Food Security and Livelihoods County Profiles

South Sudan Food Security Crisis - Jonglei State

May-July 2017

Background and Methodology

As of June 2017, an estimated 45,000 South Sudanese were facing catastrophic humanitarian conditions and 1.7 million experienced emergency levels of food insecurity, according to the Integrated Food Security Phase Classification (IPC).[1] With the aim of facilitating a better understanding of the food security and livelihoods situation in South Sudan and to inform the IPC September 2017 Update, REACH has developed food security and livelihood (FSL) profiles of counties where settlements have been assessed using the Area of Knowledge (AoK) methodology. REACH employs its remote AoK monitoring methodology to collect relevant information in hard-to-reach and inaccessible areas to inform humanitarian planning and interventions outside formal settlement sites.

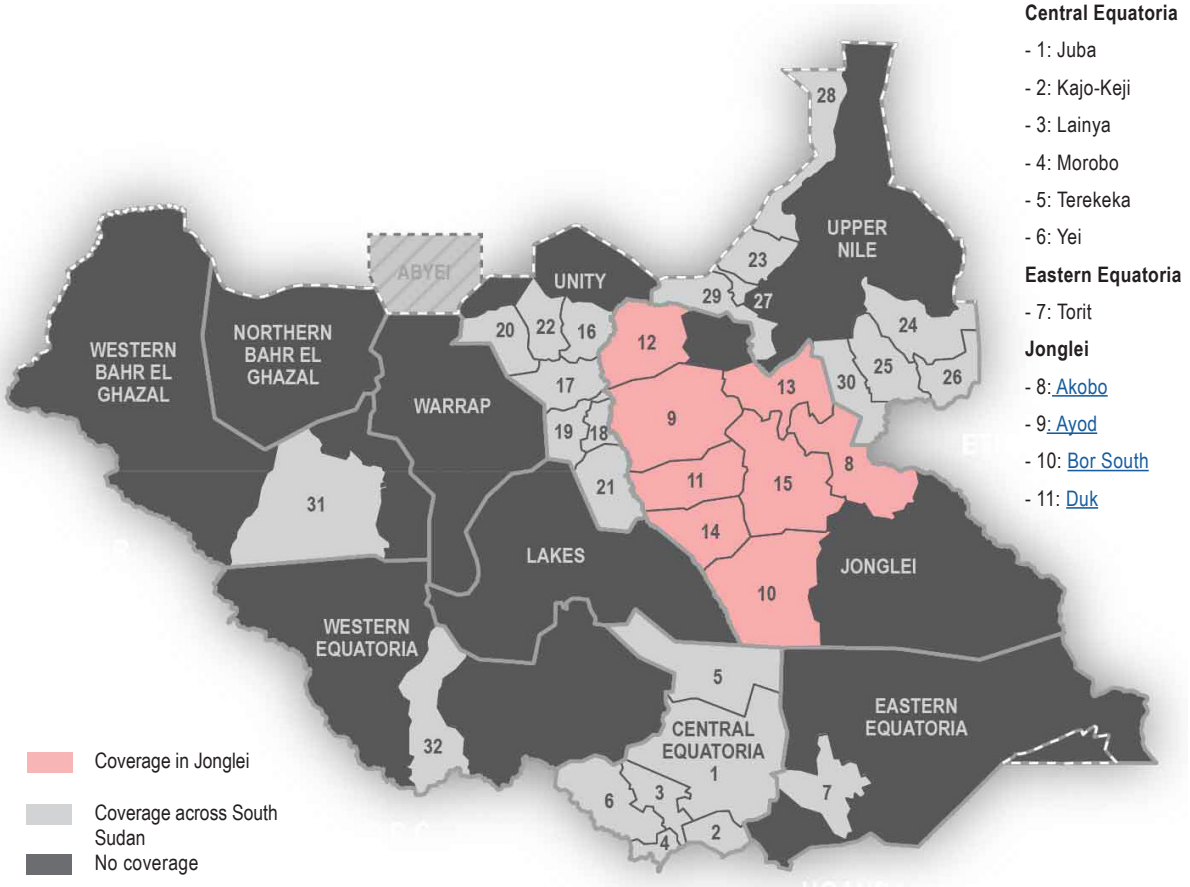
Using the AoK methodology, REACH remotely monitors needs and access to services in Greater Upper Nile, Greater Equatoria and Western Bahr el Ghazal. The information presented in these FSL profiles refers to the settlements level rather than the household level and is collected through interviews with the following typology of Key Informants (KIs):

- KIs who are newly arrived internally displaced persons (IDPs) who have left a remote settlement in the last month
- KIs who have either been in contact with someone living in, or have been to a remote settlement in the last month (traders, migrants, family members etc)
- KIs who are remaining in remote settlements, contacted through phone

Findings presented are based on primary data collected from 2084 KIs covering 790 settlements in 8 counties in Jonglei State from May to July 2017. Unless otherwise stated, figures in the profiles refer to averages across May, June and July 2017. Informing further analysis of food security trends, KI surveys were triangulated with 52 focus group discussions (FGDs) .

Data from counties where less than 5% of settlements have been assessed across the May to July period have not been included in these profiles. Further, AoK data are not collected on the basis of random sampling, and therefore trends presented in these profiles, unless stated otherwise, should be taken as indicative rather than representative of the geographic areas assessed.

Map 1: County coverage, May - July 2017



Central Equatoria
- 1: Juba
- 2: Kajo-Keji
- 3: Lainya
- 4: Morobo
- 5: Terekeka
- 6: Yei

Eastern Equatoria
- 7: Torit

Jonglei
- 8: Akobo
- 9: Ayod
- 10: Bor South
- 11: Duk
- 12: Fangak
- 13: Nyirol
- 14: Twic East
- 15: Uror

Unity
- 16: Guit
- 17: Koch
- 18: Leer
- 19: Mayendit
- 20: Mayom
- 21: Panyijiar
- 22: Rubkona

Upper Nile
- 23: Fashoda
- 24: Longochuk
- 25: Luakpiny/Nasir
- 26: Maiwut
- 27: Malakal
- 28: Manyo
- 29: Panyikang
- 30: Ulang

Western Bahr el Ghazal
- 31: Wau

Western Equatoria
- 32: Yambio

References:

IPC South Sudan, Communication Summary, May 2017.

