mainly of better-off households in Maruwa Hills, and households more generally in payams around Boma. In the first projected period, **fishing** is likely to be accessible to some households, but this will not have a significant impact on overall food security, with the possible exception of Labarab, which is located close to the river. Access to fishing will, however, reduce when the dry season progresses. **Wild foods** will become scarcer with the progression of the dry season starting in Dec-Jan. Some wild foods will continue to be available, and IDP and poorer households in Maruwa Hills expect to be relying on them as the main food source during the projection period. **Humanitarian assistance**, albeit planned, is likely to face large delivery constraints given difficult conditions of delivery. All in all, even though regular deliveries are scheduled in the assistance plan, it is not likely that monthly assistance will take place. However, during the dry season, it is possible that road access improves, which may facilitate more frequent deliveries with more extensive targeting.

Food access and stability

Financial Access. Markets in Boma are functional, and trade e.g. in cereal and livestock and most common goods and food items. Livestock fetches low prices in Boma (oversupply due to limited demand and limited purchasing power), hence livestock owners in Maruwa Hills prefer selling their animals in Juba where they get double the price compared to Boma. The market in Maruwa Hills is dysfunctional, with very few items for sale (mainly bush meat, wild foods, tobacco, drugs and some other items), with a general lack of cereals and other items normally found in markets. The nearest cereal market is in Boma, a 12 hour journey away by foot. Decimation of an economy that is normally based on livestock has led to cash shortages and lack of economic activity; most market transactions are conducted by bartering. Raiding and loss of livestock due to diseases means that households no longer travel to Juba to sell livestock and buy cereal or vegetable oil to be brought back to Maruwa Hills. There has not been a functioning market in Labarab since the attack. The nearest markets are in Boma, Pochalla and Pibor, and a trip to any of these by foot takes several days.

Physical access. Physical access to markets is difficult especially in Labarab and Maruwa Hills that are located far from functioning markets. Households are expected to maintain access to food stocks (if any) and wild foods during the projection period, although access to animal protein (fish, livestock products) is likely to be very limited especially to IDPs and poor households.

Social access. Social access has greatly facilitated households' access to food in past months; there is a strong sharing culture among the Murle, which guarantees that better-off households facilitate access to food to their extended families and neighbours. This has benefited the IDPs residing in Maruwa Hills and Labarab. The predominance of the sharing culture is also evident in the fact that practically all households receiving food assistance reportedly shared it with others (not sold or bartered it). Due to raiding and loss of livestock, however, better-off households are no longer able to support the more vulnerable members of the community with access to livestock products as they normally do.

Expected evolution of food access in the projected period: Food access is expected to remain limited in the projection period, and to decrease further. Low access to food is likely to be especially severe for IDPs and those households who were able to cultivate/harvest little, if at all. This is due to multiple reasons: lack of regular humanitarian food assistance, decreasing supply of wild foods, limited access to fish and bush meat, and lack of markets. The situation in payams around Boma is likely to be somewhat better due to the absence of unusual shocks in the past months, allowing households to continue normal livelihood activities. Boma also has a functioning market, even if it is not well integrated due to long distances to any larger markets.

Food Utilization and stability.

Food utilization is compromised in Labarab and Maruwa Hills. Both locations have inadequate access to safe water, with the Labarab population relying entirely on surface water, whereas there is only one borehole in Maruwa Hills that is now serving a population that has doubled due to the influx of refugees. Many of the wild foods consumed (such as lalop leaves) cause diarrhea and other physical problems such as stomach pains, and these consumption patterns are likely to be one of the contributing factors to elevated rates of malnutrition in the area.

Expected evolution in the projected period: Food utilization is not likely to improve in the projection period with high reliance on wild foods and no changes expected in terms of water sources.

Food consumption and livelihood change Outcomes

There is no outcome evidence on food consumption and livelihood change for Eastern Pibor, as all clusters accessed during the FSNMS were located in Western Pibor. Based on inference, it seems likely that food consumption is better than in Western Pibor due to the presence of wild foods, some livestock products, and access to stocks from harvests. Overall, however, quantity of consumed food is likely to be limited for several reasons: a lot of the livestock was raided, there is no or very little humanitarian assistance, markets in Maruwa Hills and Labarab are dysfunctional with no presence of staple food items, and presence of IDPs puts pressure on available food sources. Households with access to harvest are likely to have better food consumption. This concerns especially households further East around Boma, whereas most households in Maruwa Hills and Labarab are very dependent on wild foods.

Expected evolution in the projected period: In the projected period, it is expected that the food security situation will continue to be severe and possibly deteriorate further. This is due to diminishing food stocks of cultivating households, lower access to wild foods, lack of access to livestock products, and low (and further decreasing) access to fish. There is no indication that the very poor market access in Maruwa Hills and Labarab is going to improve in the projection period and hence, financial and physical access to markets is likely to remain rather limited. There is also the possibility of further attacks which, if carried out, would likely cause more displacement to/in Eastern Pibor and erode access to livestock products. Of particular concern is the possibility of new attacks around Christmas. Remaining livestock is likely to migrate to Labarab in December, and since previous attacks in July-August did extend to Labarab, it is possible that in the worst-case scenario, remaining livestock would be raided in new attacks, leaving the pastoralist Murle population completely without their main asset and livelihood. Any new attacks would also cause further destruction and destitution in Labarab, the population of which is already facing a very dire situation after the previous attack. Any new attacks in Western Pibor would also lead to new displacement into Eastern Pibor, putting the local wild foods and other resources (e.g. water) under further strain.

The seasonality patterns indicate the period from April to July as the lean season. However, given the current lack of access to normal food sources (livestock, disintegration of normal market structures) especially in Maruwa Hills and Labarab, it is likely that the main lean season starts earlier than usual, especially in these areas where crop production is not prevalent, especially among the IDPs and poorer population. The only significant potential mitigating factor in the projection period is humanitarian food assistance. With an increase in food assistance, it is possible to avoid further deterioration of the food security situation. In light of the past performance in assistance delivery, however, it seems unlikely that assistance will reach such a magnitude as to avoid the worsening of the food security situation.

Nutrition Outcomes

The following nutrition outcome data are available for Eastern Pibor:

Table 5. Nutrition outcome data available for Eastern Pibor

Source	Type of screening	Area covered	Date	Children screened	Area population estimated	GAM (%)	SAM (%)	MUAC or WHZ	Reliability comment
IRNA	Distribution point MUAC screening by trained enumerators	Labarab	Oct 2020	945	30,000	**20.7**	6.7	MUAC	<R1
Nutrition Cluster/ UNICEF	Modelling and expert consultation of WHZ	Pibor County	Historical data	N/A	N/A	**15.7**	Unknown	WHZ	
Partners	Facility-based data	Maruwa Hills	Oct 2020	771	Unknown?	**12.3**	1.94	MUAC	<R1
Partners	Facility-based data	Maruwa Hills	Sept 2020	1,438	Unknown?	**29.3**	1.18	MUAC	<R1
RRM	Distribution point MUAC screening by trained enumerators	Maruwa Hills	Sept 2020	1,242	Unknown	**28.6**	1.9	MUAC	<R1

There was an interruption in some programmes between July and August 2020 because of the conflict, but operations resumed in September 2020 - this may indicate the high level of GAM reported during the screenings conducted in September 2020 (may also indicate the fact that people are entirely dependent on humanitarian health and nutrition programmes).

The most common three diseases seen at health facilities are malaria, diarrhoea, and ARI (among both children and adults) and the number of people diagnosed with these diseases is on the increase. This increase is because of the increased number of IDPs in the area. A similar increase is also observed in the CMAM programme admissions for the same reason.

The two other locations in the Eastern part of the Pibor county that are of concern are Kasingor and Labarab, as there is no access to these areas. Some people from these locations have moved to Maruwa Hills, but many are left behind. Given the access constraints, there are no humanitarian programmes in these areas. As a result, the nutrition situation may be much worse in these areas than in Maruwa Hills.

Expected evolution in the projected period: In the projection period, the situation is likely to deteriorate further as the food security situation worsens and the conflict is expected to intensify, especially if access to health and nutrition services is interrupted. It should be noted, that the acute malnutrition levels (based on MUAC) have reached nearly 30% in September 2020, following the brief interruption of health and nutrition programmes in July-August 2020. Given that the population is solely relying on the only health centre in the area for health and nutrition services, any interruption of health services will have a detrimental impact. The nutrition situation in Labarab and Kasingor areas will likely get worse, as there is no access to humanitarian services in these areas.

Mortality Outcomes

There is no household survey data on mortality. According to key informants, 37 deaths have been reported in Maruwa Hills. Given the interruption in health and nutrition services in July-August 2020 and subsequent increase in malnutrition, there may be additional deaths.

Expected evolution in the projected period: In the projection period, an increase in mortality may be expected as a result of the conflict, particularly if the humanitarian access is interrupted.

Conclusion

Based on the evidence available, there is a reasonable chance of a risk of famine. **There is a reasonable chance that Famine may happen in the next seven months among the conflict-affected populations in Pibor East (displaced and host populations) who will likely be located in Labarab and Maruwa Hills if conflict reaches levels similar to those seen in June and July of 2020.** If conflict escalates to this level, there is a reasonable chance that raiding will lead to a quasi total loss of livelihoods and main source of food for the pastoralist Murle population. An increase in conflict will also likely disrupt service deliveries, including humanitarian assistance and health and nutrition care. Accompanying this, the usual lean season from April to July will also mean less access to food production among the host communities. With similar levels of conflict experienced in June/July 2020, it is expected that conflict affected populations would go as far as Labarab and Maruwa Hills to settle. It is unlikely that the conflict affected population moves further east of Labarab and Maruwa Hills over the next six months, unless conflict escalates to a level even higher than the one experienced in mid-2020. It is crucial to have contingency plans in place to avert a Famine in these areas in case conflict escalates. It is also crucial to closely monitor the evolution of the situation and potential population movements.

ANNEX 2. PIBOR DATA

QUALITY CHECKS

Sample size

In Pibor county, only 91 households were covered (R1+), just above the minimum threshold of 90. However, households were interviewed from a comparatively higher number of clusters (18). This should partially mitigate risks of low representativeness in case factors affecting food insecurity in the county were not homogeneously distributed. It is unclear why the number of households is extremely low (1 or 2 households only) in at least 8 villages.

Note: *During the review, several cases of misspelling of villages' names – included as string (IE narrative) variables - were observed. The cleaning and recoding into the most plausible names was conducted manually.*

County	Cases	Clusters
Akobo	109	14
Pibor	**91**	**18**
Aweil South	108	12
Tonj East	108	8
Tonj North	108	15
Tonj South	108	13

Correlation

Chi-square among main indicators: A series of cross-tabulations were conducted between the main food consumption and livelihood coping indicators. This analysis was done to try and assess non-random distribution and convergence of population across the same phases by couples of indicators, within a given county. While this analysis does not clarify whether there is full convergence in Phase 5 – i.e. which populations are in Phase 5 according to the various indicators, it provides an indication over the convergence of vulnerability within the same populations. The correlations are done through Chi-square analyses between categorical variables. Only values of the Person P value 0.05 or lower show statistically relevant correlation.

Note: *The convergence could be undermined by the low number of cases by county (false negatives).*

Pibor - Chi square P value					
	FCS	rCSI	LCS	HHS	HDDS
FCS		0.154	0.367	0.046	0.077
rCSI	0.154		0.676	0.14	0.003
LCS	0.367	0.676		0.398	0.094
HHS	0.046	0.14	0.398		0.024
HDDS	0.077	0.003	0.094	0.024	

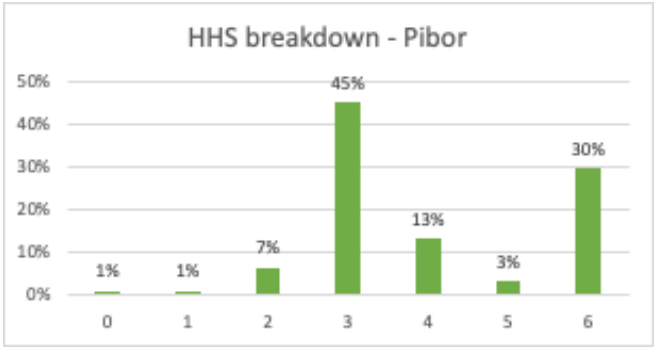
In Pibor, a significant correlation is only observed between HHS and FCS, HHS and HDDS, and between rCSI and HDDS. The livelihood coping does not align with key food consumption indicators (HDDS, FCS in Akobo, Pibor and Aweil South), HHS (Akobo, Pibor, Aweil South).

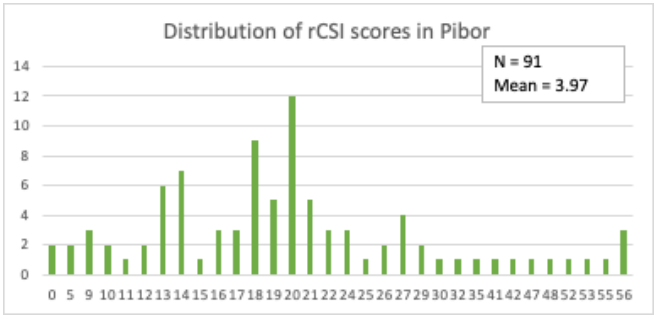
Note: *Pibor is the county with the lowest records of significant correlations, owing probably also to the lower number of households.*

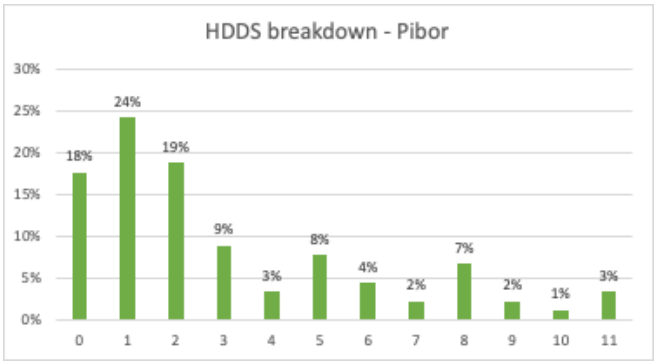
Distribution of Indicators:

Food Consumption Indicators

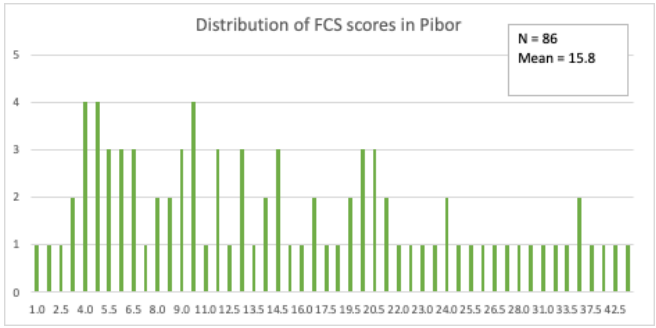
HHS: In Pibor, as well as in other counties, the number of people in Phase 5 according to the HHS is higher than the one in Phase 4. This can be potentially explained with high severity in the county and with Phase 5 aggregating two HHS scores (5 and 6). Around 30% of households in Pibor had an HHS score of 6.



