

KEY FINDINGS

- Flooding has reportedly led to displacement since November 2020, with the majority of communities moving to the highlands along the Nile and Sobat rivers, as well as along the Jonglei canal. According to KIs, displacement has led to the emergence of new settlements and has substantially increased the size of other settlements in these areas.
- Focus group discussion (FGD) participants commonly reported that the food security situation was worse than in previous crisis years. This is reportedly due to a combination of factors, including the compounding impacts of two years of consecutive flooding in 2020-21, increased insecurity incidents, reduced ability of households to plant key crops (such as sorghum), and a limited number of households that had received humanitarian food assistance over the past year.
- Flooding has led to widespread collapse of livelihoods, severely affecting the ability of households to cultivate and maintain livestock, and decreasing community and household coping capacities. Canal-Pigi is situated within the Eastern Plains Sorghum and Cattle livelihood zone, where livelihoods depend on cultivation of sorghum and livestock rearing in a normal year.¹ As flood waters remained high during the dry season in 2021, very few households were reportedly able to plant any crops and no sorghum harvest is expected in 2021.
- FGD participants reported households' inability to rear livestock due to depleted cattle herds resulting from cattle raiding, and diseases as a result of the recent floods. In addition, with most remaining herd reportedly having moved away due to fears of continued flooding, access to cattle remains atypically low and is unlikely to improve until the flood waters recede.
- Fishing remained a primary food source. However, according to FGD participants, strong currents and high water levels during the rainy season meant that only a few households with access to canoes and fishing nets were able to fish. Wild foods have reportedly become the main food source for those households that were unable to fish.² Findings indicate that market functionality also remains minimal due to the limited purchasing capacity of consumers.
- In addition to reliance on fishing and wild foods, FGD participants reported that community members were engaging in extreme coping strategies such as begging, restricting consumption of adults, only eating one meal per day, and skipping meals for consecutive days.
- All the while, findings suggest that communal coping mechanisms, such as communal sharing and chiefs

courts, have degraded substantially, due to a decline in the proportion of middle class and wealthy households, limited availability resources to share, and reduced power among chiefs, further limiting their ability to facilitate resource sharing.

- Humanitarian service providers reported that provision of aid has been challenged by the floods, with disruptions and delays in services. Flooding and insecurity have also created several barriers for communities to access humanitarian food distribution points, especially in the payams of Alam, Mat, Atar and Wunlem.
- According to humanitarian service providers, at the time of the assessment, health and nutrition services remained severely affected with restocking of supplies being a key challenge.
- Infrastructure for health care services in Canal-Pigi was reportedly extremely basic, with only Primary Health Care Units (PHCU) functioning. Most severe illness cases were reportedly referred to Malakal. However, as journeys to Malakal remain costly and time consuming, most KIs reported households were not able to make the long journeys to access health and nutrition services within the county.
- According to humanitarian service providers, the county does not have a Stabilisation Centre (SC) to treat children with medical complications due to Severe Acute Malnutrition (SAM). Without any functioning SC, children suffering from SAM are unlikely to recover, which could result in excess mortality, especially amongst vulnerable groups. With limited information on excess mortality, a SMART survey would be essential to understand the severity of SAM and Global Acute Malnutrition (GAM).³
- FGD participants reported consuming wild foods for two years in a row now. Dependance on wild foods has reportedly led to sickness, particularly amongst younger children. With inadequate dietary intakes and no access to SC, excess mortality cases could increase.
- Kls reported that there have been no registrations of host communities since 2019 and IDPs were last registered in August 2021. Findings indicate that humanitarian response has not factored in recent movements of populations, while locations and size of settlements changed considerably since the last registrations.







Map 1: Assessment coverage map



METHODOLOGY

The assessment comprised two main qualitative methodological components: focus group discussion (FGDs) and key informant interviews (KIIs). Data collection took place between the 22nd September and 30th September. During this period, data was collected through FGDs disaggregated by gender and displacement origin, and KI interviews with local leaders, traders, and humanitarian actors.

The FGD component consisted of three thematic areas: i) shocks related to food security and livelihoods, ii) impacts of shocks on humanitarian services and current needs, and iii) displacement due to shocks.

The KII component consisted of thematic tools: i) access to humanitarian services, ii) food security and livelihoods iii) market functionality and iv) displacement due to floods.

Additionally, the team conducted informal, semi-structured KIIs with local NGO staff, authority officials, and community representatives.