Interactive: please click on county name to go directly to the respective FSL profile.

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REACH Informing more effective humanitarian action

Akobo County: Food Security and Livelihoods Profile

Jonglei State, South Sudan, May-July 2017

of KI interviews conducted: 429
# of assessed settlements: 47
# of FGDs conducted: 5

Livelihoods Overview

Typical Livelihoods

Populations in Akobo County before the crisis were typically agro-pastoralist, with cultivation ad livestock rearing important sources of livelihoods.[1] The main crops grown were staples such as sorghum and maize. In the eastern parts of Akobo County, populations also relied on fishing, predominantly to sell during the lean season. Markets such as Buong and Akobo enabled populations to sell surplus crops and to supplement food from the harvest.

Hazards (Shocks)

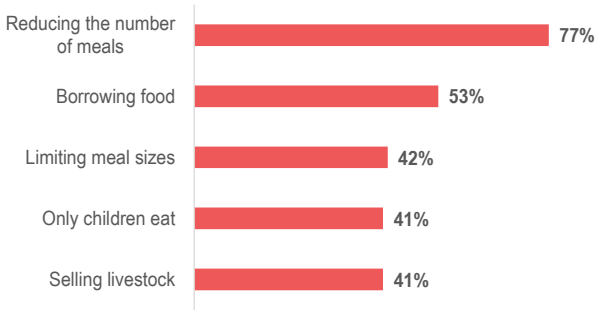
- In February and April 2017 conflict in Uror and Nyirol resulted in an influx of IDPs to Akobo.
- Intercommunal fighting associated with cattle raiding and revenge killings occurred across the county throughout the year.
- In 2017 crop yields were affected by a combination of factors including poor rainfall at the onset of the wet season, which delayed planting of crops, and crop pests and diseases that occur annually from June to September.[2]

Vulnerability (Resilience)

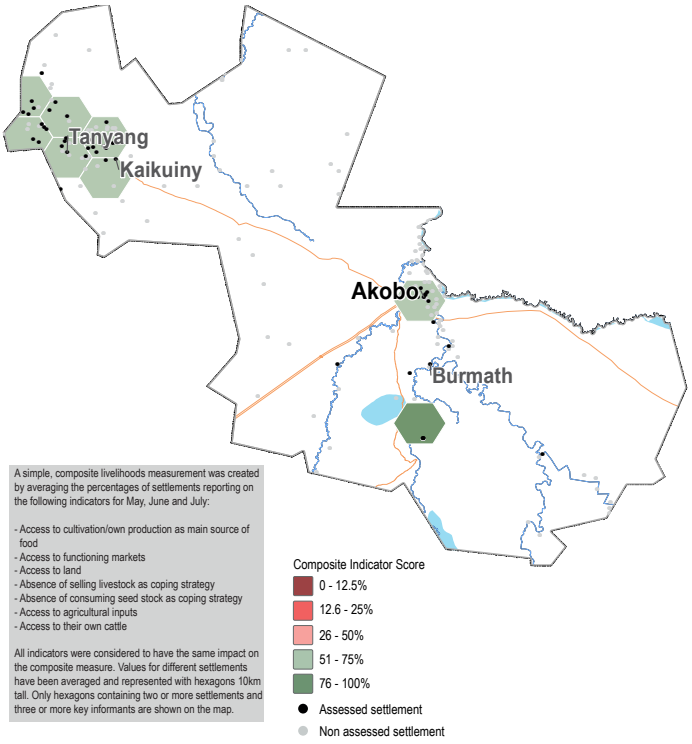
Insecurity continued to be the main challenges to accessing livelihoods in Akobo. Reflective of ongoing insecurity, from May to July assessed settlements reported crops destroyed by conflict (38%), food distributions stopped (25%) and unsafe to cultivate (19%) as the main reasons for the lack of adequate access to food. Despite these challenges, the proportion of assessed settlements reporting growing crops for cash remains high at 75%. However, the proportion of assessed settlements considering cultivation as a main food source has fallen rapidly, from 45% in May to 13% in July, suggesting that agricultural output may no longer be sufficient to sustain many households (HHs).

Due to insecurity market access also appears to be limited, creating difficulties for HHs who count on selling surplus crops.

Figure 1: Most common food-based coping strategies by percentage of assessed settlement without adequate access to food



Map 1: Level of livelihood vulnerability



Assessed settlements have reported a decrease in market access from an average of 72% from February to April to an average of 46% from May to July. While agriculture declined, livestock rearing remained important, reported as a livelihood source by 82% of assessed settlements.

Coping Strategies

In response to the livelihood disruptions, the main livelihood coping strategy reported by assessed settlements with inadequate access to food was borrowing food (53%). FGD participants indicated that social networks in Akobo are strong, with sharing practices established in local and IDP communities. This was followed by utilising markets to sell livestock, which was reported by 41% of assessed settlements with inadequate access to food.

Alternative pre-crisis sources of livelihoods appear to be restricted for many HHs. No settlements reported fishing as a main livelihood source and only 9% reported foraging for wild foods. These low levels may be due to reported protection concerns when leaving the settlements especially for IDPs who are unfamiliar with the area. However, FGDs suggested consumption of wild plants, such as Wor and Kenyom, may be common even if it is not considered a main food source.

For those no longer able to adequately access food, humanitarian assistance has become a key coping strategy, following an upscale of humanitarian assistance in July. The proportion of assessed settlements reporting having received humanitarian assistance rose from 41% in May to 78% in July. Moreover, by July, humanitarian assistance was reported to be the main food source for the majority of assessed settlements (53%).

Food Security Overview

Food Availability and Access

Possibly as a result of this humanitarian upscale, the proportion of settlement reporting adequate access to food rose sharply from 42% of assessed settlements in May to 93% in July. However, for those settlements still reporting inadequate access to food, moderate and severe coping strategies are commonly used. Reducing the number of meals per day was reported by 77% of assessed settlements with inadequate access to food. Other frequently reported strategies included limiting meal sizes (42%) and only children eating (41%).