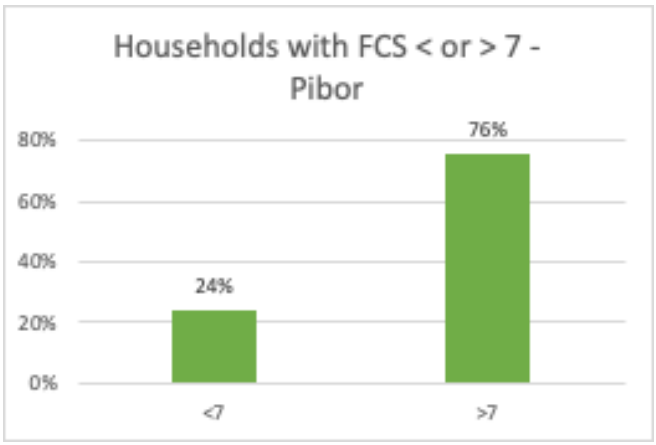


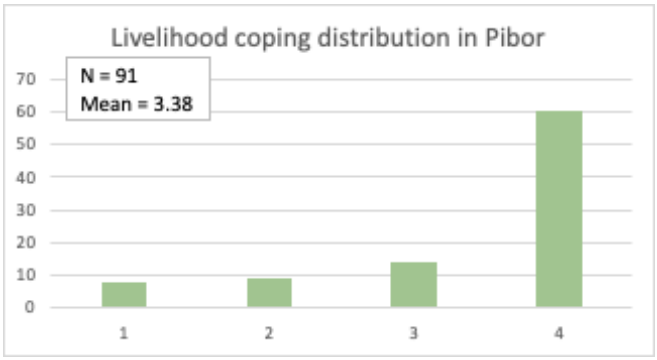


HDDS Breakdown: *18% of households had not consumed any food groups in the previous 24 hours*



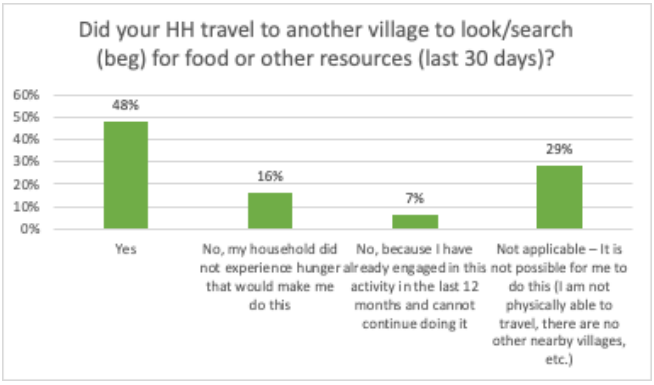
FCS < 7: In Pibor, around 24% of households in Pibor have a food consumption score less than 7

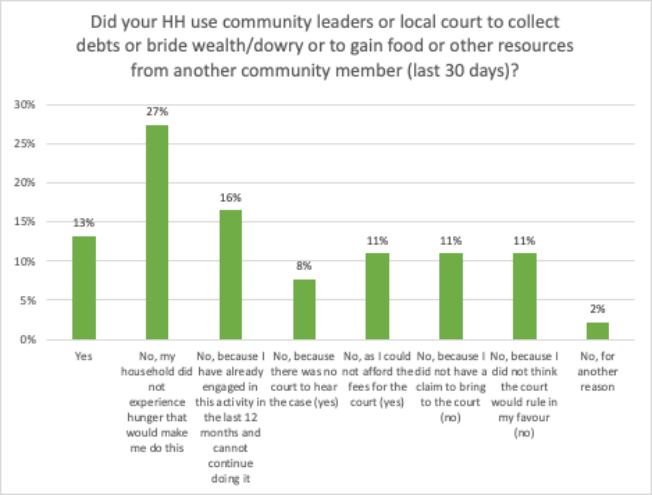




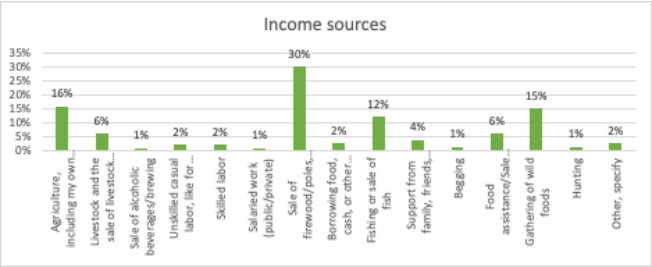
Livelihood Indicators

In Pibor County, 62% of households were unable to sell or slaughter their last cows and goats in the last 30 days, because they had either sold all of them in the last year (18%), or more than a year ago (44%). Around 36% of households were unable to travel to look/beg for food, because they had already done so in the last 12 months (7%) or they were physically unable to since there were no nearby villages (29%). 38% were unable to go to community leaders or local court to collect debts or bride wealth/dowry or to gain food or other resources from another community member.



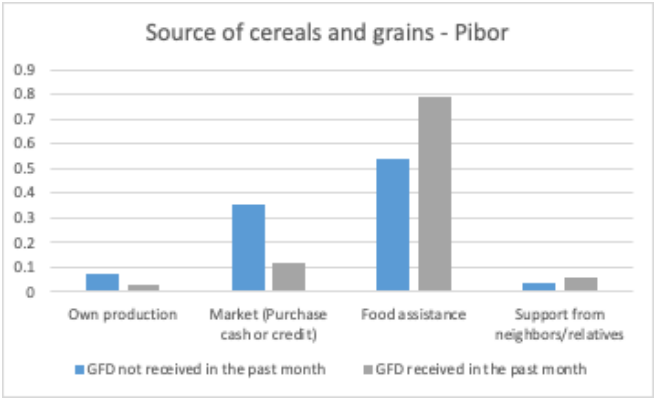


Income sources



Consistency checks

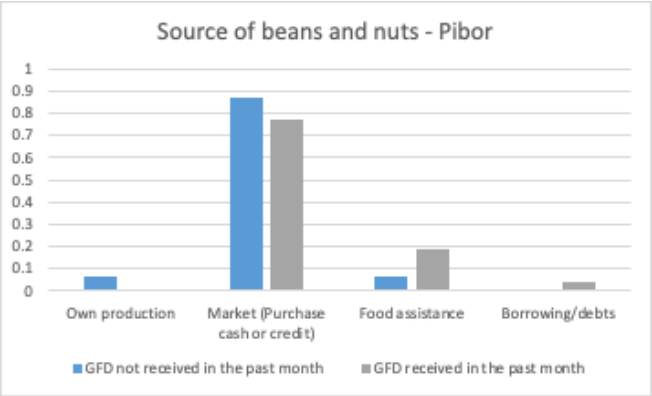
Households' food sources vs. assistance received: Households receiving GFD in the past month report food assistance as an important food source for cereals, beans and oil. However, some households that did not receive assistance also outlined food assistance as a major source of cereals, beans and oils.



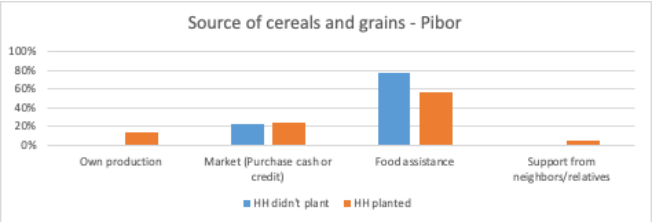
H01. In the last three months, what was your household's most important activity for getting food and income? * H01.1. In the last three months, what was your household's second

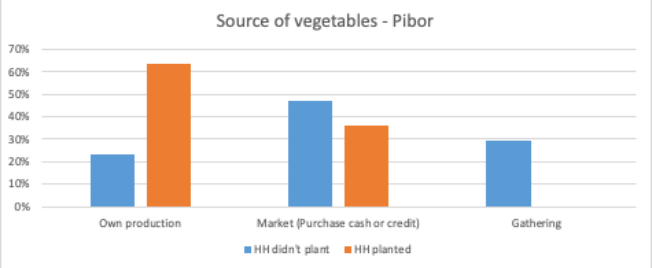
% within H01. In the last three months, what was your household's most important activity for getting food and income?

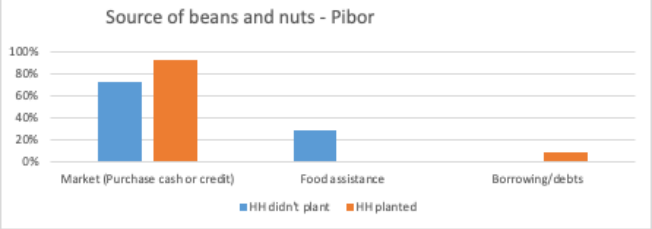
		H01.1. In the last three months, what was your household's second most important activity for getting food and income?														
		Agriculture, including my own production or the sale of cereals, vegetables and other crops	Livestock and the sale of livestock or livestock products and poultry	Sale of alcoholic beverages/ brewing	Unskilled casual labor, like for agriculture, basic construction, etc	Skilled labor	Sale of firewood/poles, charcoal, grass, stones, and other natural resources	Borrowing food, cash, or other resources	Fishing or sale of fish	Support from family, friends, the community, etc	Begging	Food assistance/Sale of food assistance	Gathering of wild foods	Hunting	No second source of income	Total
H01. In the last three months, what was your household's most important activity for getting food and income?	Agriculture, including my own production or the sale of cereals, vegetables and other crops		10.5%	5.3%	5.3%		42.1%		15.8%			5.3%	15.8%			100.0%
	Livestock and the sale of livestock or livestock products and poultry						100.0%									100.0%
	Unskilled casual labor, like for agriculture, basic construction, etc							100.0%								100.0%
	Salaried work (public/private)							100.0%								100.0%
	Sale of firewood/poles, charcoal, grass, stones, and other natural resources	20.0%	4.0%			12.0%			20.0%	4.0%		8.0%	12.0%		20.0%	100.0%
	Borrowing food, cash, or other resources		50.0%				50.0%									100.0%
	Fishing or sale of fish	11.1%					44.4%					11.1%	11.1%		22.2%	100.0%
	Support from family, friends, the community, etc						20.0%		20.0%		20.0%	20.0%	20.0%			100.0%
	Food assistance/Sale of food assistance		20.0%		20.0%		40.0%						20.0%			100.0%
	Gathering of wild foods	6.7%					26.7%		13.3%		6.7%			13.3%	33.3%	100.0%
	Other, specify												25.0%		75.0%	100.0%
Total		7.7%	5.5%	1.1%	2.2%	3.3%	27.5%	2.2%	12.1%	1.1%	2.2%	5.5%	11.0%	2.2%	16.5%	100.0%

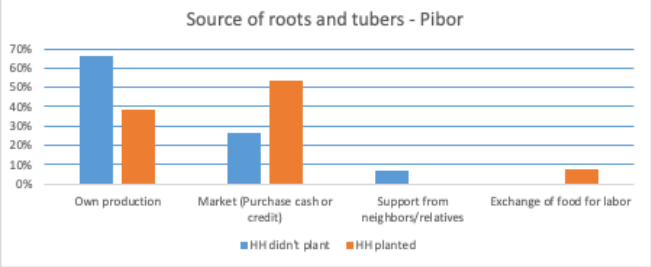


Household food sources vs. planting status: Own production is an important source of roots/tubers as well as vegetables for those households who did not plant. For cereals, beans and nuts, this anomaly is not observed with no proportion of households that did not plant marking own production as a source.









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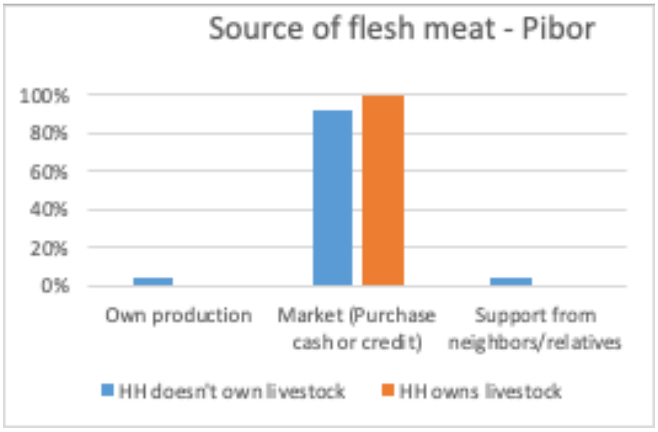
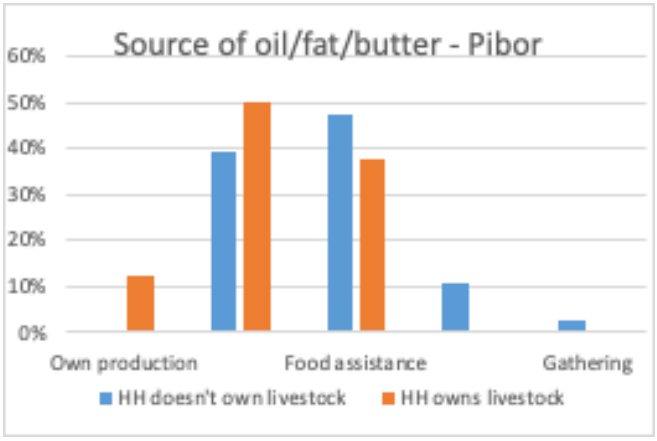
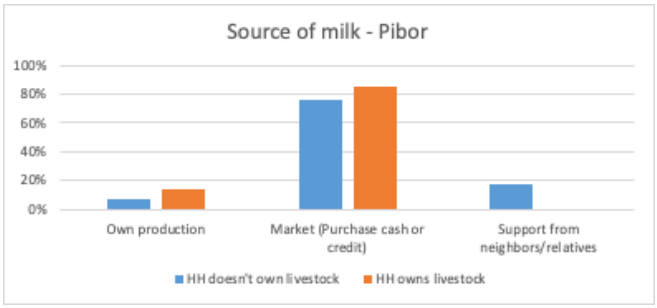
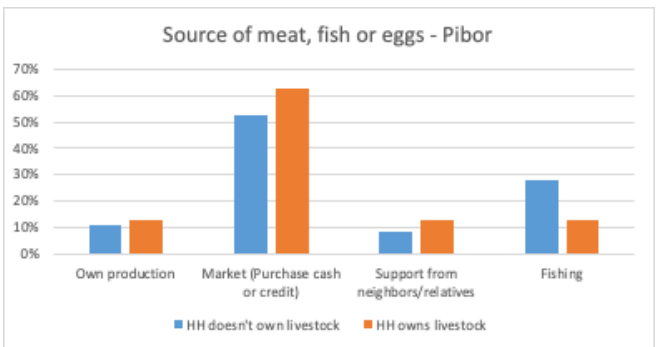