Qualitative FGD and KII assessment tools were triangulated with interactive proportional piling exercises, which involved piling 100 beans in front of the respondent, who was then asked to divide them into piles, attributing indicative values to questions on population movement and challenges facing the communities, based on the respondents' perception. Findings are not generalisable with a known level of precision, and should be considered indicative only.

INTRODUCTION: VULNERABILITY AND ACUTE EVENTS

Since the Integrated Phase Classification (IPC) workshop in November 2020, the cumulative effects of conflict and flooding have left Canal-Pigi facing Emergency (IPC Phase 4) levels of food insecurity projected until July 2021.

Canal-Pigi County has seen continued flooding since August 2020 and, at the time of the assessment, remained flooded (see Map 2), with flood waters unlikely to recede anytime soon. The flooding reportedly resulted in large-scale unseasonal internal displacement from low-lying areas of Korwai, Wunleth, Alam, Wunlem and Mareng payams, into highlands mostly near the north of the county, along the Nile, Sobat rivers and along the Jonglei canal.⁴

Displacement to larger towns such as Canal (payam headquarter) and Khorfulus has further added pressure of an increasing internally displaced persons (IDPs) population on host communities' resources, with the limited maize harvest and humanitarian food assistance (HFA) provided being shared with the IDPs. In addition, the county has reportedly seen more than 200,000 returnees from nearby counties.⁵

In light of these recent shocks, REACH conducted a rapid assessment in Canal-Pigi (Map 1), with the objectives of i) gaining a snapshot of current humanitarian needs and gaps, ii) identifying variations in needs between different geographic areas and population groups, iii) understanding the impacts of years of cumulative shocks on the ability of households to engage in











Map 2: Flood extent - 2020 and 2021 comparison of July-September average



Flood extent methodology: Sentinel 1 SAR data was analysed in Google Earth Engine to derive the approximate extent of standing floodwater in the July - September 2020 and July - September 2021 periods. The VV/VH band ratio was calculated and averaged for all available images during these two periods. Finally, ground-truth points of known flooded locations (collected during field work in September 2021) were used to train the 2021 model and determine the threshold for standing floodwater for both maps.

traditional livelihood activities, and iv) understanding the effect of shocks on the ability of traditional institutions to redistribute community assets and to protect the most vulnerable.

FLOODING IN CANAL-PIGI

Flooding along the Nile occurs annually during the rainy season between May and October.⁶ However, according to FGD participants, the recent floods have reportedly had devastating impacts on people's lives and livelihoods, disrupting agriculture, and leading to losses of livestock and assets, which has reportedly led to severe food insecurity and widespread livelihood collapse.

The impacts of flooding in July 2021 were first felt in the south of the county, affecting the payams of Korwai and Alam; flooding in the south of the county pushed people from the south to the north, see Map 2 for reference. The second round of flooding in August 2021 along the Sobat river affected settlements in the north of the county; flooding in the north resulted in secondary displacements of IDPs that moved into the area.

The most recent round of flooding in August has reportedly led to the relocation of entire settlements in Canal and Khorfulus towns to nearby highlands.

The timing and duration of the rainy season has not significantly changed, even though reported rains started a month later than usual in 2021 (June) and finished a month later (November) last year. However, according to FGD participants, during recent years, the most significant change in flooding seems to be due to the fact that flood levels were not receding during the dry season. This is resulting in rain waters accumulating and increasing stagnated water levels from previous year's floods, likely disrupting traditional

livelihood practices such as farming and pastoralism.7

KIs and FGD participants reported that Korwai is the worst affected payam, with the dyke completely giving way around September 25th following more heavy rainfall. FGD participants reported that, as the dyke gave way, large parts of the payam were submerged, which reportedly resulted in NGOs operating in the area to evacuate and seeking refuge in the nearby highlands in Longwundit, delaying service delivery and reducing provision. However, NGOs have set up base close to areas where local residents evacuated in order to ensure services continue.

POPULATION MOVEMENT

Atypically severe flooding has resulted in displacement across Canal-Pigi County. The earliest reports of atypical displacement due to flooding occurred in November 2020. FGD participants reported some communities decided to remain in their settlement and wait for the flood waters to reduce. However, since then, the flood waters have reportedly not reduced and therefore population groups have relocated to higher grounds.