The continuation of livestock rearing and cash crops has allowed for some diversity in HH diets. Meat consumption was reported by 58% of assessed settlements with adequate access to food, while 28% reported that residents were eating vegetables. However, these rates fell over the assessment period, suggesting that while humanitarian assistance has increased the proportion of assessed settlements with adequate access to food, it has not necessarily increased their nutritional diversity.

A further positive trend is that 96% of assessed settlements reported access to clean water sources. The proportion of assessed settlements reporting gastrointestinal diseases was correspondingly low at 6%, which suggests HHs in Akobo are at relatively low risk of contracting diseases through food and water sources.

Map 2: Level of access to food

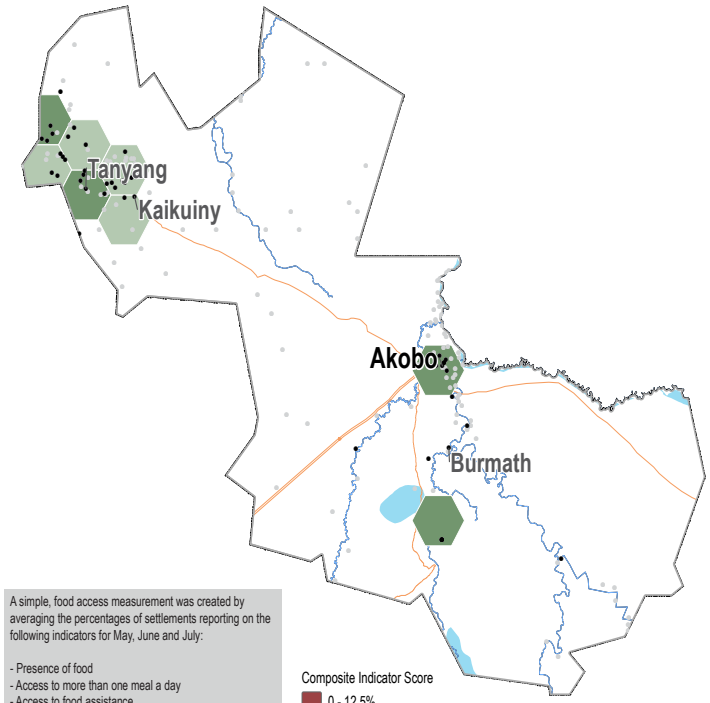
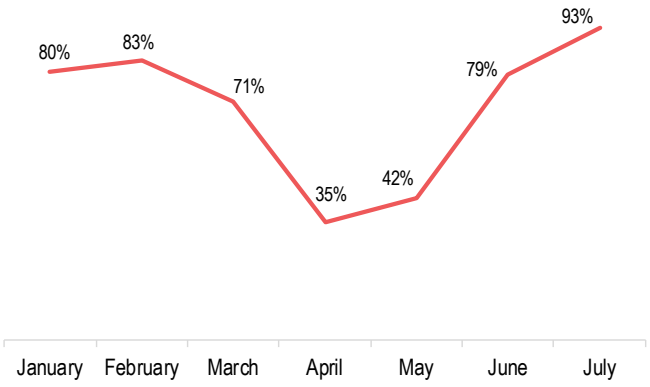


Figure 2: Proportion of assessed settlements with adequate access to food from January to July 2017



Due to an inability to plant crops coupled with low rainfall at the start of the rainy season, REACH port monitoring teams found that on average 65 individuals per day were permanently leaving Akobo for Ethiopia from May to July. These individuals (predominantly IDPs) reported a lack of food as their primary push factor.[3]

Stability of Food Access

The relatively high access to food will likely be maintained in the coming months, as the sorghum harvest comes in and humanitarian assistance is likely to continue.

However, these livelihood sources may struggle to provide adequate access to food in the future as the high number of IDPs in Akobo strains existing resources, with 81% of assessed settlements reporting the presence of IDPs in their settlements. These IDPs have predominantly been absorbed into local communities as reported in 97% of assessed settlements, placing additional strain on basic services and food resources available. With high numbers of IDPs reportedly living in the bush in neighbouring Nyirol and Uror, further IDP movement to Akobo, where access to services and assistance is perceived to be better, is likely during the dry season when roads become more accessible.

Furthermore, while the use of coping strategies will continue to be common in increasing food during the lean season, the high proportion of settlements reporting selling livestock may not be sustainable as it may deplete essential livestock assets. When it comes to borrowing food, the second most frequently cited coping strategy, the high levels of movement into Ethiopia may weaken social networks as the wealthier populations are more likely to leave.

1 Fewsnet, South Sudan Livelihood Zones and Descriptions, August 2013.
2 Ibid.
3 REACH South Sudan: Akobo Port Monitoring Factsheet, July 2017.

Ayod County: Food Security and Livelihoods Profile

Jonglei State, South Sudan, May-July 2017

of KI interviews conducted: 123
# of assessed settlements: 44
# of FGDs conducted: 3

Livelihoods Overview

Typical Livelihoods

Pre-crisis households in Ayod County typically followed an agro-pastoral lifestyle. Agriculture and cattle keeping were the key sources of livelihood. Many households would catch fish and forage wild foods to increase consumption during the lean season. Trading goods from Sudan also enabled some households to earn money to purchase food in the markets.

Hazards (Shocks)

Since 2016, Ayod has been hit by both flooding and conflict. In October 2016, severe flooding struck Ayod, destroying crops and spreading diseases. Furthermore, in the first half of 2017, conflict re-erupted in the county, creating high levels of insecurity for civilians.

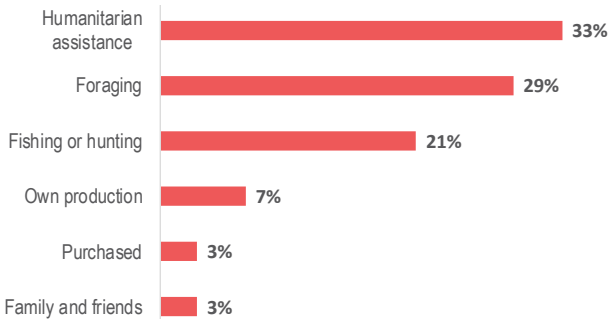
Vulnerability (Resilience)

Agriculture has been devastated by these shocks. Thirty-six percent of assessed settlements with limited access to food reported natural disasters (i.e. flooding) as the main reason. Pastoralism too has suffered severely from the flooding, which spread livestock diseases and blocked off pasturelands. In the settlements of Haat, Gorwai and Pagil, the REACH rapid assessment found the median number of cattle per household to be just one[1].