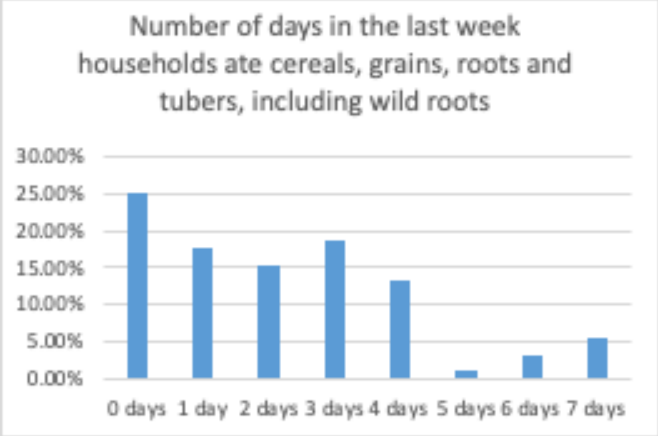


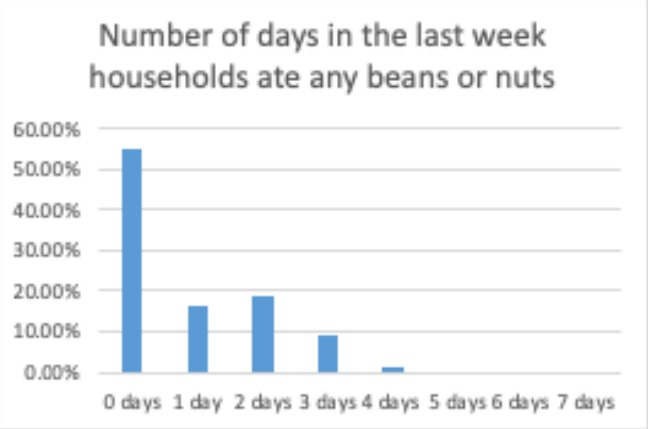


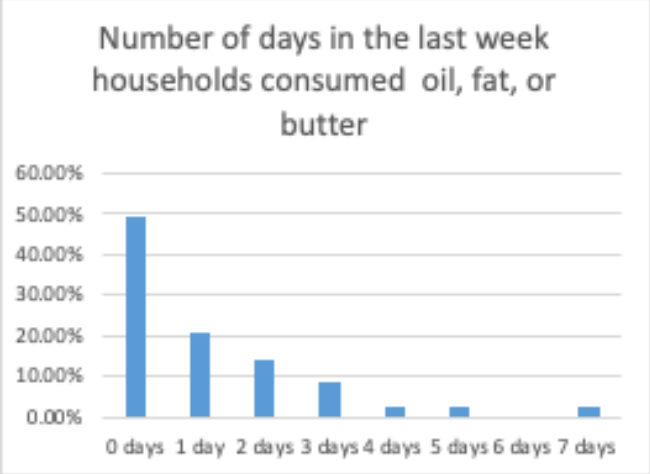


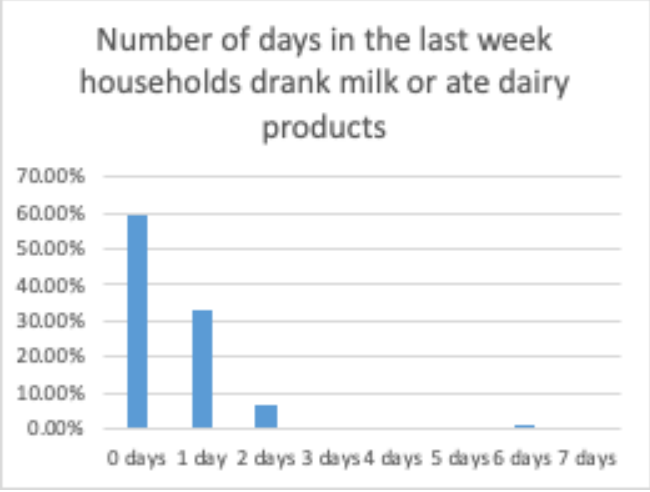
Additional Analysis

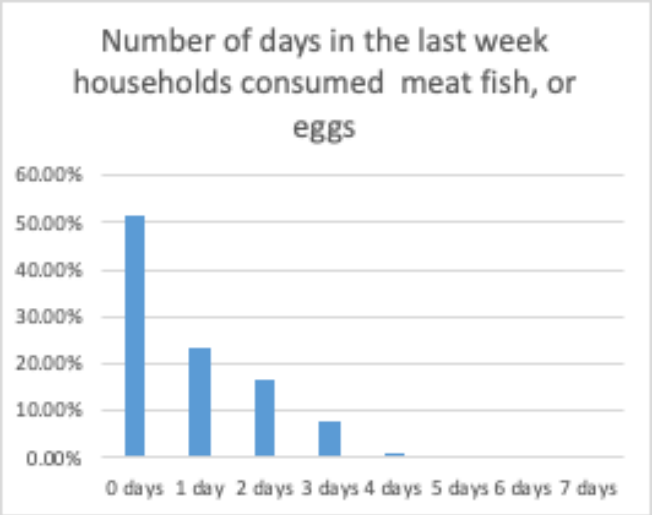
The following table is a simple frequency of days of consumption of each food group, by county.

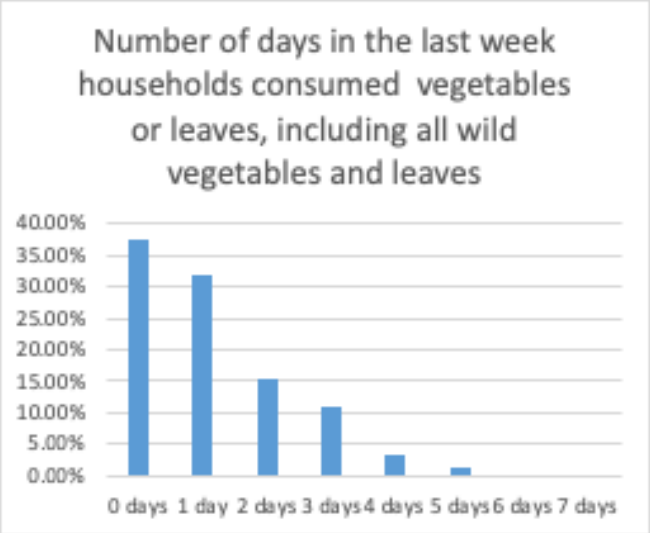









Number of days in the last week households consumed meat fish, or eggs
60.00%
50.00%
40.00%
30.00%
20.00%
10.00%
0.00%
0 days
1 day
2 days
3 days
4 days
5 days
6 days
7 days


Number of days in the last week households consumed vegetables or leaves, including all wild vegetables and leaves
40.00%
35.00%
30.00%
25.00%
20.00%
15.00%
10.00%
5.00%
0.00%
0 days
1 day
2 days
3 days
4 days
5 days
6 days
7 days

Distribution of data by Payam: The following table focuses on four critical payams of Gumuruk, Pibor, Verteth, Lekuangole. The number of observations in these payams is extremely low (from 9 in Verteth to 34 in Pibor). Therefore, results from analyses on key indicators (FCS, HHS, rCSI continuous, rCSI severe strategies, HDDS, and FCS converge indicators) are only indicative. Cross-tabulations also include LCS and GFD beneficiaries. All analyses include counts and percentages within the payam.

		A.06 Payam code											
		Gumuruk			Pibor			Verteth			Lekuangole		
		Count	% cases column	Media	Count	% cases column	Media	Count	% cases column	Media	Count	% cases column	Media
Food Consumption Score	Poor	15	88.2%		25	73.5%		4	44.4%		18	69.2%	
	Borderline	2	11.8%		7	20.6%		2	22.2%		7	26.9%	
	Acceptable	0	0.0%		2	5.9%		3	33.3%		1	3.8%	
Household Hunger score	None	0	0.0%		0	0.0%		1	10.0%		0	0.0%	
	Slight	0	0.0%		1	2.9%		0	0.0%		0	0.0%	
	Moderate	6	31.6%		12	35.3%		6	60.0%		23	82.1%	
	Severe Emergency	4	21.1%		6	17.6%		1	10.0%		1	3.6%	
	Severe Catastrophe	9	47.4%		15	44.1%		2	20.0%		4	14.3%	
rCSI Mean				17.42			24.91			29.00			17.86
Reduce Num-Meals_YN	No	1	5.3%		0	0.0%		0	0.0%		2	7.1%	
	Yes	18	94.7%		34	100.0%		10	100.0%		26	92.9%	
Restrict Adult Consumption_YN	No	1	5.3%		0	0.0%		0	0.0%		2	7.1%	
	Yes	18	94.7%		34	100.0%		10	100.0%		26	92.9%	
rCSI by 3.0 threshold	Phase 1	0	0.0%		0	0.0%		0	0.0%		2	7.1%	
	Phase 2	10	52.6%		16	47.1%		4	40.0%		9	32.1%	
	Phase 3+	9	47.4%		18	52.9%		6	60.0%		17	60.7%	
HDDS with IPC cut-offs	Phase 4+ 0-2 food groups	13	68.4%		18	52.9%		5	50.0%		19	67.9%	
	Phase 3 3-4 food groups	4	21.1%		2	5.9%		2	20.0%		3	10.7%	
	Phase 1-2 5+ food groups	2	10.5%		14	41.2%		3	30.0%		6	21.4%	
Food consumption convergence phase	2,00	0	0.0%		0	0.0%		1	11.1%		0	0.0%	
	3,00	2	11.8%		11	32.4%		6	66.7%		17	65.4%	
	4,00	8	47.1%		13	38.2%		1	11.1%		7	26.9%	
	5,00	7	41.2%		10	29.4%		1	11.1%		2	7.7%	
LHC_Final	1,00	2	10.5%		5	14.7%		1	10.0%		3	10.7%	
	2,00	5	26.3%		7	20.6%		1	10.0%		2	7.1%	
	3,00	3	15.8%		8	23.5%		2	20.0%		6	21.4%	
	4,00	9	47.4%		14	41.2%		6	60.0%		17	60.7%	
Food consumption Livelihood Coping convergence phase	3,00	2	11.8%		6	17.6%		5	55.6%		5	19.2%	
	4,00	8	47.1%		18	52.9%		3	33.3%		19	73.1%	
	5,00	7	41.2%		10	29.4%		1	11.1%		2	7.7%	
GFD received in the last one month	No	19	100.0%		17	50.0%		6	60.0%		11	39.3%	
	Yes	0	0.0%		17	50.0%		4	40.0%		17	60.7%	

Additional Quality Checks for 6 counties with potential population in Phase 5

Quality Checks for 6 areas with populations classified in IPC Phase 5, Catastrophe (Akobo, Pibor, Aweil South, Tonj East, Tonj North, Tonj East).

Missing values

There were a (few) missing cases, only for the Food Consumption Score; all other outcome indicators were reported for full sample size.

	Missing cases (# of hhs)	
Indicators	72 counties (N = 7,853)	6 counties (N = 632)
FCS	177	6
HDDS	0	0
HHS	0	0
rCSI	0	0
LCS	0	0

Correlation

- Significant correlation between all indicators
- Expected correlation versus experienced correlation:
  - Dietary indicators (FCS and HDDS) of 0.536 (FANTA/FEWS NET HFCIS found 0.592)
  - Experience based (rCSI and HHS) of 0.392 (FANTA/FEWS NET found 0.493)
  - Dietary and experience-based indicators ranged between -0.108 and -0.232 (FANTA/FEWS NET HFCIS found somewhat similar correlation of -0.071 to -0.232)
- Overall correlation within the other counties was similar to, or somewhat weaker than the FANTA/FEWS NET HFCIS.
- Correlation of dietary indicators in the six counties of particular interest was somewhat stronger (0.634), whereas correlation between dietary and experience-based indicators was slightly weaker than in the other counties.

For 6 counties:

	Spearman's rho	FCS	HDDS	rCSI
HDDS	Correlation coefficient	.634**		
	N	626		
rCSI	Correlation coefficient	-.323**	-.228**	
	N	626	632	
HHS	Correlation coefficient	-.247**	-.224**	.397**
	N	626	632	632

*** Correlation is significant at the 0.01 level (2-tailed).*

For other counties:

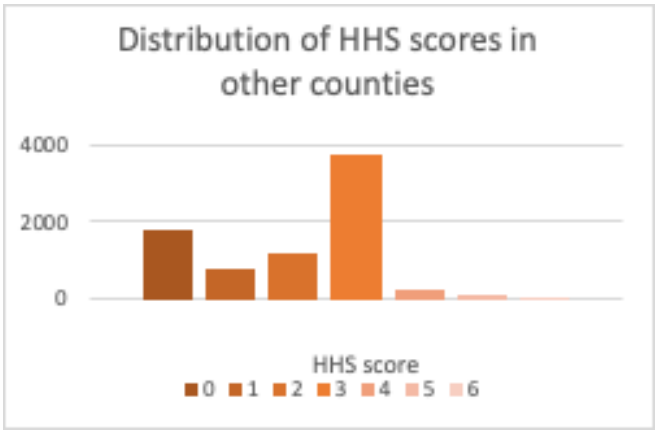
	Spearman's rho	FCS	HDDS	rCSI
HDDS	Correlation coefficient	.536**		
	N	7,676		
rCSI	Correlation coefficient	-.108**	-.121**	
	N	7,676	7,853	
HHS	Correlation coefficient	-.232**	-.139**	.392**
	N	7,676	7,853	7,853

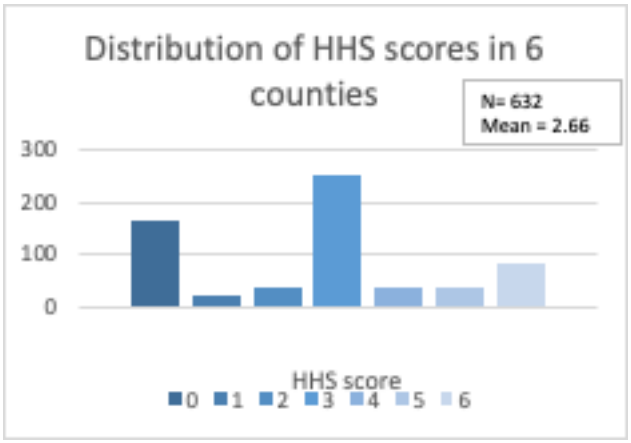
*** Correlation is significant at the 0.01 level (2-tailed).*