• Migration in the county is generally undertaken during the wet season (May to October) and early dry season (November to April).⁸ KIs and FGD participants reported that between November 2020 and May 2021, flood waters had not receded, which led to atypical displacement and unusual cattle migration during these months.

• FGD participants reported that, substantial proportions of the populations previously located within the payams of Alam, Wunlem, Atar, Korwai and Mareng have since left.

• FGD participants from settlements located in higher areas















commonly reported that the largest influx of households to their settlement had taken place between June and August 2021, but that people had continued to arrive since then. Continued influx of IDPs has led to an increase in settlement sizes and communities have reportedly had to share resources to accommodate displaced population groups.

• In addition, KIs and FGD participants reported that the movement of populations has resulted in new settlements being established in displacement areas (Mat, Kolieyet, Ayok, Zinkir, Doliep, Chabnil, Panam, see coverage Map 1).

• The displacement has reportedly resulted in many communities previously located throughout the South, East and West of the county, specifically from payams of Alam, Wunlem, Atar, Korwai and Mareng, moving to higher lands along the Jonglei Canal, which runs through the centre of the county, and towards the most northern extent of the county on the highlands along the Nile and Sobat rivers, see Map 3.

• FGD participants reported they had no intention of moving in the medium to long term, mainly due to limited knowledge of other locations with livelihood opportunities, such as collecting firewood, and making charcoal.

• FGD participants reported that the closest major town, Malakal, is not a viable option to displace to, due to high living costs and fears

of insecurity. During FGDs, IDPs reported reluctance to relocate to the nearest Protection of Civilian (PoC) site in Malakal due to ethnic differences affecting acceptance within the PoC. These factors, coupled with the inability to return back to their area of origin due to the high flood water levels, has presumably resulted in most IDPs expressing their intentions to remain in locations of displacement in the near future.

 During FGDs, IDPs commonly reported the high flood levels and fear of insecurity in some areas led to several of the usual displacement routes having become unsuitable. Households that had not been able to pay boat drivers and/or did not want to travel along insecure routes had reportedly been forced to travel long journeys on foot through uninhabited rural areas. Such journeys typically took more than three days and it was reportedly common to lose cattle and other livestock due to sickness and exhaustion.

• FGD participants displaced from Korwai reported that the most vulnerable population groups have been unable to make longer displacement journeys, and were left behind.

In summary, flooding and insecurity have been significant movement barriers in Canal-Pigi County. Nevertheless, affected populations have continued to make these journeys, which is indicative of the severity of the impact on, and loss of, livelihoods.









Jonglei State, South Sudan, October 2021





FOOD AVAILABILITY AND ACCESS

In a normal year, communities in Canal-Pigi typically engage in agro-pastoralist livelihoods, relying on a combination of livestock rearing, subsistence agriculture, and trade to acquire food and income. Households in the county plant a variety of crops including sorghum, maize, cow peas, okra, and onions, with some additional kitchen garden greens.⁹ Typically, the harvest of staple crops takes place between October and November, with food stocks in a normal year lasting upto four months, as reported by KIs and FGD participants. During the lean season, typically between May to October, people generally access food by selling livestock, and consuming fish and wild foods. Findings suggest that the compounding shocks of unseasonal flooding and insecurity in the recent years have had a detrimental effect on people's ability to engage in these traditional livelihood activities.

Cultivation

Flooding in August 2020 reportedly damaged crops, especially the staple crop sorghum, with most households reportedly being unable to harvest. As a consequence, many households in Korwach and Mareng payams began to displace in November 2020, reportedly fearing that standing flood water would limit their ability to plant and harvest in 2021, thus reducing long term food security.

• Throughout 2021, flooding continued to drive large-scale displacement on a continuous basis, with populations converging along the highlands of the county along the Jonglei canal and towards the highlands in the north of the county. As a result, IDPs displaced along the Jonglei canal in Mat, Ayok, Koliyet and near the settlements of Wunleth, Doliep, Zinkir and Chabnil have reportedly been unable to plant, as the settlements were surrounded by stagnant flood waters limiting land for cultivation. As a result, most IDPs have reportedly been unable to harvest in 2021.

• FGD participants reported that subnational conflict in the area will potentially further limit communities' access to the land in Wunlem and Atar, even if flood waters were to recede, potentially impacting next year's harvest.