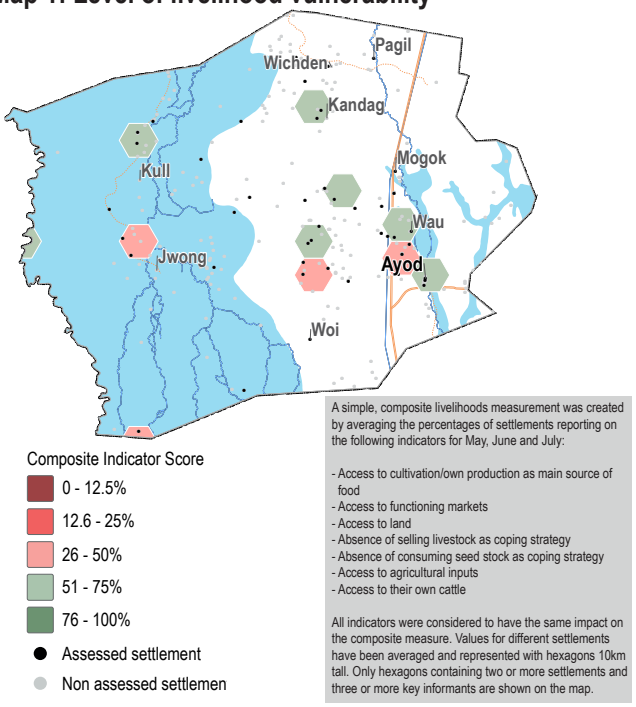
The conflict then further disrupted agriculture. Thirteen percent of assessed settlements citing inadequate access to food reported that the primary reason was that fighting had destroyed their crops. Moreover, the presence of armed groups is making it difficult to grow crops, as 28% of settlements citing inadequate access to food reported that the primary reason was that it was unsafe to cultivate. As a result, only 7% of settlements reported cultivation as their main food source.

The insecurity has also disrupted alternative sources of livelihood. Since conflict has largely cut off the northern trade route, only 42% of assessed settlements in Ayod reported market access. Subsequently, just 3% of assessed settlements reported purchasing as a main source of food. Moreover, with very few households having the resources to employ labour, only 5% of assessed settlements reporting casual labour as a livelihood source.

Figure 1: Main sources of food reported in assessed settlements



Map 1: Level of livelihood vulnerability



Coping Strategies

With pre-crisis livelihood sources no longer providing sufficient food, many households have adopted coping strategies that endanger their health. In particular, 51% of assessed settlements citing inadequate access to food reported eating wild foods. Although wild fruits are often eaten during the lean season, households have also resorted to eating less nutritious wild foods, such as lalop leaves, which are believed to cause diarrhoea, further reducing nutritional intake. Similarly, fishing and hunting are now important livelihood sources, reported as the main source by 21% of assessed settlements. However, those who do not possess nets sit in the water for several hours, thereby increasing their exposure to waterborne diseases.

Populations are also risking physical attack by travelling outside of their settlements. Nineteen percent of assessed settlements citing inadequate access to food reported borrowing food, which typically involves women walking to settlements that have received a food distribution. It is mostly women who undertake these journeys because men face a higher risk of being killed if caught outside of their settlement.

The disruption to livelihood sources has rendered many households dependent on humanitarian assistance, which was the most commonly cited primary food source (33% of assessed settlements). However, the insecurity and poor roads during the rainy season have impeded humanitarian access. Only 26%[2] of assessed settlements reported receiving humanitarian assistance in the last three months, which suggests that this assistance has not yet been sufficient to fill the gaps in consumption.

Food Security Overview

Food Availability and Access

The strain on livelihoods has drastically limited access to food, with only 12% of assessed settlements having reported adequate access to food. In addition, according to the REACH rapid assessment, 58% of assessed households ranked as severe on the household hunger scale[3]. Reported causes of death underline the severe shortage of food: malnutrition was cited as the main cause of death in 23% of assessed settlements.

The restricted access to food has driven households to adopt emergency consumption strategies. Settlements citing inadequate access to food most commonly reported skipping meals for entire days (55%). Populations in assessed settlements citing inadequate access to food were also reportedly reducing their consumption by only letting children eat (43%), limiting meal sizes (41%), and reducing the number of meals eaten (22%).

The lack of food has also severely reduced diversity of diets. Households appear to be almost completely reliant on sorghum and other staples, which are reportedly eaten in 92% of settlements with adequate access to food. Reports of settlements eating other food types, such as pulses, vegetables, and meat, were extremely rare.

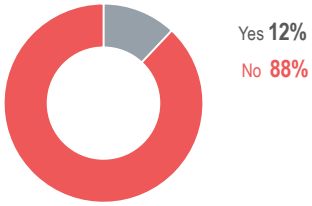
A further concern is the utilisation of food. Gastrointestinal diseases such as cholera were reported to be the leading cause of death in Ayod, cited by 29% of assessed settlements. As the proportion of settlements reporting access to clean water has fallen from May (79%) to July (53%), the risk of contracting these diseases through food is likely increasing.

In response to the dire situation, much of the population has left Ayod to seek food and protection in neighbouring Duk and Fangak counties. Fifty-four percent of assessed settlements reported that less than half the original population remained. However, with travel being so dangerous and physically challenging, this is a high-risk option, and only available for those with the resources to make the journey.