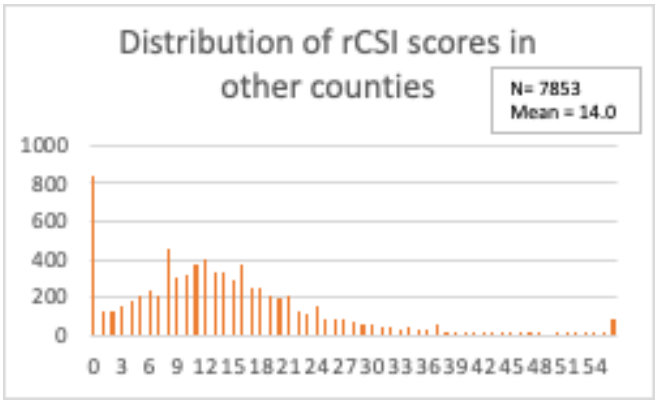
Distribution

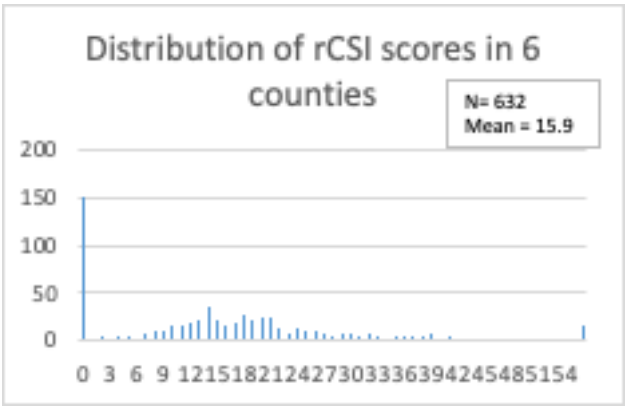
Pibor Only:

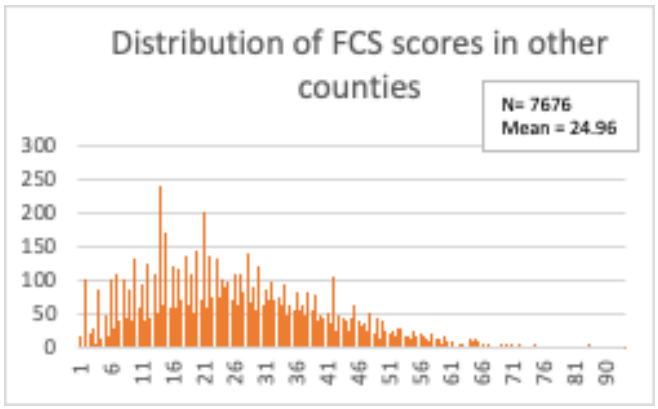
In Pibor County, the distribution of households with HHS score 4-6. Distribution shows an overall more severe situation in the six counties than in the other counties, with a higher share of households having HHS scores of 4-6, somewhat more prevalent food coping, and a relatively even distribution of FCS. The HDDS of highest frequency is 3, whereas in other counties it is 4, even if mean HDDS score in counties of interest is somewhat higher than in other counties. Furthermore, the six counties exhibit a high prevalence of Emergency Level Livelihood Coping.

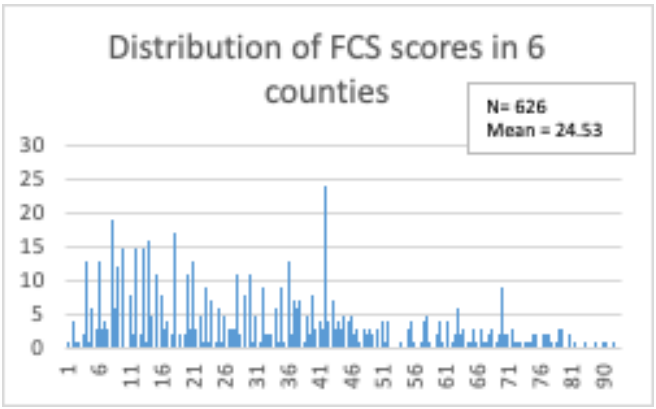

Distribution of HHS scores in other counties
4000
2000
0
HHS score
0 1 2 3 4 5 6

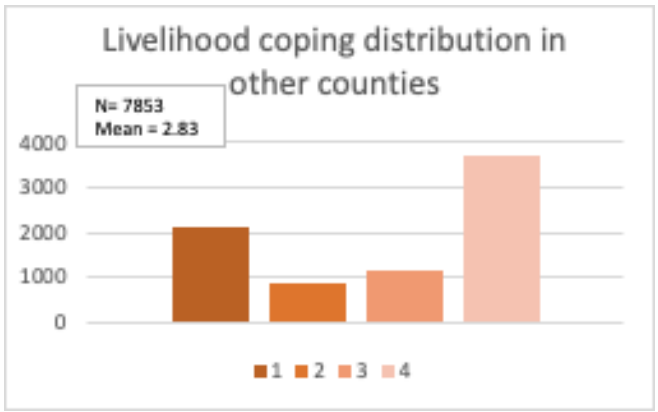

Distribution of HHS scores in 6 counties
N= 632
Mean = 2.66
300
200
100
0
HHS score
0 1 2 3 4 5 6

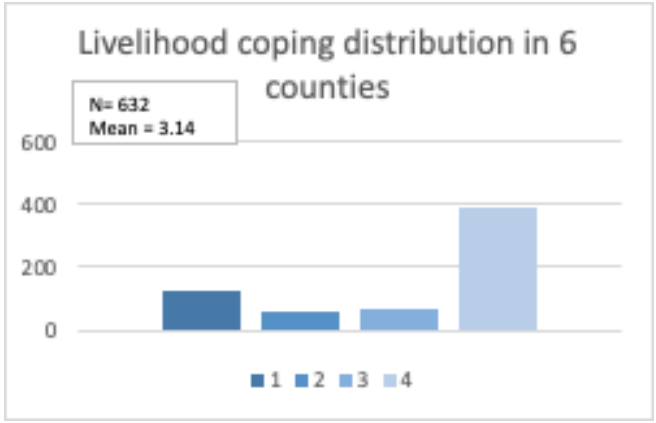

Distribution of rCSI scores in other counties
N= 7853
Mean = 14.0
1000
800
600
400
200
0
0 3 6 9 12151821242730333639424548515 4

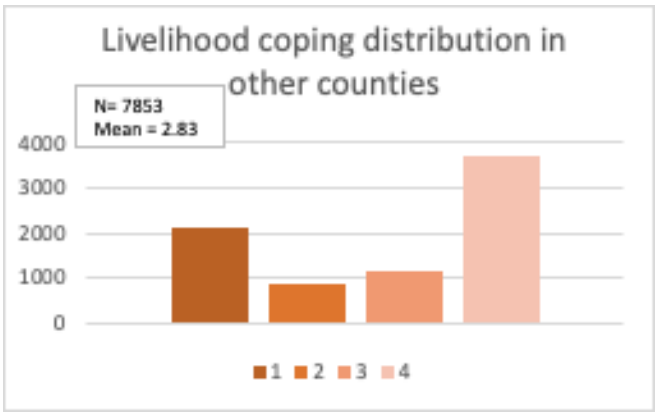

Distribution of rCSI scores in 6 counties
N= 632
Mean = 15.9
200
150
100
50
0
0 3 6 9 12151821242730333639424548515 4

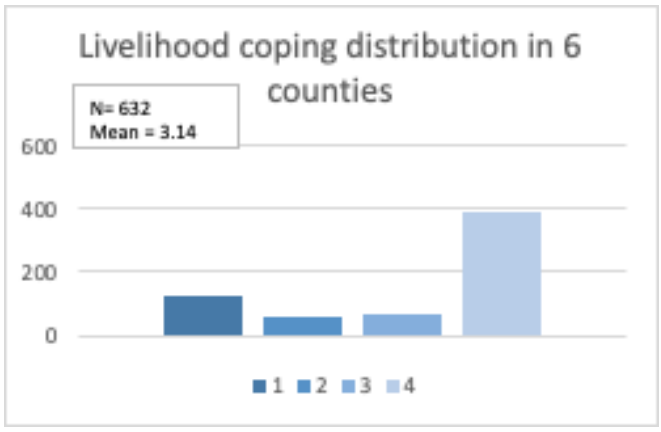

Distribution of FCS scores in other counties
N= 7676
Mean = 24.96
300
250
200
150
100
50
0
1 6 11 16 21 26 31 36 41 46 51 56 61 66 71 76 81 90


Distribution of FCS scores in 6 counties
N= 626
Mean = 24.53
30
25
20
15
10
5
0
1 6 11 16 21 26 31 36 41 46 51 56 61 66 71 76 81 90


Livelihood coping distribution in other counties
N= 7853
Mean = 2.83
4000
3000
2000
1000
0
1 2 3 4

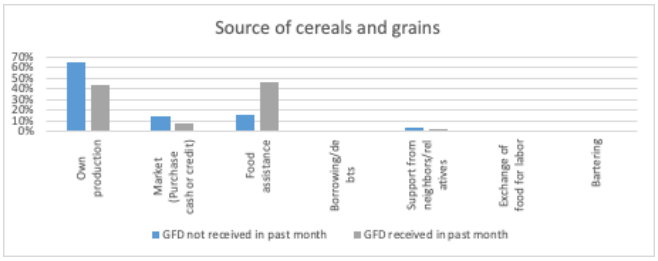

Livelihood coping distribution in 6 counties
N= 632
Mean = 3.14
600
400
200
0
1 2 3 4

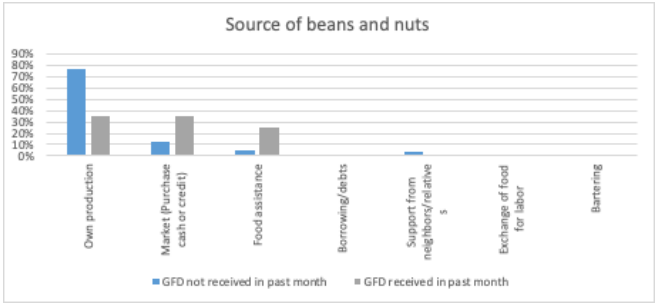


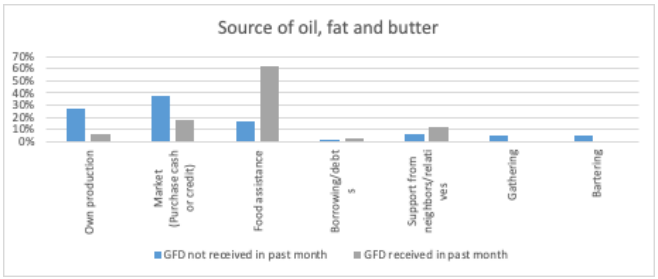


Consistency checks

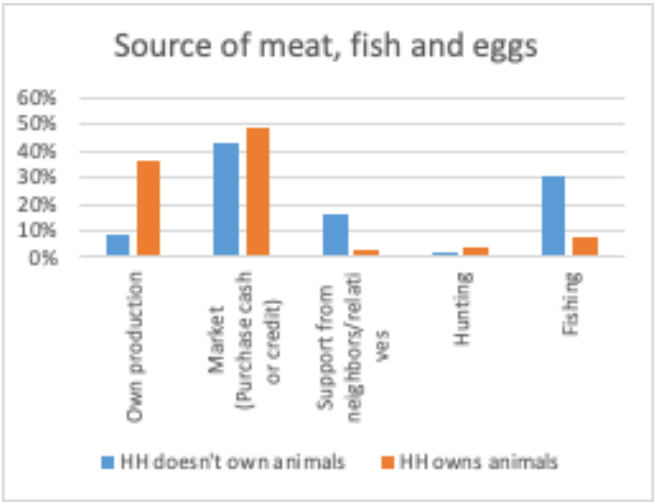
Households' food sources vs. assistance: Households receiving GFD in the past month report food assistance as an important food source for cereals, beans and oil.

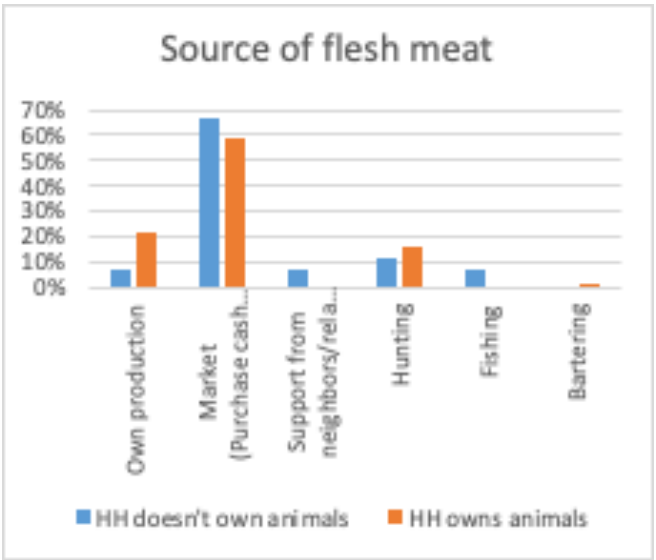


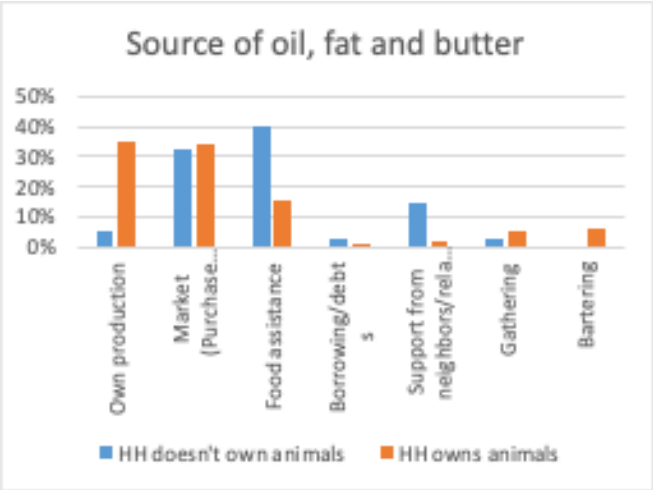


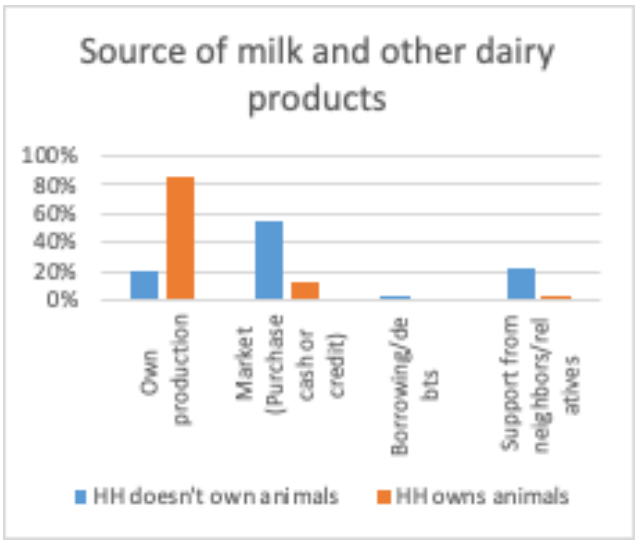


Household food sources vs. livestock ownership: Households owning livestock report 'own production' as an important source of meat, flesh meat, oil/fat/butter and milk. Some households not owning livestock, however, also report 'own production' as a source of these items.