• In the northern parts of the county, along the major towns of Khorfulus and Canal, which are located on a higher ground, people usually have access to extended areas of land for cultivation. However, the floods from 2020 have reportedly prevented access to most parts of these lands. Nevertheless, some households have reportedly managed to have a small harvest of maize, with most households still having access to land close to the homestead.

• For those community members that were able to cultivate, harvested food stocks were expected to be exhausted as early as October-November 2021. Many households, have reportedly been unable to harvest at all, likely resulting in atypically severe, and prolonged food consumption gaps.

In summary, the influx of IDPs to larger towns and villages has placed substantial pressure on the already limited, flood-affected production of host communities, which will likely lead to an atypically early exhaustion of food stocks. IDPs in particular remain at a greater risk of food insecurity, as they have not been able to harvest and depend on host communities for support.

Livestock

Access to livestock has been atypically low throughout the 2021 lean season, when reliance on cattle is generally highest. Findings suggest widespread flooding has resulted in people moving cattle far from their homestead. Access to cattle is unlikely to improve in the near to medium term with flood waters unlikely to recede, leaving highly vulnerable groups without access to milk and meat.

 KIs and FGD participants reported limited ownership of cattle since the crisis years of 2013-2017, as frequent cattle raids depleted cattle stocks. Using proportional piling exercise, KIs and FGD participants estimated that 30% of households owned cattle at the time of the assessment. According to FGD participants, throughout recent years, flooding has, had additional implications for all households owning cattle, as it resulted in loss of cattle due to diseases and grazing lands being inundated with flood waters.

• In addition to flooding, during the 2021 dry season, insecurity seems to have had major implications for pastoralist communities











Image 3: Dry fish and fresh catch hung in the highlands along the Sobat river



displaced along the Jonglei canal. KIs and FGD participants reported the occurrence of regular raids by communities from neighbouring counties, reducing access to cattle. This limited production of milk and meat, affecting long term food insecurity. As keeping cattle closer to settlements is reportedly too dangerous, and water levels are expected to remain high in the near term, access to cattle is unlikely to improve.

Fishing

Findings suggest that fishing is one of the main sources of food during the lean season. Floodwaters have led to wetlands expanding and other areas becoming inundated with flood water, resulting in greater access to fish in the wetlands. However, fishing in wetland areas reportedly has its own challenges due to the presence of snakes, lack of fishing nets, and fears of fish catch depletion.

• FGD participants reported fishing in river waters becomes difficult during the rainy season, as waters levels are high and currents are fast, and fishing is only possible with canoes and fishing nets. Therefore, fishing in the river during the rainy season is only done by a few households that have access to canoes and fishing nets.

• While fishing in the rainy season is challenging, the dry season also comes with its own set of barriers; KIs and FGD participants commonly indicated that, as flood waters recede, access to fish in the wetlands will likely reduce greatly, and fishing will not remain a sustainable source of food and would still require the use of canoes.

• Recently displaced IDPs reported that fishing has become difficult, as some of the IDPs have become exhausted and lost their strength during the long displacement journeys.

Wild foods

With atypically low access to cattle and harvests, wild foods are reportedly becoming the main food source for those who cannot fish. However, access to wild food remains low, as flood waters have restricted mobility.

FROM THE AMERICAN PEOPLE

Image 4: Maize harvest hung from trees to protect it from flooding



• Since the floods in August 2020, dependence on wild foods appears to have increased atypically, with some FGD participants reporting that wild foods have been the only source of food available for two consecutive years, indicating that other emergency livelihood strategies might have been exhausted.

• KIs and FGD participants reported consumption of green leaves and raw lalup fruits, instead of traditional wild foods, such as water lilies, indicating limited availability of wild foods. Ongoing reliance on raw lalup fruits and green leaves is reportedly resulting in sickness, particularly amongst younger children. With inadequate dietary intakes and no access to stabilisation centres, excess mortality cases could increase.

 In addition, accessing wild foods comes with greater risks during the rainy season due to the risk of snake bites. Despite a reported perceived increase in snake bites and limited access to health services (see section on Health and Nutrition services), FGD participants reported the collection of wild food has continued where possible.

• Given the limited harvest in 2021, community coping capacity remains low and dependence on wild foods will likely continue to increase untill the next harvest in 2022.