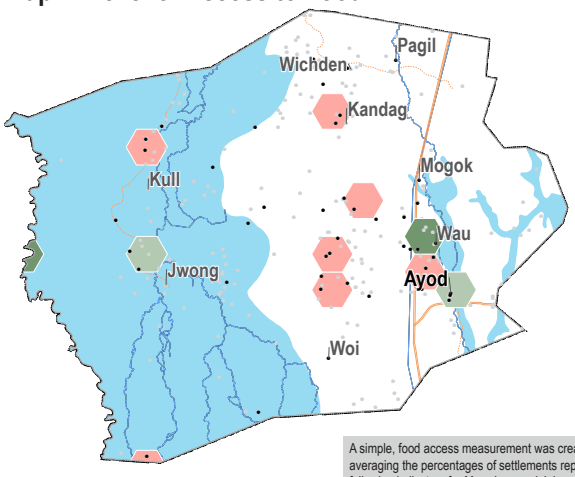
Stability of Food Access

The disruption to livelihood sources will likely continue in the future. Agriculture, in particular, seems unlikely to recover in the short term as only 3% of assessed settlements reported access to agricultural inputs and focus group discussion (FGD) respondents

Figure 2: Percentage of assessed settlements reporting adequate access to food



Map 2: Level of Access to Food



Composite Indicator Score
- 0 - 12.5%
- 12.6 - 25%
- 26 - 50%
- 51 - 75%
- 76 - 100%
- Assessed settlement
- Non assessed settlement

A simple, food access measurement was created by averaging the percentages of settlements reporting on the following indicators for May, June and July:

- Presence of food
- Access to more than one meal a day
- Access to food assistance
- Absence of skiping meals as coping strategy
- Absence of reducing # of meals as coping strategy
- Absence of harvesting crops not yet ready as coping strategy

All indicators were considered to have the same impact on the composite measure. Values for different settlements have been averaged and represented with hexagons 10km tall. Only hexagons containing two or more settlements and three or more key informants are shown on the map.

reported that reduced rain this season has destroyed many of the seeds, with no more left to plant. Furthermore, it is not clear as of yet how long the conflict will continue to disrupt livelihoods.

As FGD participants reported slaughtering cattle for food, livestock keeping looks set to decline as well. Although slaughtering cattle does not always constitute a coping strategy, the current low numbers of cattle mean this strategy risks depleting many herds' ability to reproduce.

Moreover, already strained coping strategies are likely to face further pressure. The large-scale displacement might strain social networks, as the wealthier population are encouraged to leave. For those who remain, there will be fewer community members from whom to borrow. Adding to these concerns, FGD participants reported fatal attacks on women carrying food, further increasing the protection concerns associated with travelling to other settlements to borrow food.

On the other hand, an upscale of NGO assistance, which may increase access to food, seems likely. In response to reports of high levels of food insecurity, Ayod has recently been prioritised for food distributions and multi-sectoral humanitarian assistance. However, security issues and limited access may continue to impede humanitarian efforts and reduce the effectiveness of this assistance.

1 Source: REACH, Ayod Rapid Assessment, July 2017.
2 The disparity in these two figures is largely explained by different baselines due to non-responses.
3 Source: REACH, Ayod Rapid Assessment, July 2017.

Livelihoods Overview

Typical Livelihoods

Subsistence agriculture and livestock keeping were typically the main livelihood sources in Bor South. Focus group discussion (FGD) participants suggested that populations also relied on hunting and fishing to fill gaps in consumption during the lean season when food stocks run low. Many households also earned income through casual labour, such as tukul construction and hospitality work, in order to purchase food in the markets.

Hazards (Shocks)

Intercommunal violence related to cattle raids and child abductions are a persistent issue in Bor South. Following several attacks since the start of the year, intercommunal tensions remain high.

Vulnerability (Resilience)

Insecurity has seriously disrupted the main livelihood source: agriculture. Crops have been destroyed and tools stolen or abandoned. Even when households have access to land and agricultural inputs, working in the fields increases the risk of being attacked. The majority of assessed settlements with inadequate access to food (54%) reported that the primary reason was that it was unsafe to culitvate. As a result, cultivation was only cited as the main source of food for 13% of assessed settlements.

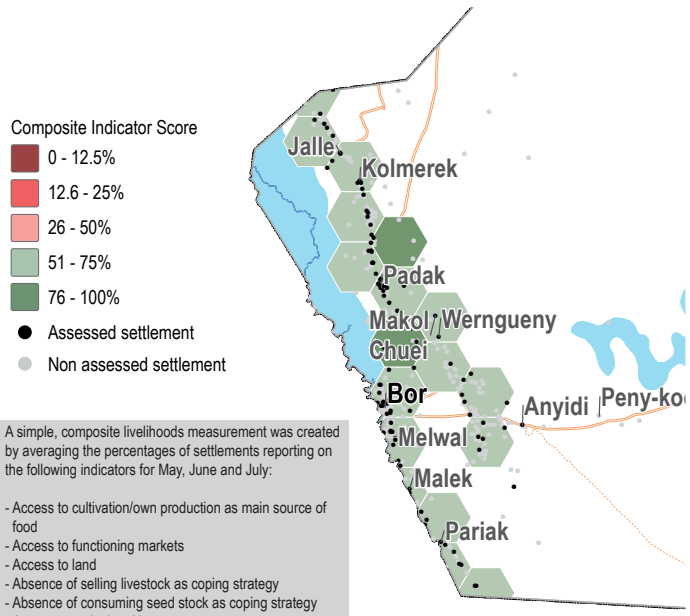
Moreover, the cattle raids have also disrupted cattle keeping, as cattle are reportedly stolen in large numbers. Reported cattle ownership declined from 81% of assessed settlements in May to 63% in July as cattle raids intensified.

Given the decline in agricultural output and livestock numbers, households are increasingly relying on casual labour in order to purchase food. Reflecting this trend, 35% of assessed settlements in Bor South reported markets to be the main source of food. This reliance on markets is likely enabled by the proximity to Bor town. With the majority of settlements within walking distance of Bor, the proportion of settlements reporting market access in Bor South is the highest of assessed counties in Jonglei (96%). Some of the increased reliance on markets and decreased agricultural activity can be explained by typical lean season patterns, but the extent of the decline in agriculture suggests that this is more than seasonal variation.