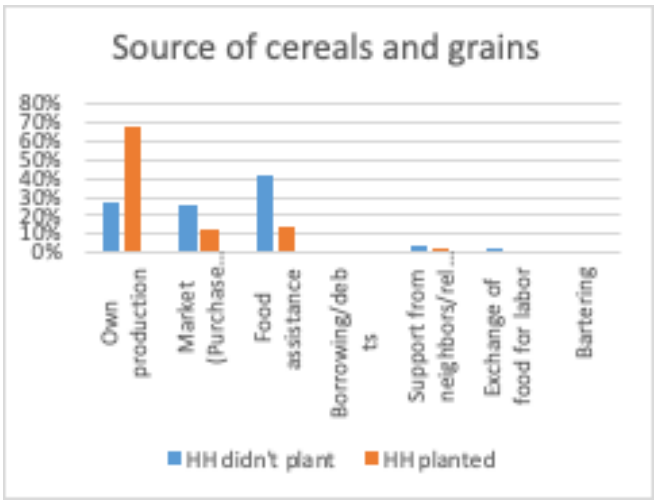


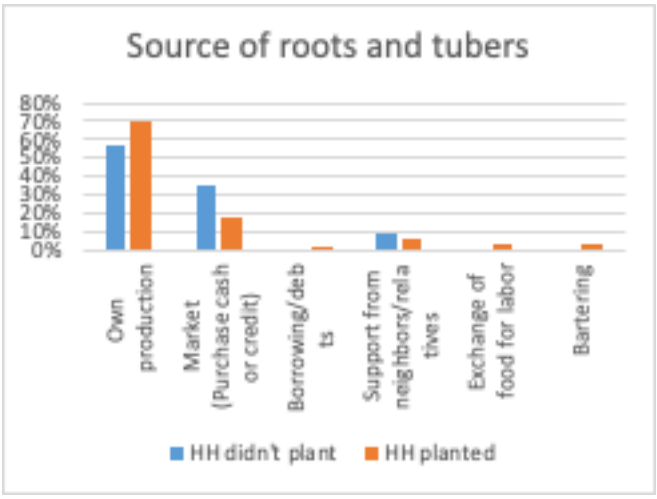


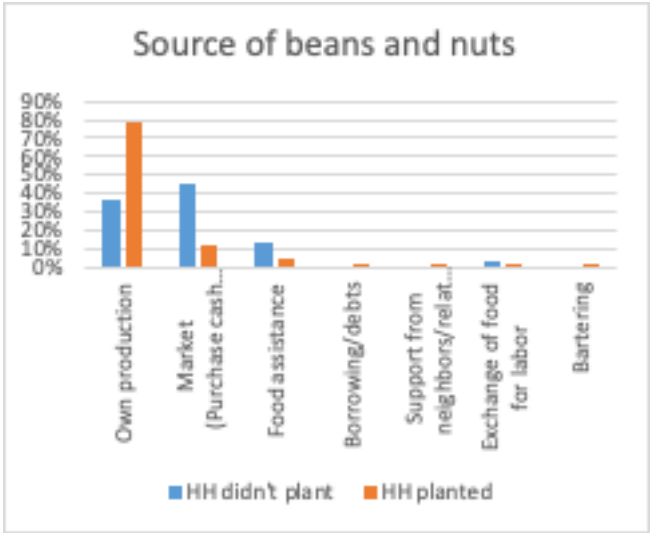


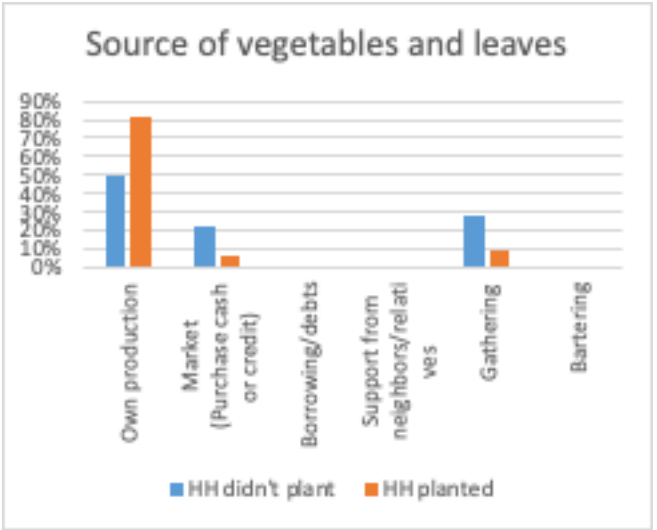


Household food sources vs. planting status: Own production is the most important source of cereals, roots/tubers, beans and vegetables for those households who planted. Nevertheless, also many households that didn't plant report 'own production' as an important source.









Correlation:

Chi-square among main indicators: A series of cross-tabulations were conducted for all 6 counties' populations classified in Phase 5, between the main food consumption and livelihood coping indicators. This analysis was done to try and assess non-random distribution and convergence of population across the same phases by couples of indicators, within a given county. While this analysis does not clarify whether there is full convergence in Phase 5 – i.e. which populations are in Phase 5 according to the various indicators, it provides an indication over the convergence of vulnerability within the same populations. The correlations are done through Chi-square analyses between categorical variables. Only values of the Person P value 0.05 or lower show statistically relevant correlation. Note: The convergence could be undermined by the low number of cases by county (false negatives).

		A.05 County					
		Akobo	**Pibor**	**Aweil South**	**Tonj East**	**Tonj North**	**Tonj South**
		rCSI by 3.0 thresholds_ corrected	rCSI by 3.0 thresholds_ corrected	rCSI by 3.0 thresholds_ corrected	rCSI by 3.0 thresholds_ corrected	rCSI by 3.0 thresholds_ corrected	rCSI by 3.0 thresholds_ corrected
FC_group	Chi-square	11.444	6.679	13.414	24.360	16.285	12.428
	gl	2	4	4	4	4	4
	Sign	,003*[b]	,154[b,c]	,009*[b,c]	,000*	,003*[b,c]	,014*

		County					
		Akobo	**Pibor**	**Aweil South**	**Tonj East**	**Tonj North**	**Tonj South**
		LHC_Final	LHC_Final	LHC_Final	LHC_Final	LHC_Final	LHC_Final
FC_group	Chi-square	7.555	6.527	5.942	15.493	16.844	21.913
	gl	8	6	8	8	8	6
	Sign	,478[a,b]	,367[a,b]	,654[a,b]	,050[a,b]	,032*[a,b]	,001*[a]

		A.05 County					
		Akobo	**Pibor**	**Aweil South**	**Tonj East**	**Tonj North**	**Tonj South**
		FC_group	FC_group	FC_group	FC_group	FC_group	FC_group
Household Hunger score	Chi-square	49.319	15.740	12.560	8.926	6.176	9.131
	gl	8	8	8	8	8	8
	Sign	,000*[b,c]	,046*[b,c]	,128[b,c]	,349[b,c]	,627[b,c]	,331[b,c]

		A.05 County					
		Akobo	**Pibor**	**Aweil South**	**Tonj East**	**Tonj North**	**Tonj South**
		HDDS with IPC cut-offs	HDDS with IPC cut-offs	HDDS with IPC cut-offs	HDDS with IPC cut-offs	HDDS with IPC cut-offs	HDDS with IPC cut-offs
Household Hunger score	Chi-square	25.321	17.710	15.973	18.833	10.698	4.961
	gl	8	8	8	8	8	8
	Sign	,001*[b,c]	,024*[b,c]	,043*[b,c]	,016*[,b,c]	,219[b,c]	,762[b,c]

		A.05 County					
		Akobo	**Pibor**	**Aweil South**	**Tonj East**	**Tonj North**	**Tonj South**
		HDDS with IPC cut-offs	HDDS with IPC cut-offs	HDDS with IPC cut-offs	HDDS with IPC cut-offs	HDDS with IPC cut-offs	HDDS with IPC cut-offs
LHC_Final	Chi-square	8.492	2.164	10.811	15.471	4.279	3.667
	gl	8	6	8	8	8	6
	Sign	,387[a,b]	,904[a]	,213[a,b]	,051[a,b]	,831[a,b]	,722[a]

		A.05 County					
		Akobo	**Pibor**	**Aweil South**	**Tonj East**	**Tonj North**	**Tonj South**
		Household Hunger score 3.0	Household Hunger score 3.0	Household Hunger score 3.0	Household Hunger score 3.0	Household Hunger score 3.0	Household Hunger score 3.0
LHC_Final	Chi-square	9.306	12.608	15.233	40.914	66.316	40.997
	gl	16	12	16	16	16	12
	Sign	,900[a,b]	,398[a,b]	,508[a,b]	,001[a,b,*]	,000*[a,b]	,000*[a,b,]

		A.05 County					
		Akobo	**Pibor**	**Aweil South**	**Tonj East**	**Tonj North**	**Tonj South**
		HDDS with IPC cut-offs	HDDS with IPC cut-offs	HDDS with IPC cut-offs	HDDS with IPC cut-offs	HDDS with IPC cut-offs	HDDS with IPC cut-offs
FCS	Chi-square	83.085	8.431	49.183	14.034	35.135	9.174
	gl	4	4	4	4	4	4
	Sign	,000*[,b]	,077[b,c]	,000*	,007*[b]	,000*[,b,c]	.057

Test chi-square di Pearson		A.05 County					
		Akobo	**Pibor**	**Aweil South**	**Tonj East**	**Tonj North**	**Tonj South**
		Household Hunger score 3.0	Household Hunger score 3.0	Household Hunger score 3.0	Household Hunger score 3.0	Household Hunger score 3.0	Household Hunger score 3.0
rCSI by 3.0 thresh-olds_ corrected	Chi-square	6.317	15.854	6.594	10.687	10.052	5.283
	gl	2	4	4	4	4	4
	Sign	,042*[b]	,003*[b,c]	,159[b,c]	,030*[b]	,040*[b,c]	.259

Test chi-square di Pearson		A.05 County					
		Akobo	**Pibor**	**Aweil South**	**Tonj East**	**Tonj North**	**Tonj South**
		LHC_Final	LHC_Final	LHC_Final	LHC_Final	LHC_Final	LHC_Final
rCSI by 3.0 thresh-olds_ corrected	Chi-square	13,471	4,002	5,643	49,221	19,293	45,077
	gl	4	6	8	8	8	6
	Sign	,009*[b]	,676[b,c]	,687[b,c]	,000*[b,c]	,013*[b,c]	,000*[b]

NUTRITION DATA QUALITY CHECKS

1. MUAC quality check of FSNMS data

Results by Payam after removing children <6 months of age, and blanks:				
Location	Total # children 6-59 months	Total # children with yellow MUAC	Total # childrenwith red MUAC	GAM based on MUAC
Verteth	20	5	0	25.0
Lekuangole	43	3	2	11.6
Pibor ayam	48	5	0	10.4
Gurumuk	31	7	2	29.0
Total	**142**	**20**	**4**	**16.9**

2. Summary results of mass MUAC screening in vaccination campaign:

Location	Target # children	Total # screened	Total # Red MUAC	SAM based on MUAC (%)	Total Yellow MUAC	MAM based on MUAC (%)	Total # children with oedema	SAM with Edema (%)	GAM based on MUAC (%)
Pibor payam	5405	4662	390	8.4	742	15.91	13	0.2	24.5
Verteth payam	1371	1384	109	7.9	221	15.96	3	0.3	24.1
Lekuangole Payam	4932	5018	390	7.8	628	12.51	8	0.1	20.4

3. Relationship between WHZ and MUAC based on historical SMART survey data:

Pibor, FSNMS							
FSNMS Round	MMM-YYYY	# clusters	# children	% WHZ (95%CI)	SD, WHZ	% MUAC (95%CI)	SD, MUAC
23	Sept/Oct-2018	9	161	25.5 (19.4-32.7)	1.33	12.8 (8.7-18.5 95)	11.7
24	July/Aug-2019	9	118	16.9 (11.2-24.7)	1.3	10.6 (6.2-17.1)	17.8
25	Sept/Oct-2019	9	195	11.8 (4-30.1)	1.02	7.4 (0.8-43.8)	10.9
26	Sept/Oct-2020	9	153	N/A	N/A	17.83	N/A

Pibor, SMART						
MMM-YYYY	# clusters	# children	% WHZ (95%CI)	SD, WHZ	% MUAC (95%CI)	SD, MUAC
Oct-2016	34	610	26.4 (21.6-31.8)	1.12	17.1 (12.3-23.3)	13.4
Oct-2017	37	704	26.8 (22.8-31.2)	1.15	9.4 (5.9-14.6)	11.1
May-2018	32	563	20.7 (17.0-25.0)	1.09	10.7 (8.2-13.7)	11.4
Nov-2018	38	533	20.8 (17.3-24.8)	1.1	13 (9.2-18.1)	12.4

IPC Integrated Food Security Phase Classification

Evidence and Standards for Better Food Security and Nutrition Decisions

IPC RESOURCE 01
ANNEX 3: Famine Classification

WHAT DOES THE IPC TECHNICAL MANUAL VERSION 3.0 SAY ABOUT FAMINE?

- Refer to pages 85 - 89 of the Manual 3.0.

WHAT DOES THIS RESOURCE ADD TO THE MANUAL?

- This document aims at providing more in-depth knowledge about Famine classifications, especially to the analysts and facilitators analysing a possible Famine situation. As a result, the document includes detailed guidance for use of the special additional protocols, and on evidence needed for Famine classifications. The Special additional protocols applied to all the four IPC Functions, and further explained in this document, are required for Famine classifications, in addition to all the regular IPC protocols that also need to be observed.

How is this Resource Organized?

- This guidance resource is organized into two Parts as follows:

Part I: IPC Famine Overview

- Definition
- Type of classifications
- Key challenges and limitations
- Analysis cycle

Part II: Special Protocols (tools and procedures organized by the four IPC Functions)

- Consensus Building
- Classify Severity & Identify Key drivers
- Communicate for Action

DISCLAIMER

The guidance is based on deliberations of the IPC Global Support Unit, the IPC Food Security and Nutrition Working Groups, the IPC Famine Review Committee, the IPC Technical Advisory Group, and the IPC Steering Committee as well as on famine related research and experiences and lessons learned by the IPC community on Famine classifications. This guidance is meant solely for the purposes of IPC Famine Classifications and cannot be considered as overall guidance for analysis of famine situations.

CONTACTS

For queries or to request support contact the IPC Global Support Unit at **info@ipcinfo.org**.

PART I: Overview of IPC Famine Analysis Parameters[1]

DEFINITION OF FAMINE

For the IPC, Famine exists in areas where **at least one in five households has or will most likely have an extreme deprivation of food. Starvation, death, destitution and Extremely Critical levels of acute malnutrition are or will likely be evident. Significant mortality, directly attributable to outright starvation or to the interaction of malnutrition and disease, is occurring or will likely be occurring.**

SEVERITY OF THE SITUATION FOR ANY FAMINE CLASSIFICATION

Famines are by definition situations where the current condition has already met the agreed famine thresholds for food consumption and livelihood change, acute malnutrition, and mortality or the projected situation is expected to meet these thresholds.

How severe is the situation?
Area has or will most likely have outcomes at or above Famine thresholds:
•≥ 20% households with highly inadequate food consumption;
•≥ 30% of children 6-59 months having Weight for Height Z-score below 2 standard deviations or having oedema;
•Crude death rate is ≥2 deaths per 10,000 people per day.