MARKET ACCESSIBILITY AND TRADE

Markets in Canal-Pigi rely substantially on Malakal town for supply of goods. Even in a normal year, communities generally use waterways to purchase goods in Malakal, especially during the rainy season. With the onset of the rainy season, prices of goods remain high and supply of goods remains low, with poorer households and households located far away from major towns typically finding it difficult to access markets due to lack of canoes and markets being located far away.¹⁰

• Market supplies in Canal-Pigi have reduced notably over the years.¹¹ According to traders, market functionality has decreased substantially due to recent shocks and stressors. FGDs with market vendors and direct observation by the assessment team











Jonglei State, South Sudan, October 2021

Image 5: Damaged crops, flooded tukuls and health centre in Canal town



showed that there was a lack of food available in the market, and the diversity and quantity of goods was also limited. In both of the assessed markets, in Canal and Mat, only retailers were observed to sell food items, while wholesalers selling larger quantities were not present.

• Purchasing power of the traders is reported to have significantly weakened in the past 2 years due to limited customers. Traders also reported having limited to no capacity to purchase livestock and, as a result, community members have to access markets in Malakal to sell livestock. With limited transport and insecurity, travelling to Malakal for community members to sell livestock remains a challenge and comes at an increased cost.

• Goods within the assessed markets of Canal and Mat continue to be supplied by Malakal Town, taking typically 1-2 days to transport food items and non-food items (NFIs) using the main river route on the Nile via canoe or boat. Only a few traders reported having access to canoes or boats, and reportedly hired transport together to share the costs. As there are only a few traders, transport costs remained high.

 FGD participants commonly reported that access to markets is restricted. The predominant cause of this restricted access was limited purchasing power as a result of disruption of usual livelihood activities, such as selling charcoal, oil, and livestock. In addition to this, the second most reported cause of restricted access and use of markets was physical access constraints, as functional markets were located in major towns that were difficult to reach with limited means of transport along the river.

Findings indicate that the recent years of flooding have led to reduced market functionality in Canal-Pigi, with flood waters affecting both physical and financial access among consumers and suppliers throughout the area.

SOCIAL NETWORKS AND ACCESS TO FOOD

Findings suggest community coping capacity has decreased considerably in Canal-Pigi due to a lack of resources. KIs and FGD participants reported that, during the crisis period of 2013-2017, a majority of the households lost their assets and cattle,

whilst the period also saw a relative decline in the power of chiefs. Decreasing chiefs' power erodes the functionality of communal structures to redistribute resources in times of need.

• FGD participants reported that a significant proportion of the total population were deemed as poor or very poor at the time of assessment. According to the social class definitions provided by FGD participants and KIs, this refers to populations possessing no cattle, little or no other livestock, who are dependent on support from others within the community (see Map 4). With an overall decrease in community coping capacity, social structures have also changed, with most households now being considered as part of the poor social class, indicating an increase in long term vulnerability as reported by KIs.

• Findings from the proportional piling exercise (see Map 4) suggest that the social class structure and stratification of communities within Canal-Pigi County has been significantly impacted over the past 10 years, initially by the 2013-2019 civil war, and more recently by the severe levels of flooding. More households were reported to be very poor, which may be attributed to reduction in access to and availability of cattle within most communities, which was reported as the most significant feature of social class within the county, and the main classifier of social wealth within a community.

• Lack of assets seems particularly acute amongst displaced populations, who have become increasingly unable to depend on family members for support. FGD participants reported that host communities are already sharing their limited maize harvests with IDPs, which will likely result in limited harvested food stocks being exhausted atypically early, reducing longer term food security for host community members.

• With consecutive years of flooding and related displacement, employment and income generating activities have reportedly reduced. According to FGD participants, vulnerable IDPs and host communities that were left without social network, have been undertaking extreme coping strategies, such as begging. Other extreme coping strategies that IDP and host communities reportedly used in Ayok, Mat, Zinkir, Doliep, Wunleth and Panam (Khorfulus), were restricting consumption of adults so children can eat, reducing number of meals, or skipping meals altogether.

• The use of extreme coping strategies coincides with consecutive years of high food insecurity, reflected by the names reportedly given to recent years (see table 1). According to KIs and FGD participants, there has not been a normal year (locally known as "Piny Lonkam") since 2013.

• Even more so, KIs and FGD participants commonly reported that the current period of food insecurity has been the worst they have experienced, worse than other periods of food insecurity after the flood events in 1962 and during the food insecurity crisis of 1998. According to FGD participants, this is because, previously, the















Map 4: Using proportion piling exercises, social stratification for different populations groups in assessed settlements

community still had access to cattle and resources to share among themselves.