However, rapidly rising prices over the past year have made purchasing food in the markets increasingly difficult. The price of a bag of sorghum reached 588 SSP per Malua in Bor market in May: a sevenfold increase compared to 80 SSP in May 2016.[1] Supporting these findings, 100% of assessed settlements citing access to markets consistently reported rises in the price of sugar and 99% reported a rise in the price of cooking oil.

As a result, high prices were the most commonly cited secondary restriction on food access, selected by 30% of assessed settlements reporting inadequate access to food.

Map 1: Level of livelihood vulnerability



A simple, composite livelihoods measurement was created by averaging the percentages of settlements reporting on the following indicators for May, June and July:

- Access to cultivation/own production as main source of food
- Access to functioning markets
- Access to land
- Absence of selling livestock as coping strategy
- Absence of consuming seed stock as coping strategy
- Access to agricultural inputs
- Access to their own cattle

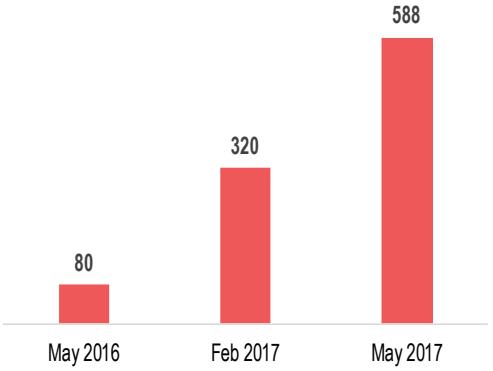
All indicators were considered to have the same impact on the composite measure. Values for different settlements have been averaged and represented with hexagons 10km tall. Only hexagons containing two or more settlements and three or more key informants are shown on the map.

Coping Strategies

With pre-crisis livelihoods severely disrupted, social networks appear to be playing an important role in resilience. Borrowing food was cited as a coping strategy by 38% of assessed settlements reporting limited access to food.

In addition, many settlements are sourcing food through humanitarian assistance, with 40% of assessed settlements reporting receiving humanitarian assistance in the last three months. However, this assistance does not appear to be sufficient by itself to sustain households, as only 17% of assessed settlements reported humanitarian assistance to be their main food source.

Figure 1: Price of sorghum in Bor market SSP/Malua



Food Security Overview

Food Availability and Access

As a result of the strains on livelihood sources, access to food in Bor South is low: only 24% of assessed settlements reported adequate access to food and 72% of assessed settlements reported only eating one meal per day. However, the situation appears stable for now, with an average of 27% of assessed settlements reporting adequate access to food since September 2016.

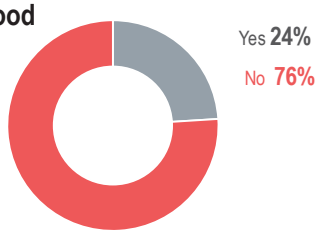
Given the difficulties in accessing food, many households are resorting to severe coping strategies by eating cheaper and eating less. Reflective of the rising food prices, the most commonly cited coping strategy in Bor South was to buy less expensive food, which was cited by 52% of assessed settlements citing inadequate access to food. Cheaper foods often refers to red sorghum, which is believed to be less nutritious. Moreover, almost one third (33%) of assessed settlements citing inadequate access to food reported that residents are resorting to the severe coping strategy of limiting meal sizes. Another strategy to reduce intake is reducing the number of meals, reported by 27% of assessed settlements with inadequate access to food. The high proportion of settlements reporting these strategies suggests severe gaps in food consumption.

The diversity of diets in Bor South has also been negatively affected by the shocks. While the vast majority of settlements with adequate access to food reported eating main staples, such as sorghum, (83%), only a small proportion reported other foodstuffs, such as pulses (10%) and vegetables (9%). With cattle keeping declining, the proportion of settlements with adequate access to food reporting meat consumption has also fallen, from 23% in May to 7% in July.

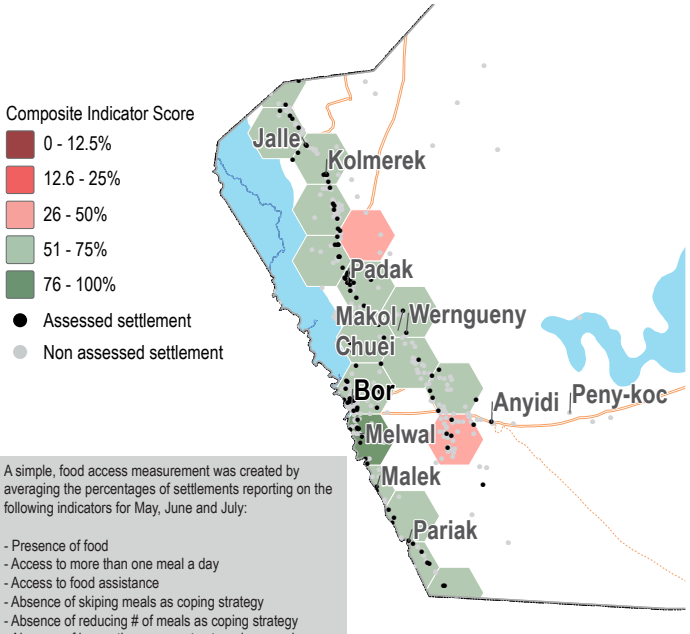
A more positive finding is that a high proportion of assessed settlements reported access to clean water (92%) and the proportion of assessed settlements that reported gastrointestinal diseases is relatively low (15%), suggesting that households are generally still able to practice good hygiene when preparing and eating food.

In response to the limited access to food, households are leaving Bor South in order to preserve their livelihoods or to find food and security. Key informants reported that many households who still possess cattle are relocating to the Bahr el Ghazal region to escape the raids. Reflective of this movement, 70% of assessed settlements reported that at least half the population had left.

Figure 2: Percentage of assessed settlements reporting adequate access to food



Map 2: Level of access to food



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- Access to food assistance
- Absence of skiping meals as coping strategy
- Absence of reducing # of meals as coping strategy
- Absence of harvesting crops not yet ready as coping strategy

All indicators were considered to have the same impact on the composite measure. Values for different settlements have been averaged and represented with hexagons 10km tall. Only hexagons containing two or more settlements and three or more key informants are shown on the map.