Famines can be classified in two ways depending on the quality and quantity of evidence available for classification. If evidence is adequate, areas can be classified as 'Famine'. If evidence is limited, but available evidence meets minimum parameters and the IPC consensus building and quality assurance functions are also completed, areas can be classified as 'Famine Likely'. These two ways to classify a famine in IPC pertain to both current and projection classifications.

Determining whether an analysis supports a classification of Famine or Famine Likely is solely a question of the quality and quantity of existing evidence; the severity of the situation(s) is expected to be the same. In summary:

- **Famine classification:** This classification can be made for current or future conditions when mortality, acute malnutrition, food deprivation, and livelihood collapse are verified by reliable evidence showing that they all exceed or are likely to exceed the Famine thresholds.
- **Famine Likely classification:** Famine is likely but cannot be confirmed due to limited evidence. This classification refers to situations when the available evidence exceeds (current period) or is expected to exceed (projected period) the famine thresholds. However, although some minimally acceptable evidence is available to assess Famine, the minimum criteria for Famine classification are not met.

The rationale for allowing Famine Likely classifications with less than optimal evidence derives from the humanitarian imperative coupled with practical constraints of data collection in situations where famine is suspected. The latest verified and suspected famines (e.g. Somalia 2011, Nigeria 2016 and South Sudan around 2016-2017) have all taken place in areas where humanitarian access for data collection and for delivery of assistance has been either restricted or non-existent, and as a result, the data available has not met the criteria for Famine classification. Based on these experiences, it has been concluded that famine situations can be reliably identified and classified through a robust analysis process using also inference of available data, even if some direct evidence is lacking, in order to inform urgent action.

If areas cannot be classified even as 'Famine Likely' based on the evidence available, areas can be classified in Phase 4 Emergency and populations in Phase 5 Catastrophe can be identified. Specific parameters for quality and quantity of evidence for famine classifications are presented as a special additional protocol in part 2 of this note and in the IPC Technical Manual Version 3.0.

[1] This resource is built on the content of the IPC Technical Manual Version 3.0, and while it further explains the protocols as identified in the Manual, it does not override any of its contents and should be used in addition to it.

DEATHS IN FAMINE

According to the IPC definition, areas are classified to be in Famine only when **substantial deaths have occurred due to lack of food consumption on its own or due to the interaction between inadequate food consumption and disease.** Although further deaths can and should be prevented by urgent action, these actions will be a late response as many would have died by this point. By classifying Famine as situations where mass deaths have already taken place due to starvation, the IPC Famine area classification is only applied to a situation that is an outcome of a sequential and causal series of events involving severe food deficits, acute malnutrition and the final expression of deaths.

The IPC acknowledges that other definitions of famine have been discussed elsewhere with different interpretations on what defines a famine. For example, Devereux (Famine in the Twentieth Century - IDS Working Paper 105) has highlighted that mass starvation and deaths are only one possible outcome of the famine process and that other outcomes include fertility decline, economic destitution, community breakdown, distress migration and exposure to new disease vectors. Devereux also highlighted that deaths during famine are more related to epidemic diseases than starvation and thus famines that are classified depending on deaths will more often than not highlight mainly situations where epidemic diseases are playing a significant role. As such, in accordance with Devereux, famines could be classified even without widespread deaths, thus allowing situations with extreme food gaps, displacement, and total collapse of livelihoods and high acute malnutrition to constitute a famine. Although the IPC acknowledges these views, the view endorsed by the IPC, whereby widespread deaths are already occurring in a famine situation, has been adopted to differentiate Phase 4 from Phase 5, and to call attention to the catastrophic situation of famines, ensuring that the classification of Phase 5 Famine carries on being a rare and extreme situation. However, the IPC does recognize the extreme severity of the situations described above and when possible classifies them up to Phase 5 depending on evidence available.

PHASE 5 VS. PHASE 4

Although IPC acute food insecurity Phase 5 Famine reflects a failed situation where widespread deaths and malnutrition have been observed, it should be noted that IPC Phase 4 Emergency is an extremely severe situation where urgent assistance is needed in order to save lives and livelihoods.

Phase 4 situations are typically caused by multifaceted, severe shocks in areas where households have increased vulnerability to food insecurity due to, for example, recurrent shocks and erosion of assets, or an overall weak livelihood base and generalised poverty. Households in Phase 4 areas are often characterised by rapid loss of livelihoods and livelihood assets, and very inadequate food consumption. This situation may lead also to increased mortality and high levels of acute malnutrition, but this is not always the case. Households can have highly inadequate food consumption and/or emergency level livelihood coping, without the situation translating at least in the short term into acute malnutrition and mortality. This is also reflected in the description of Phase 4, which states that an area should be classified in Phase 4 in one of the two cases: high food gaps are reflected in high malnutrition and mortality or households mitigate food gaps but use emergency-level livelihood coping strategies to do so.

Whether all or only some outcomes are manifested depends e.g. on household resilience and social networks, baseline levels of malnutrition and mortality, and on potential presence of different mitigating factors, such as functioning health care systems or provision of assistance. Depending on the seriousness of livelihood loss and inadequacy of food consumption, some household groups (adding up to less than 20%) may face a Phase 5 situation and are therefore classified in Phase 5 Catastrophe, even if the overall area Phase is 4. It is not necessary for the households in Phase 5 Catastrophe to exhibit high levels of malnutrition or mortality, even if it is likely that at least some of them do.

Phase 4 communication should emphasise the urgency of the situation, and the necessity to act immediately to save depleted livelihoods, and to prevent excess loss of lives. In case some households/household groups are estimated to be in Phase 5 whereas the area is in Phase 4, there is a need to highlight the existence of households in Phase 5, and the imperative to reach them with assistance as soon as possible in order to prevent the deterioration of the situation into a famine.

Areas with Phase 5 classifications exhibit many of the same characteristics as areas in Phase 4 in terms of underlying vulnerability and complex shocks. The difference is that all four outcomes manifest a Phase 5 level of severity, including acute malnutrition and mortality. As discussed above, individual households in Phase 5 may or may not exhibit high levels of acute malnutrition and mortality, but it is imperative that at the area level, malnutrition and mortality levels do meet the Phase 5 thresholds. In addition, Phase 5 situations are typically characterised by e.g. large market anomalies (large price increases or collapse of markets), mass migration, breakdown of social networks, and widespread destitution, seen for instance in increased rates of households resorting to begging. Typically, presence of humanitarian assistance is also either very limited or non-existent.

PHASE 5 FAMINE (AREA CLASSIFICATION) VS. PHASE 5 CATASTROPHE (HOUSEHOLD CLASSIFICATION)

As discussed above, the IPC allows **households to be classified in Phase 5 Catastrophe even if areas are not classified as Phase 5 Famine.** This means that in some cases, areas can be classified in Phase 4, because more than 20% of the population is in Phase 4 and 5 and include populations in Phase 5. Households may be in IPC AFI Phase 5 Catastrophe, but the area may not be classified as IPC AFI Phase 5 Famine if widespread deaths and acute malnutrition have not yet been expressed at the area level, either because the population facing Catastrophe is smaller than 20% of the population, because of a relatively limited geographical coverage of the dire situation, or because of the natural time delay expected between food deprivation and collapse of livelihoods, and the consequential increase in acute malnutrition levels and death rates.

The classification of households into Phase 5 Catastrophe is done independently of prevalence of acute malnutrition and death rates and is solely based on analysis of food consumption, livelihood change, and contributing factors to food insecurity. In IPC AFI Phase 5 Catastrophe, households are expected to have extreme lack of food and/or other basic needs, even with full employment of coping strategies. By highlighting the existence of households in IPC AFI Catastrophe, the IPC intends to guide the humanitarian community in preventing even more widespread famine by identifying the need for prompt action.

SPECIAL ADDITIONAL PROTOCOLS FOR FAMINE CLASSIFICATIONS

For Famine classifications, including both Famine and Famine Likely classifications, there are additional protocols that need to be followed, further to the standard protocols included in IPC Manual 3.0. The next part of this resource provides guidance and best practices for IPC Famine classification through these additional protocols that apply to Phase 5 classifications.

Table 1. Additional protocols for Phase 5 classifications

IPC Function	Purpose	Standard Protocols for any IPC classification	Additional Protocols for Phase 5 classifications
I. Build Technical Consensus	To enable technical consensus among multi-sectoral experts.	1.1 Compose the analysis team with relevant sectors and organizations. 1.2 Conduct the analysis on a consensual basis.	1.3 Ensure presence of additional experts
II. Classify Severity and Identify Key Drivers	To critically analyse complex information, classify areas in severity categories, estimate magnitude, and identify key drivers and characteristics of the condition.	2.1 Use Analytical Frameworks to guide convergence of evidence. 2.2 Compare evidence against the Reference Tables. 2.3 Adhere to parameters for analysis. 2.4 Evaluate evidence reliability. 2.5 Meet minimum evidence and analysis requirements. 2.6 Methodically document evidence and analysis and provide them upon request.	2.7 Analysis parameters 2.8 Meet minimum evidence requirement for classification of: 2.8.1 Famine 2.8.2 Famine Likely 2.9 Conduct methodical inference of evidence 2.10 Meet minimum evidence requirements for: 2.10.1 Famine 2.10.2 Famine Likely 2.11 Adhere to special protocols for evidence requirements for areas with no or limited humanitarian access
III. Communicate for Action	To communicate core aspects of the situation in a consistent, accessible and timely manner.	3.1 Produce the IPC Analysis Report. 3.2 Adhere to mapping standards. 3.3 Strategically share communication products in a timely manner.	3.4 Famine communication 3.5 Famine analysis report 3.6 Famine mapping protocols
IV. Quality Assurance	To ensure technical rigour, neutrality and self-learning for future improvements.	4.1 Conduct a self-assessment of the analysis. 4.2 Request and engage in an external quality review if necessary.	4.3 FRC preparation 4.4 FRC

PART II: Special Protocols for Famine Classification

SPECIAL PROTOCOLS FOR FUNCTION 1

1.3: Ensure presence of additional experts

When a Famine classification is being considered, it is essential to make sure that the analysis team includes the following members:

- **Analysts with experience in classifying Famine using the IPC Protocols.** Ideally, the analysis team should be supported by analysts who have been directly involved in Famine classifications or supported such analysis.
- **Food security experts and nutritionists;** and ideally, communication experts and analysts with advanced knowledge in analysing mortality data. Additionally, given the high profile of the classification, it is strongly advised that global and regional experts are invited to support the analysis.

It is essential that the in-country IPC Technical Working Group (TWG) has real-time advice from experts professionally trained in the analysis of mortality data during any IPC activity that assesses the likelihood of Famine to ensure methodological rigor of analysis and interpretation of the Crude Death Rate (CDR) and the Under-5 Death rate (U5DR). Although best practice would be to include mortality experts, i.e. analysts who have experience in analyzing mortality data, in the country TWG, whenever this is not possible, the country team should seek external support from mortality experts through the IPC Global Support Unit and/or IPC Global Partnership.

SPECIAL PROTOCOLS FOR FUNCTION 2

2.7 Analysis Parameters for Famine Classification

a **Minimum population size for classification:** Any population sub-groups or areas with at least 10,000 people can be classified in Famine or Famine Likely for current or projected time periods if the minimum evidence parameters are met for the specific population sub-groups or areas. Examples of sub-groups or areas include Internally Displaced Persons (IDPs), IDP camps, and affected areas. The classification of sub-groups or sub-areas may be especially important if populations are thought to be in IPC Phase 5 Catastrophe.

b **Evidence availability defines if an area can be classified as Famine or Famine Likely:** IPC evidence level criteria for famine classification identify minimum requirements for two distinct levels: Famine and Famine Likely classification. Independent of the existence and quality of evidence to be used in the classification, the existing evidence, including the inference of evidence through critical review, needs to indicate that the severity thresholds assigned for Famine situations have been met or are likely to be met.

c **Crude Death Rate (CDR) needs to be directly attributable to outright starvation or to the interaction of food consumption deficits and disease.** The following guidance is provided on the use of death rates in the classification of Famines:

- **Deaths due to trauma should not be included** in the calculation of Crude Death Rates (CDR) or in Under 5 Death Rates (U5DR) when this evidence will be used to support classification of Famine. All other causes of deaths should be included in the calculation of CDR and U5DR.
- **A mathematical subtraction of deaths caused by trauma from total deaths** should be done whenever information on number of deaths caused by trauma is available.
- **If information on number of deaths caused by trauma is not available, analysts should carefully review the mortality data to determine to what extent the CDR and U5DR are likely to have been impacted by traumatic causes.** One helpful analysis may be a comparison between the ratio of U5DR and CDR to see whether or not the deaths among children under five are disproportionately higher, which can indicate that the potential causes are non-trauma related. This analysis is based on the widely agreed assumption that in normal circumstances, U5DR is expected to be roughly twice that of CDR. When comparing U5DR and CDR based on general assumptions under normal circumstances, analysts should exert caution as the actual ratio may depend on the severity and the stage of the famine as well as the disease epidemiology, social factors and micronutrient deficiencies. Furthermore, contributing factors, such as extent of conflict and natural disasters, should also be taken into account when assessing the impact of traumatic deaths in total CDR and U5DR.

d **Current classification** refers to the classification of the ongoing situation in Phase 5, either in Famine Likely or in Famine depending on the evidence available. Minimum evidence requirements for current classifications of Famine and Famine Likely are included in Tables 4 and 5 below. Typically, famine situations are quite volatile, and the peak of famine lasts only for a few months. As such it may be advisable to keep the validity period of the analysis relatively short.

e **Projection classification** can be conducted both for Famine and Famine Likely. This classification can take place in two situations: 1) The current classification is Famine or Famine Likely, and the analysts conclude that the severity of the situation is most likely going to remain the same during the projection period, or 2) the current classification is e.g. Phase 3 or 4, and the analysts conclude that the situation is most likely going to deteriorate to Phase 5 in the projection period. When projecting Phase 5, the analysts have to show through critical analysis that malnutrition and mortality are likely to be above the Phase 5 cut-offs in the projection period, and that the situation is likely to be characterised by widespread food deprivation and destitution. Tables 4 and 5 provide the minimum requirements for the projected classification of Phase 5. Alternatively, if analysts are not confident that the area will be in Famine or Famine Likely in the projection period, they can also allocate <20% of households in Phase 5 Catastrophe to draw attention to the extremely serious food security and nutrition situation, even if the area itself does not receive a Phase 5 classification.

f **Retrospective classification:** as noted also elsewhere in this document, data collection in famine situations is often difficult due to access limitations, increased mobility of households, and focus on assistance delivery rather than on data collection. As a result, the true severity of the situation may become apparent only after the peak of the famine has already passed, and all the available data is compiled and reviewed. In these cases, retrospective analysis and classification of the food security situation may be conducted, as it may provide lessons learned and useful information for decision-making in order to prevent similar situations from occurring in the future.

2.8 Meet evidence parameters for:

Availability of evidence defines if classification is Famine or Famine Likely as follows:

2. 8.1 Famine

For Famine classification, direct reliable evidence is needed for all three outcomes. Table 2 below provides details on evidence requirements.