• Against this backdrop, findings suggest that the functionality of hunger courts, a mechanism that is traditionally relied upon by the most food insecure households during times of severe hunger, when chiefs courts transition to focus solely on food distribution, has reduced substantially. According to KIs, hunger courts have not been functional since 2013-2014 due to a lack of food and resources to redistribute. KIs more generally reported chiefs courts were not fully functional as a result of resource scarcity and that, therefore, the influence of chiefs has reduced considerably.

If resource scarcity continues, individual and communal coping capacity will likely further deplete, leaving those without ties to more wealthy social networks highly vulnerable.

HUMANITARIAN FOOD ASSISSTANCE

After the floods in August 2020, the duration of HFA was increased, in Canal-Pigi County from September to November 2020. However, in 2021, the lean season response decreased compared to 2020, according to humanitarian service providers.

• As reported by humanitarian service providers, the response in Canal-Pigi County has been severely delayed due to insecurity and flooding incidents; distribution in Wuanayien last took place in July 2021 and the distribution cycle in Koliyet was increased in July from 2 month cycles to 4 month cycles due to mobility restrictions (see Map 2).

• KIs reported that boats delivered aid via Atar to Wunanyen and Kurway, but that these locations are not accessible to all populations due to the sub-national conflict lines (see Map 3), leaving highly vulnerable communities unable to access the assistance.

• KIs and FGDs participants reported that the caseload, ration size

and, duration of humanitarian food assistance did not account for recent arrivals, with the last registration of flood-displaced IDPs having taken place in 2020 and the general registration taking place in 2019. Consequently, HFA has been shared amongst households in these communities, according to FGD participants.

• Communities also reportedly faced difficulties in accessing HFA, even when registered, as flood waters made movement on foot very difficult and most distribution sites very far away from some settlements (see Map 5). FGD participants reported walking more than 6 hours to access HFA, with most vulnerable people unable to make the journey.

• Seasonally, between June and September, distribution sites in Korwai, Wunayen and Atar 3 become inaccessible due to flooding (see Map 5). WFP has reportedly had to air drop rations in Korwai and Wunayen, which still remain flooded.

• Canal-Pigi remains a difficult county to transport relief material to. Humanitarian service providers reported that livelihoods assistance in the form of seeds distribution, tools, and vegetable kits that were to be distributed before cultivation did not reach communities in time this year. According to humanitarian service providers, coordinating HFA supplies and distributions has been difficult on an administrative level. With the response being coordinated from

Table	1:	Names	given	to	recent	years,	according	to	FGD
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2021	Kechit bap (year of widespread
	devastation)
2020	Amol (year of hunger)
2013-2017	Riak (years of fighting)
Before 2013	Piny Lonkam (normal year)











Jonglei State, South Sudan, October 2021



Map 5: Humanitarian food distribution points as reported by humantarian service providers

Bor, as the main administration centre, and operational partners being located in Malakal, service providers reported timely communication has been challenging.

Findings indicate that the dependency of humanitarian assistance remains high in Canal-Pigi, particularly amongst displaced populations. Therefore, delivery of humanitarian services beyond the lean season is essential to prevent deterioration of the food security situation and reduce malnutrition. To ensure effective distribution of services, humanitarian service providers reported that humanitarian actors need to cover wider geographic scale and maximum population coverage as the size and location of settlements have changed. KIs further reported that re-registration of IDPs should be prioritised to further prevent deterioration of humanitarian needs severity.

HEALTH AND NUTRITION SERVICE PROVISION AND ACCESS

According to humanitarian service providers, provision of health and nutrition services in the county has deteriorated since November 2020. Displacement has placed extreme pressure on health and nutrition facilities in the areas of displacement. Moreover, poor infrastructure and inaccessibility have reportedly continued to limit limit service provision and functionality. • According to humanitarian service providers, health and nutrition services remain severely affected by flooding. Out of the nine health centres in the county, eight have been flooded since July 2021 (see Map 6), disrupting services and affecting supplies. In Canal and Korwai, the Primary Health Care Unit (PHCU) centres had reportedly been relocated to highlands nearby.

• In addition to there only being a few operational health care centres, the available centres also remain basic, with only PHCUs reportedly functioning within the county. PHCUs only offer basic health care services such as an outpatient department (OPD) and supporting Expanded Programme on Immunizations (EPI).