Stability of Food Access

The current challenges in access to food look set to continue. While the coming months should see an increase in access to main staples and vegetables from the harvest, reduced rainfall in May and June led to stunted growth of this year's maize harvest. Furthermore, only 36% of assessed settlements reported having inputs for agriculture, such as tools and seeds. Hence, it is likely that agricultural output will be below average this year.

Moreover, current coping strategies are likely to become increasingly strained. Rising prices are increasing the pressure on those households that are depending on markets for food. In addition, coping strategies that rely on social networks, such as borrowing food, may become more difficult as the disruption to livelihood sources encourages the wealthiest population to leave. Those who remain will have fewer relatives and neighbours to turn to. Despite these challenges, an upscale in humanitarian assistance seems unlikely given the urgent needs of many other counties in Jonglei.

All these factors suggest that the low levels of adequate food access in Bor South will continue in the medium term unless the security situation improves.

1 WFP, South Sudan Monthly Market Price Monitoring, June 2017.

Duk County: Food Security and Livelihoods Profile

Jonglei State, South Sudan, May-July 2017

of KI interviews conducted: 265
# of assessed settlements: 44
# of FGDs conducted: 2

Livelihoods Overview

Typical Livelihoods

Typical livelihoods in Duk County centred on agro-pastoralism: a combination of subsistence farming and cattle keeping. To increase food intake during the lean season, households would also hunt, fish, and gather wild foods. Throughout the year, many households would engage in small businesses, such as selling firewood, using the income generated to purchase food in the markets.

Hazards (Shocks)

Following the violence in Juba in July 2016, fighting between armed groups broke out in parts of Duk. While this conflict has largely subsided in the county, intercommunal violence, in particular cattle raids and child abductions, persists.

Vulnerability (Resilience)

The conflict has severely disrupted pre-crisis livelihoods. As it has become dangerous to work in the fields, 60% of settlements citing inadequate access to food reported the primary reason to be that it was unsafe to cultivate. Moreover, in July, 12% of settlements citing inadequate access to food reported that the main reason was that fighting had destroyed their crops. Subsequently, only 20% of assessed settlements from May to July reported practising agriculture. The violence is also threatening livestock keeping as cattle are reportedly taken in raids. Sixty percent of assessed settlements reported cattle ownership: the lowest proportion amongst assessed counties in Jonglei.

As key livelihood sources have been disrupted, supplementary sources, such as fishing, continue to be important, particularly for settlements in the West of the county with access to the Nile. Twenty percent of assessed settlements reported fishing and hunting to be the main source of food.

Since fishing and hunting cannot fill the gaps in consumption for many households, markets have become a key source of food in Duk. Purchasing was reported to be the main food source by 35% of assessed settlements, enabled by the relatively high market access in the county, reported by 90% of assessed settlements.

However, purchasing many food items has become more difficult due to the insecurity in Greater Bor. Ambushes are reducing the flow of goods along the Juba trade route and nationwide inflation is increasing prices. All assessed settlements citing market access reported rising prices for food types such as oil and sugar from May to July.

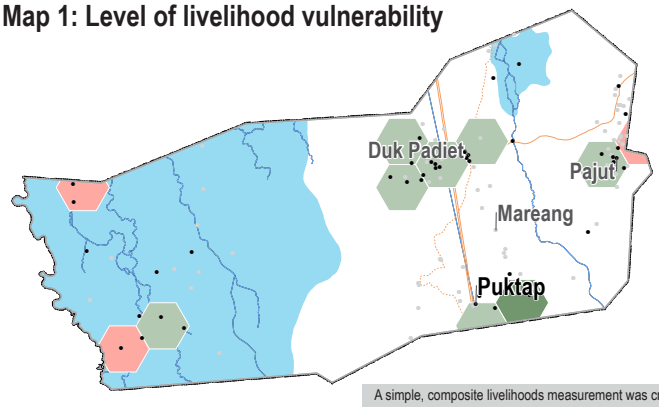
Coping Strategies

In response to the strains on livelihoods, households have increased foraging. Nineteen percent of assessed settlements reported wild foods to be their main food source. Although wild fruits form part of typical lean season diets, households are also eating thou and lalop leaves, which is considered an emergency coping strategy as the leaves are believed to cause diarrhoea if eaten in excess. This can further reduce nutritional intake.

Households are also relying heavily on social networks. Borrowing food from neighbours and relatives was the most frequently cited coping strategy, reported by 40% of assessed settlements citing inadequate access to food, and 27% of assessed settlements with inadequate access to food reported borrowing money for food.

As their own means of production have been almost exhausted, many settlements are relying on humanitarian assistance. Forty-three percent of settlements reported receiving a food distribution in the past three months and 18% reported humanitarian assistance to be their main source of food. When food distributions decreased in June, 71% of settlements citing inadequate access to food reported the primary reason to be the halting of food distributions. This demonstrates the extent to which many households now rely on food assistance.

Map 1: Level of livelihood vulnerability



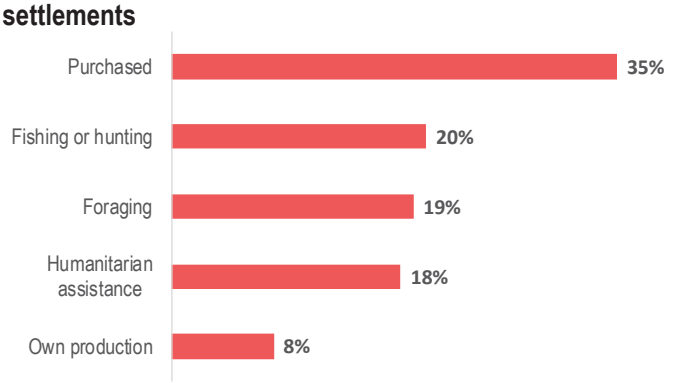
Composite Indicator Score
- 0 - 12.5%
- 12.6 - 25%
- 26 - 50%
- 51 - 75%
- 76 - 100%
- Assessed settlement
- Non assessed settlement

A simple, composite livelihoods measurement was created by averaging the percentages of settlements reporting on the following indicators for May, June and July:

- Access to cultivation/own production as main source of food
- Access to functioning markets
- Access to land
- Absence of selling livestock as coping strategy
- Absence of consuming seed stock as coping strategy
- Access to agricultural inputs
- Access to their own cattle

All indicators were considered to have the same impact on the composite measure. Values for different settlements have been averaged and represented with hexagons 10km tall. Only hexagons containing two or more settlements and three or more key informants are shown on the map.