Table 2. Direct evidence allowed for Famine classifications

Outcome 1: Food consumption & livelihood change	Outcome 2: Nutritional status	Outcome 3: Mortality[2]
Food consumption and livelihood change indicators included in the IPC Acute Food Security Reference Table: • Ideally, direct evidence should exist on indicators that have a cut-off for Phase 5, such as HHS and HEA. • Direct reliable evidence should be collected from at least 25 clusters in the analysis area within the season of analysis. • In case direct reliable evidence is available on nutritional status and mortality, it is also possible to use inference of indirect evidence to conclude on the food consumption and livelihood change situation. Parameter 2.9 below provides further details on the use of inference.	**GAM based on WHZ:** • Evidence on WHZ must come from - Cluster surveys with ≥25 clusters and ≥225 observations - Simple or systematic surveys with ≥150 observations. • Evidence must come from the same season of analysis, when there is seasonality, and from the previous 12 months if there is no seasonality or significant shocks.	**CDR or U5DR:** • Evidence on CDR and/or U5DR must come from - Cluster surveys with ≥25 clusters and 645 households[3] - Simple or systematic surveys with ≥430 observations. • The recommended recall period for mortality evidence is around 90 days.
Evidence must be reviewed and accepted by the Famine Review Committee.[4]		

2.8.2 Famine Likely

If evidence requirements for Famine classification cannot be met, the IPC Famine Likely classification can be conducted, provided that minimum evidence requirements specified in Table 5 are met. Furthermore, direct evidence that scores less than R1 can and should be used to support Famine and Famine likely classifications. However, other evidence allowed can only be used if they meet the minimum requirements as stated in Table 3. It should also be noted that any other evidence, including somewhat reliable direct evidence used in the analysis, cannot override reliable direct evidence available on the situation.

[2] The IPC acknowledges the ongoing efforts to validate rapid assessments using key informant and household data to estimate mortality rates. The IPC is committed to reviewing this guidance note in light of the validation results once they become available.

[3] The sample size is based on the CDR of 2/10,000/day, precision of 0.6, recall period of 93 days, and design effect of 1.5. The same parameters (except design effect) were also used to calculate the minimum sample size of simple and systematic surveys.

[4] Standardized plausibility checks should be conducted for nutrition and mortality evidence. Plausibility checks (with penalty scores) are included in ENA for SMART software for data on WHZ, and guidance for verifying the plausibility of mortality data is also included (without any penalty scores) in the software.

Table 3. Other evidence allowed for Famine Likely classifications

Outcome 1: Food consumption & livelihood change	Outcome 2: Nutritional status	Outcome 3: Mortality[5]
Inference of outcomes: Any relevant evidence on outcomes or contributing factors: • A combined analytical approach using calibration of local evidence which do not have global cut-offs included in the Reference Table; extrapolation across time and space; and causal pathways/ interpretation of contributing factors (at least two out of three methods). • Include reference to at least four pieces of somewhat reliable (R1) indirect evidence collected during the same season of analysis, or during a period of six months prior to the analysis. • Methodical and well documented analysis demonstrating the use of the methods for inference. • A list of potential indicators with indicative thresholds not provided as indirect evidence by definition lack international thresholds and need contextualization.	**GAM based on MUAC from representative surveys of good method:** Disaggregated surveys representative at a higher administrative unit: • Evidence must add to at least 5 sites and 100 observations from the same season of analysis. Surveys of similar areas • Evidence must come from the same season of analysis. Recent surveys • Inferred estimates of evidence collected within the last 6 months but not from the same season of analysis (12 months for areas with no seasonality). Historical evidence • Evidence must have been collected during the same season of analysis from at least 2 similar years in the last 5 years.	**CDR or U5DR from representative surveys of good method:** Surveys of similar areas • Evidence must come from the same season of analysis. Recent surveys • Inferred estimates of evidence collected within the last 6 months but not from the same season of analysis (12 months for areas with no seasonality). Historical evidence • Evidence must have been collected during the same season of analysis from at least 2 similar years in the last 5 years. **CDR or U5DR from functioning monitoring systems including:** • Hospital records, community-based surveillance systems and vital registration records.
Evidence must be reviewed and accepted by the Famine Review Committee.		

2.9 Conduct methodical inference of evidence when nowcasting or projecting food consumption and livelihood change

Analysing:

- Indirect evidence on outcomes and direct evidence of a reliability lower than R1, for example, evidence on HHS collected from a small sample, or anecdotal evidence on extreme coping measures employed from key informants.
- Evidence on contributing factors, indirect evidence and direct evidence of R0 should not be used on its own to conclude on food consumption and livelihood change, but rather through inference, considering the three ways endorsed by the partnership, i.e. calibration, extrapolation and interpretation/causal pathway. Use of two (preferably all three) of these with available evidence is required.
- Inference of available evidence for nowcasting or projecting the situation constitute one piece of indirect evidence for food consumption and livelihood outcomes allowed for Famine or Famine Likely classifications.
- Use of inference is recommended for all analyses and required when reliable (for Famine classification) or somewhat reliable (for Famine Likely classification) direct evidence is not available for food consumption and livelihood change.
- Inference analysis must be documented, and the individual pieces of evidence on contributing factors used for inference can also be taken into consideration as data on contributing factors to reach the minimum evidence level.
- Evidence gathered through qualitative methods, such as focus group discussions or key informants can be considered somewhat reliable (R1) if collected with standard methodology, but does not constitute direct evidence on its own.
- As much as possible and whenever baselines are available, analysts should attempt to use the HEA approach as an input to IPC analysis already prior to the workshop, in order to share analysis results for classification purposes. Assumptions used regarding expected changes and forecasts concerning e.g. seasonality, prices and humanitarian assistance need to be documented, as well as all the other evidence used in the analysis and the conclusions reached.
- General principles of inference include contextualisation of evidence and analysis, identification of most suitable indicators for example through reference to other famine situations or review of locally specific indicators.

- **Calibration** of indicators not in the Reference Table
- **Extrapolation** over time and space
- **Interpretation** of contributing factors within their context

[5] The IPC acknowledges the ongoing efforts to validate rapid assessments using key informant and household data to estimate mortality rates. The IPC is committed to reviewing this guidance note in light of the validation results once they become available.

Calibration is conducted by approximating indicators not included in the IPC Acute Reference Table to the Phases of the Reference Table. The indicators that can typically be calibrated inform on food consumption or livelihood change of households and as a result, their results can be compared against the Phase descriptions or potentially even against the cut-offs of direct evidence. A list of potential indicators to use for assessing whether the situation meets Phase 5 criteria is included below. The list is non-exhaustive and other e.g. locally specific indicators can also be used.

Potential indicators to use for calibration/correlation include:

- Number of meals (0-1 meals per day for adults and for children)
- Intra-household food distribution (certain household members sacrificing their food consumption for the benefit of other members).
- Food items consumed (e.g. consumption limited to wild foods only)
- Consumption of locally specified 'famine' foods (with adverse effects on food assimilation/nutrition)
- Engagement in dangerous or detrimental coping strategies to access food (e.g. passing through dangerous areas in order to access food, at risk of being physically harmed or even killed)
- Large-scale displacement caused by lack of access to food and livelihood collapse
- Lack of displacement in case of populations that are unable to move due to conflict or natural disaster
- Large-scale dependence on aid, social networks and handouts for food

Examples of calibration/correlation:

- Large-scale displacement: during the Somalia 2011 famine, over 200,000 people migrated to Dadaab refugee camp in Kenya and to Dollo Ado camp in Ethiopia from the affected areas. Large-scale distress migration is indicative of exhaustion of other coping mechanisms and a sign of a potential Phase 5 situation.
- Food items consumed: in Northern Nigeria, in 2016, extreme lack of food forced households to boil dry goat skins for food.
- Extreme consumption of wild foods: the famine around 1995 in North Korea forced households to eat all possible wild foods. For example, birds and other animals were hunted to extinction, and people reportedly consumed also grass and tree bark.
- Destitution and dependency on food handouts: during the Ethiopia famine in the 1970s, roadside destitution became commonplace. In early 1973, sick and hungry people were lining parts of the north-south highway in Wollo (epicenter of the famine), stopping vehicles to beg for food.

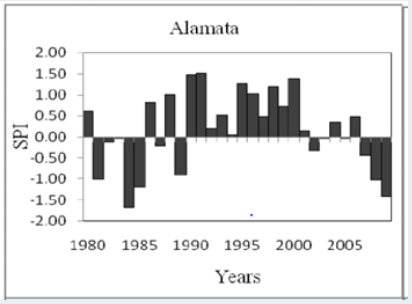
Extrapolation refers to inference of direct or indirect evidence over space or time. This requires assessing historical trends of evidence, comparing current/projected situation to past situations and estimating whether the current/projected situation is likely to meet the Phase 5 criteria. Extrapolation over space focuses on assessing the situation e.g. in neighbouring areas, or in other areas in similar situations, and seeing how this can help to strengthen the analysis for the area in question, in order to confirm or deny the existence of a Famine/Famine Likely -situation.

Example of extrapolation:

- Famine in Northern Ethiopia (especially northern Wollo and Tigray) in the 1980s was a consequence of different factors, one of which was a series of failed rainfall seasons. Affected households experienced one crop failure after another, leading to erosion of assets, coping capacity and food access and culminating in a famine, especially between 1983 and 1985. Analysis of historical trend data helps in assessing the seriousness of the deteriorating trend in key indicators, such as precipitation and market prices.

	E. Tigray	N. Wollo	N. Begemder
November/December 1981	100	50	40
November/December 1982	165	65	55
November/December 1983	225	90	45
November/December 1984	300	160	70
June/July 1985	380	235	165

Average grain prices in Northern Ethiopia (birr per quintal, 100 kg) (Alex de Waal, 2002)



Standardized time series plot of annual rainfall totals in Alamata, Tigray over the period from 1980 to 2009 (Hagdu, 2013)

Interpretation/causal pathway should be based on the IPC Analytical Framework (or other suitable approach) that can support systematic and logical analysis of food security evidence. Interpretation/causal pathway is used to take individual pieces of evidence on contributing factors and to carefully analyse them to deduce the likely severity of the food security outcomes, in this case that of food consumption and livelihood change. For example, the following typical drivers of a famine situation should be considered: conflict, precipitation, macroeconomic situation, crop and livestock production, terms of trade, market prices, large-scale loss of livestock, loss of typical income and food sources, etc. Other questions worth examining are existence (or possible collapse) of social networks and levels of humanitarian food assistance (especially sudden interruptions in situations where humanitarian food assistance is a significant food source).

Examples of interpretation/causal pathway:

- Drastic negative changes in terms of trade (ToT) were observed between June 2010 and June 2011 in Southern Somalia: e.g. ToT between labour and sorghum decreased by 75% and that of goat and sorghum by 83% in Baidoa. As it was also known that households typically relied on casual labour and livestock sales for their income, and that prices of staple food items had increased substantially, it was possible to conclude that a large share of households was not able to procure enough food at the markets to meet their food needs, leading to large food gaps.
- Exceedingly high prices of rice, the main staple food item, and subsequent large-scale flooding decimating new rice crops and leading to further price increases contributed heavily to the Bangladesh famine in 1974. Government policies restricting movement of food stocks between districts, speculative hoarding of rice by traders and better-off households, corruption, and withholding of expected food aid by the US (for political reasons) led to extremely high rice prices and severely restricted access to food, especially for those who were market dependent, i.e. daily labourers and landless households. This led to severe food deficits at household level that were further exacerbated by the failure of the next rice harvest due to large-scale flooding.
- In Bor (which at the time was still Sudan), subsequent shocks of flooding, animal disease epidemics and tribal fighting including cattle raiding led to the total loss of cattle between 1991 and 1993. Since livestock was the main source of livelihood to households, lack of access to cattle meant widespread lack of access to food and income, leading by early 1993 to extreme food gaps and famine.

2.10. Meet minimum evidence requirements for:

2.10.1. Famine Classification

For Famine Classification, at least three pieces of direct and reliable[6] evidence are needed, one piece each for acute malnutrition, mortality, and for food consumption or livelihood change, with all of them at or above Famine threshold levels either currently or likely to be at or above the levels in the projected period. However, if reliable direct evidence is only available for mortality and acute malnutrition, but not for food consumption or livelihood change (FC or LC) outcomes, a classification of Famine can still be done, provided that analysts document the analytical process of inference for FC or LC from at least 4 pieces of somewhat reliable direct or indirect evidence on outcomes and/or contributing factors, indicating that at least 20% of households are in IPC AFI Household Phase 5 Catastrophe. Especially in these cases, it is crucial to ensure that the analysis team includes experts with an excellent understanding of the local food security context, and highly capable experts in analysis of food consumption and livelihood change. Famine can be projected even if current evidence is below the Famine thresholds for any or all outcomes, if it is justified that the current levels will exceed Famine thresholds for all outcomes during the projection period in the most likely scenario. To inform a projection of Famine, it is crucial to ensure that indicators that provide warning signals, such as those that show extreme gaps in food consumption, livelihood collapse, child malnutrition and deaths among children are well analysed to support an assessment of the likely levels of GAM, CDR and FC & LC in the future period, thus ensuring that a potential Famine projection is not missed.

[6] Evidence Reliability Assessment is discussed in detail in Section II of the IPC Resources.

Table 4. Minimum Evidence Requirements for IPC Famine Classifications

Classification	Current	Projection
	Documented analysis with the following minimum evidence:	
Famine	1) The three outcomes with R2 direct evidence + 2) Four other pieces of R1 (+ or -) evidence, with at least two of those from the season of analysis *Note: In exceptional case where reliable evidence is available on acute malnutrition (GAM based on WHZ) and mortality, but no reliable direct evidence is available on food consumption or livelihood change, Famine may still be classified if food consumption or livelihood change outcomes are inferred to be at the level of IPC AFI Phase 5 Catastrophe (based on somewhat reliable or reliable evidence on contributing factors).*	1) IPC Current adhering to Evidence Level for Famine classification[7] + 2) Evidence used for current classification can be at most 12 months old at the end of projection period + 3) Four pieces of R1 evidence presented with clear assumptions on forecasted trends

2.10.1. Famine Likely Classification

If evidence requirements for Famine cannot be met, **Famine Likely can be classified if at least two pieces of somewhat reliable, direct or other evidence for two of the three outcomes is available.** In order to classify Famine Likely for the current situation, all available evidence needs to be above Famine thresholds. As for Famine, Famine Likely conditions can be projected even if the current evidence is below the Famine thresholds for any or all the outcomes, as long as it is justified that the current levels will exceed Famine thresholds during the projection period in the most likely scenario.

More details on the guidance on evidence for Famine Likely classifications are available in Table 5 below.