• Reflective of this, according to KIs, the county does not have any lifesaving hospital services and more severe illness cases are therefore referred to Malakal. Journeys to Malakal remain costly and time-consuming, and KIs reported that most households were unable to make this journey.

• Three nutrition sites were established in Mat, Koliyet, and Ayok in April 2021 (see Map 7). However, humanitarian service providers reported that there were no SCs present in the county, at the time of the assessment. Humanitarian service providers projected that, without stabilisation centres, excess mortality in children with complicated malnutrition will likely increase.













Jonglei State, South Sudan, October 2021



Map 6: Health centres as reported by humantarian service providers

• Health and nutrition facilities remain seasonally affected during the rainy season as restocking becomes difficult. Two years of consecutive flooding have exacerbated this, as many supplies in stock have been spoiled due to high water levels.

• Humanitarian service providers reported additional challenges with restocking; supplies reportedly have to be brought in from Malakal as the infrastructure to preposition supplies has been flooded and there is a lack of mobile storage units in the county. KIs reported that there is one large warehouse located in Korwai, with a capacity of 13 tonnes, which can store nutrition supplies for 3 weeks to support nearby nutrition centers. However, KIs reported supporting other sites in nearby areas is challenging without mobile storage units, and moving supplies from the warehouse on canoes is slow and costly. Additionally KIs reported that flooding in 2021 has impacted the warehouse with supplies reportedly spoilt.

• As a result of the floods in September 2021, the nutrition centre in Khorfulus had to be relocated across the Sobat river, now situated in a recently formed settlement called Panam. FGD participants reported that it is difficult for households to access nutrition services in Panam as they have to cross the Sobat river and only a few households have access to canoes.

• FGD participants reported limited functional boreholes and latrines. Due to a lack of boreholes, most households have reportedly had

to collect untreated water from the rivers or nearby swamps. These are typically the same locations that cattle drink from, people bathe in, and boats dock at. KIs emphasised that the limited capacity of the health facility in the area, combined with the general lack of access to clean water, and poor sanitation and hygiene practices is likely to lead to an increase in diseases, particularly acute watery diarrhoea.

CONCLUSION

Assessment findings suggest that compounding shocks and stressors have resulted in widespread livelihood disruptions throughout Canal-Pigi, with atypically severe food consumption gaps in the county, particularly amongst IDPs in Mat, Ayok, Koliyet, Doleip, and in areas where mobility is restricted, such as in Korwai. Moving forward, populations are unlikely to experience any substantial, near future improvement in the food security situation, as most people have reportedly been unable to plant sorghum, and yields of maize harvest around Canal and Khorfulus were atypically low and reportedly likely to be exhausted by October. Findings suggest that, while traditional community mechanisms to cope with extreme resource stress, such as chiefs courts, have eroded significantly, limited access to harvested food stocks, HFA, and health and nutrition services will likely cause the food security in Canal-Pigi to continue to deteriorate.

REACH









Jonglei State, South Sudan, October 2021





Continued delivery of humanitarian services beyond the lean season, particularly health and nutrition services and HFA, will be essential to prevent food consumption deficit from manifesting in critical malnutrition and excess mortality.

END NOTES

1. Famine Early Warning Systems Network (FEWS NET). Famine Early Warning Systems Network (FEWS NET). Livelihoods Zone Map and Descriptions for the Republic of South Sudan. August 2018.

2. The SMART (Standardised Monitoring and Assessment of Relief and Transitions) Methodology is a standardised, simplified, crosssectional field survey method designed to aid the collection of quality, up-to-date and timely nutrition data necessary for decisionmaking.

3. Famine Early Warning Systems Network (FEWS NET). Livelihoods Zone Map and Descriptions for the Republic of South Sudan. August 2018.

4. Integrated Rapid Needs Assessment (Canal-Pigi County, Jonglei State), 3-5 August, 2021

5. Joint Inter Cluster Coordination Group (ICCG), Field Mission Report 15-17 September 2021

6. World Bank – South Sudan floods 2020, remote floods damage and needs assessment, June 2021

8. Famine Early Warning Systems Network (FEWS NET). Livelihoods Zone Map and Descriptions for the Republic of South Sudan. August 2018.

9. ibid.,

10. ibid.,

11. REACH Diel Displacement and Access to Services brief