Table 5. Minimum Evidence Requirements for IPC Famine Likely Classifications

Classification	Current	Projection
	Documented analysis with the following minimum evidence:	
Famine Likely	1) At least two outcomes with R1 (+ or -) direct evidence or other evidence allowed for Famine Likely classifications + 2) Four other pieces of R1 (+ or -) evidence, with at least two of those from the season of analysis	1) IPC Current adhering to Evidence Level for Famine Likely classification[7] + 2) Evidence used for current classification can be at most 12 months old at the end of projection period + 3) Four pieces of R1 evidence presented with clear assumptions on forecasted trends

There may also be situations where the analysts have partial evidence of a famine situation, but not enough to classify the area in Famine Likely. In these cases, the analysts can refer their analysis and the available evidence to the IPC Famine Review Committee. The Committee will provide their own expert opinion on the situation and conclude whether the situation merits a Famine Likely classification.

2.11 Adhere to special protocols for evidence requirements when classifying areas with limited or no humanitarian access to collect evidence

For areas where humanitarian access is either limited or non-existent, the evidence requirements for Phase 5 classifications are somewhat different regarding evidence reliability and the number of pieces of evidence required for classification. The minimum evidence requirements for Famine classifications in areas with limited or no access are included in the table below. Specific guidance for data collection has been developed for areas with limited or no access (please refer to the corresponding section in the IPC Resources for this guidance).

[7] Famine and Famine Likely can be projected even if no Phase 5 classification is reached for the current analysis period. In these cases, the amount and reliability of evidence used to classify the current situation need to correspond to the criteria included in Evidence Levels of Famine and Famine Likely.

Table 6. Minimum evidence requirements for IPC Famine classifications in areas with no or limited access

Classification	Current	Projection
	Documented analysis with the following minimum evidence:	
Famine	1) The three outcomes, each with one piece of direct R0 evidence + 2) Two other pieces of R1 evidence on contributing factors or outcome elements	1) IPC Current adhering to evidence level with limited humanitarian access + 2) Evidence used for current classification at most 12 months old at the end of the projection period + 3) Four pieces of R1 evidence presented with clear assumptions on forecasted trends
Famine Likely	1) Two outcomes, each with one piece of direct R0 evidence + 2) Two other pieces of R1 evidence on contributing factors or outcome elements	1) IPC Current adhering to evidence level with limited humanitarian access + 2) Evidence used for current classification at most 12 months old at the end of the projection period + 3) Four pieces of R1 evidence presented with clear assumptions on forecasted trends

For Famine and Famine Likely classifications in exceptional circumstances of limited or no humanitarian access[8], less than somewhat reliable evidence (R0) is accepted, given it follows the IPC Parameters stipulated in IPC Manual 3.0. To exceptionally classify areas with limited or no humanitarian access to collect reliable evidence, analysts need to converge less than somewhat reliable available evidence for mortality, acute malnutrition and food consumption & livelihood change.

Areas where IPC Analyses do not meet the minimum parameters specified in this section cannot be classified in Famine or in Famine Likely. Nevertheless, populations of households can still be classified as IPC AFI Household Phase 5 Catastrophe following existing guidance on IPC Evidence Levels.

Note on data collection in the context of conflict and migration

In many contexts, famines are typically caused by complex emergencies, where conflict is a key factor. Due to conflict, access to areas potentially affected by a famine may be limited, and there may be large obstacles to data collection that would allow confirming famine beyond reasonable doubt.

Furthermore, famines are typically accompanied by large-scale migration. This together with conflict makes it difficult to collect necessary data in general, but in particular reliable data on mortality, households may not know what has happened to their family members, and even if they are aware of deaths they may be unable to say when the deaths occurred or what was the approximate cause of death (trauma or non-trauma -related). Additionally, deaths may have happened during migration and it may be difficult to associate these deaths to a specific area for area classification purposes. Increased mobility of households is also likely to hamper any efforts to estimate the number of people experiencing IPC AFI Phase 5 conditions in the analysis area.

[8] **Exceptional circumstances of limited or no humanitarian access** refers to the persistent lack of humanitarian access that has been verified by the RTQR team based on justification provided by the country IPC TWG. Typically, in these situations, humanitarian actors have no consistent presence in the area, and humanitarian access is limited to only some parts of a larger area. Famines often occur in areas where there is little or no humanitarian access. Lack of humanitarian access does not only mean that famine is more likely to happen, as populations do not receive aid, but also that it is not possible to collect systematically data on the food security and nutrition situation in the affected area. In some situations, lack of access may mean that there is access to distribute aid, but no access to collect (reliable) data. Examples of situations with no or limited humanitarian access: South Sudan counties Leer and Koch in 2016-2017 with no humanitarian presence, population scattered on islands that were difficult to reach, with humanitarian missions limited to a few hours at a time; Borno state in Northern Nigeria in 2016-2017 where part of the area was accessible to humanitarian actors whereas some areas were totally inaccessible due to insecurity and humanitarian presence was limited to some accessible areas; and Southern Somalia in 2011 where many districts were inaccessible to humanitarian actors due to a decision and action taken by armed groups to prevent access and aid to drought-affected areas.

SPECIAL PROTOCOLS FOR FUNCTION 3

For the purpose of communication, the two classifications of IPC Phase 5 Famine fall within two main statements consisting of specific communication messages and mapping requirements.

1 **Famine Classification is used when areas, sub-areas or sub-groups with a population of more than 10,000 people are classified in IPC Phase 5 and famine is currently happening or will happen.** Communications should focus on the actual and/or projected famine conditions for these area(s) and people within the area(s), and related implications. The area(s) should be colored using the color for IPC Phase 5.

2 **Famine Likely** is used for communicating the classification of area(s) in IPC Phase 5, but there is some uncertainty about the occurrence of famine due to the use of less than reliable evidence. Communication should focus on the high likelihood that famine is either happening or will happen within the specified timeframe. Areas in Famine Likely should be coloured as indicated in Table 4 below.

The table below shows how the IPC Phase 5 Famine classifications should be communicated and mapped.

Table 7. IPC Famine Communication and Mapping protocols

IPC Famine Classification	IPC Famine Communication		IPC Famine Mapping Protocols	
	Statement	Key Message	Map	Legend
IPC Phase 5 Famine Current or Projected	Famine classification[9]	**Current** Famine is classified for an area and xxx people in the area are facing catastrophic conditions (even if humanitarian assistance has been or is being delivered). **Projected** There are concrete indications that the area will be facing Famine from xx to xx and xxx people will face catastrophic conditions in absence of humanitarian assistance.		**Famine:** IPC Phase 5 **Famine Projected:** IPC Phase 5
Famine Likely[10] Current or Projected	Famine is likely but cannot be confirmed	**Current** Famine is most likely happening, but limited evidence does not allow its confirmation. xxx people are likely to be facing catastrophic conditions (even if humanitarian assistance has been or is being delivered). **Projected** Famine is likely to happen, but limited evidence does not allow its confirmation. xxx people will likely face catastrophic conditions in absence of humanitarian assistance.		**Famine Likely: Famine is likely but cannot be confirmed.** IPC Phase 5 Famine is likely happening/ will happen, but limited evidence does not allow confirmation

SPECIAL PROCEDURES AND COMMUNICATION REQUIREMENTS

- In addition to the IPC standard communication brief describing the overall situation in a country/region, **the development of an ad-hoc product, namely the IPC Famine Alert is required to highlight the situation in areas classified in Famine or Famine Likely.** This provides a clear and concise explanation of the situation for the area(s) in question, considering the essential information indicated in point 3 below;
- To this purpose, in addition to the national/regional map included in the IPC standard communication brief, **the development of separate map(s) only for the area(s) in Famine and Famine Likely** is required. The maps should include the famine-specific legend that should be used in both the IPC country/regional communication brief and special alert. Furthermore, if the area classified has limited or no humanitarian access, a specific mapping protocol to indicate the lack of access should be used.
- In case of a Famine and Famine Likely classification, it is essential to provide **specific information/key messages** indicated below in both the IPC standard communication brief and alert:

[9] Famine classification refers to the area level classification, where at least 20% of the population is experiencing extreme food deprivation and livelihood collapse, more than 30% acute malnutrition rate (GAM by WHZ) and a mortality rate that surpasses 2 persons per day per 10,000 people.

[10] Limited Evidence refers to situations where there is evidence pointing at famine conditions, but the amount of evidence on different outcomes is not sufficient, or the reliability of the evidence is not high enough for a famine classification.

- ~ With regards to the Famine, it is necessary to 1) clearly indicate the areas where famine is occurring; 2) indicate the evidence showing the famine occurrence such as level of acute malnutrition, mortality, extremely poor or no food consumption or complete livelihood disruption; 3) clearly indicate the main data and sources used to get to that conclusion; and 4) include clearly the time-frame of the famine occurrence. With regard to Famine Likely scenarios, it is essential to 1) state why the area is classified as Famine Likely and no Famine is classified (i.e. because of limited evidence); 2) highlight the evidence supporting warning signals, such as those indicating extreme gaps in food consumption, livelihood collapse, child malnutrition and deaths; 3) specify that the classification is based on limited evidence, but that all available evidence shows that a Famine is likely happening or will likely happen; 4) clearly indicate main data and sources used to get to that conclusion; and 5) indicate the related time-frame.
- ~ The quality and reliability of evidence used, highlighting the issues with data quality and availability, especially due to no or limited humanitarian access if relevant, and related implications. Especially in case of areas under exceptional circumstances of limited or no humanitarian access, it should be clearly highlighted in the text that the classification was done with limited evidence, due to lack of access to collect reliable evidence, and thus classification needs to be confirmed as soon as there is access to collect better evidence;
- ~ Date/time for the next analysis as well as any monitoring plan in order to indicate when an update on the situation may be available.

Communication of IPC Phase 5 Famine vs. Catastrophe

The existence of households in IPC Phase 5 Catastrophe especially when areas have not been classified as IPC Phase 5 Famine should be highlighted as immediate response is crucial. By highlighting the existence of households in Catastrophe, the humanitarian community may be able to prevent an increased risk of famine if prompt action is taken. Communication should highlight that these households have an extreme lack of food and/or other basic needs even after full employment of coping strategies. Furthermore, areas classified in IPC Phase 4 Emergency should be highlighted as areas with critical need for humanitarian action to save lives and livelihoods.

- The IPC national/regional map including Famine and Famine Likely areas should always be labelled, and the title should indicate clearly the time period the map is referring to (current and projection).
- All areas affected by a famine should be highlighted in the communication brief with zoom-in maps as necessary.
- With regards to the national map, in case analysts do a second projection focusing on a less likely worst-case scenario, analysts should not produce a second map; instead they should highlight this analysis in text. The fact that this is a less likely scenario, the specific assumptions used, and risks identified should also be included. For example, the main message could be *"Famine can occur in the next 3 months if conflict escalates and humanitarian access is curtailed"*.
- In case of Famine and Famine Likely, the following note must be included in the IPC communication products: "According to the IPC, Famine is classified when an area has at least 20% of households facing an extreme lack of food, 30% of the children are suffering from acute malnutrition and 1 person for every 5,000 dies each day from starvation and related causes".
- The IPC global quality review process (Real Time Quality Review (RTQR) and the IPC Famine Review Committee (FRC) review) should be mentioned in both the IPC standard communication brief and IPC Famine Alert.

SPECIAL PROTOCOLS FOR FUNCTION 4

As a best practice, the national IPC Technical Working Group that foresees the possibility that its upcoming or ongoing IPC analysis might result in classification of Famine or Famine Likely is strongly encouraged to consult the IPC Global Support Unit to clarify the way forward in terms of support and the review process.

IPC FAMINE CLASSIFICATION PROCESS

The review by the IPC Famine Review Committee (FRC) together with the preparation work undertaken by the IPC GSU-led multi-partner team is a neutral and independent process aiming at supporting IPC quality assurance and helping to ensure technical rigor and neutrality of the analysis. The activation of the IPC FRC provides an additional validation step before the release of Country IPC results. The FRC Review is a specific procedure activated in order to confirm or disprove Famine classifications when IPC AFI country analyses show a potential or already identified situation of Famine.

The IPC FRC consists of a 4-6 member team of leading international food security and nutrition experts, who are neutral to the IPC outcome and who have the relevant technical knowledge and experience in the specific crisis context. This committee reviews and debates the IPC evidence and results and then provides guidance and recommendations to the country IPC TWG based on the review.

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 IPC AFI Phase 5 Famine or Famine Likely; or

ii) In case of a breakdown in technical consensus within the country IPC TWG regarding possible Famine or Famine Likely classification; or

iii) In case the IPC GSU, acknowledging the presence of evidence above IPC AFI Phase 5 thresholds, decides to activate the Famine Review; or

iv) In case, for similar reasons, an IPC Global Partner officially requests the IPC GSU to activate it.

Famine reviews also apply to IPC compatible analyses conducted by IPC partners, which classify at least one area in Famine or Famine Likely.

A process of Review by the FRC is set up according to the IPC Famine Classification Special Additional Protocols in Manual IPC Version 3.0 (Part 2A, pages 85 – 89). The process is composed of two steps: Phase 1 - Preparation of the FRC review by the multi-partner team and Phase 2 - FRC Review.

Step 1 - The purpose of the **Famine Review preparation by the IPC GSU-led multi-partner team** is to support IPC quality assurance and help ensure technical rigor and neutrality of the analysis. It is conducted by the IPC GSU and global IPC partners represented by experts who have not been directly involved in the analysis. This review consists of a preliminary screening of the classifications performed by the TWG, in order to verify adherence to IPC protocols and existence of famine conditions. This exercise is done prior to the FRC review and provides technical inputs, structuring the information needed by the FRC to assess the validity of the analysis results in relation to Famine classifications, and identifies the key issues to be raised to the IPC FRC.

This review constitutes a first verification step that existing evidence point towards a level of severity that requires an FRC review (i.e. Step 2). Should the Famine Review preparation team reach a consensus and conclude that the analysis in question does not qualify for an FRC review (i.e. possible famine classification not plausible), this is communicated to the FRC, which is in turn deactivated. In case of breakdown of consensus within the Famine Review preparation team, the FRC review is maintained.

Step 2 - 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 or Famine Likely). The committee is to be convened by the request of the IPC Global Support Unit (IPC GSU). The scope of work of the FRC review includes (i) reviewing available evidence for the areas under review; and (ii) assessing the plausibility of famine classification for these areas.

The **selection of areas to be included in the FRC review** is an important part of the process. The Famine Review Committee maintains the discretion to expand/alter the Technical Working Group selected areas if necessary. The process includes the following steps:

a) The Technical Working Group provides their list of areas that has/have been or may potentially be classified in IPC AFI Phase 5 Famine or Famine Likely,

b) The Famine Review preparation team reviews the TWG analysis and provides additional suggestions if required;

c) The Famine Review Committee decides, based on the evidence, which areas to review from both lists.

The **release of the Famine Review Committee findings/reports** is done through a series of steps:

a) Upon completion of their review, the FRC presents their findings to the TWG. This exchange is not for the FRC to review/comment on TWG conclusions, but to explain the rationale for their conclusions;

b) The FRC also presents the conclusions of their report to the IPC Global Steering Committee;

c) The FRC report is made public on the IPC web page alongside the TWG report.

The Famine Review Committee can produce technical recommendations to improve data collection in the Famine Review Committee report, however, follow up actions on how future data collection is organized/improved is not the responsibility of the Famine Review Committee, but of individual agencies.

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