Figure 1: Main source of food reported in assessed settlements



Food Security Overview

Food Availability and Access

Although the disruption to typical livelihood sources has severely limited access to food in 2017, reported access to food has risen from 0% in January to an average of 29% between May and July. This is largely due to the upscale in humanitarian assistance since May. The reported falling price of sorghum demonstrates the effects of the increased assistance: Key informants (KIs) reported that the price has fallen rapidly from 10-12,000 SSP per 50kg in April to 3,000 SSP in July. Given the importance of markets in accessing food in Duk, these lower prices have likely played a critical role in increasing food availability even for those not directly receiving assistance.

However, the quality of food remains a concern. During the wet season, hunting becomes more difficult due to flooding and vegetation growth, and wild fruits go out of season. With trade routes and agriculture still strained, foods other than the main staples associated with humanitarian assistance, such as sorghum, are difficult to obtain. While 87% of settlements with adequate access to food reported residents eating main staples, only 12% reported vegetable consumption and none reported meat consumption in June and July. The change in food sources from own production, to markets and humanitarian assistance, is leading to less diverse and less nutritious diets.

Despite the somewhat improved access to food, those settlements still citing inadequate access reported resorting to severe and moderately severe coping strategies. These settlements reported that residents were reducing food intake by limiting meal sizes (38%) and reducing the number of meals (26%). Moreover, reflective of the high prices of many foods, 29% of assessed settlements with inadequate access to food reported that populations are eating less expensive food types, such as red sorghum, which is believed to be less nutritious.

Map 2: Level of access to food

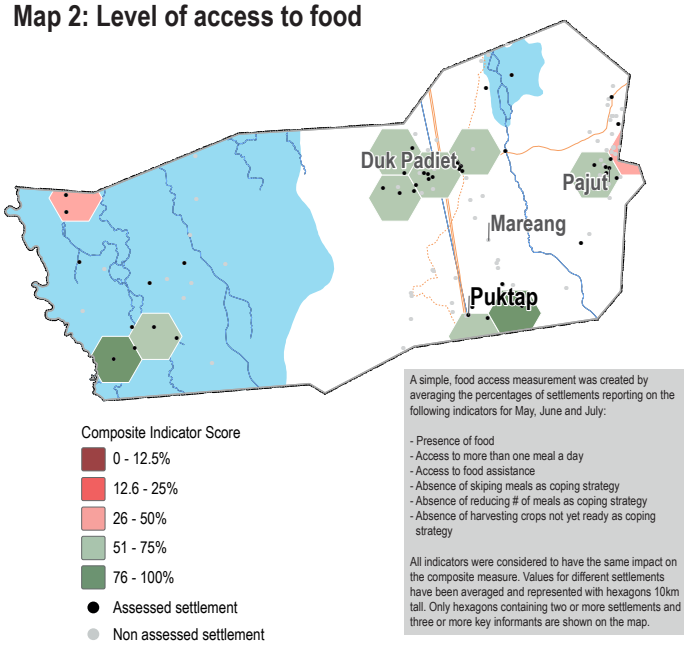
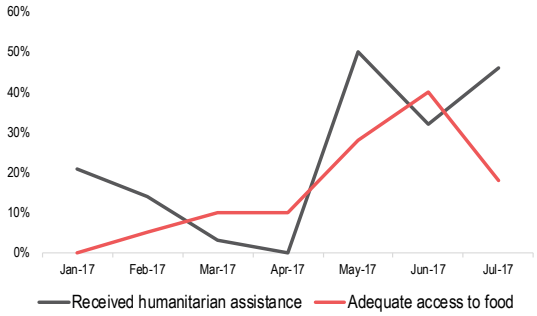


Figure 2: Proportion of assessed settlements reporting humanitarian assistance and adequate access to food



Some populations are at risk of further reducing nutritional intake due to diarrhoea. One quarter of assessed settlements reported no access to clean water, and rates of gastrointestinal diseases were particularly high in May, reported as the primary health concern by 41% of settlements. With medical interventions from organisations such as CRS and PAH[1], the rate reduced to 10% by July. As long as some settlements cannot access clean water, however, the risk of another outbreak remains high.

Stability of Food Access

A slight increase in access to food can be expected in the following months as the sorghum harvest arrives. However, few settlements still report cultivating and only 15% reported access to agricultural inputs, such as seeds. In particular, 33% of assessed settlements reported looting of farm tools. The harvest, therefore, is likely to fall below average.

Moreover, the social networks that are so critical to current coping strategies are likely to become more strained in the future as wealthier populations are encouraged to leave Duk in search of food and security. In July, 53% of assessed settlements had reportedly lost at least half of their original population. For those that remain, there are fewer people from whom to borrow food and money.

The lower agricultural output and strained social networks will likely leave households even more dependent on humanitarian assistance once food stocks from the harvest run low. Moreover, many of the current coping strategies relate to humanitarian assistance. Given that markets are the main source of food, the role food assistance plays in keeping the price of sorghum low is critical in ensuring households can afford to purchase food. In addition, focus group discussion (FGD) participants reported that borrowing food is often associated with humanitarian assistance, as household members are sent to borrow food when a food distribution arrives in a relative's village. Humanitarian assistance, therefore, will likely continue to play a critical role in food access in Duk, both directly and indirectly.

1 Source: WHO, Cholera Response Updates, 23 June 2017.

Fangak County: Food Security and Livelihoods Profile

Jonglei State, South Sudan, May-July 2017

of KI interviews conducted: 126
# of assessed settlements: 40
# of FGDs conducted: 2

Livelihoods Overview

Typical Livelihoods

Typical pre-crisis livelihoods in Fangak included a combination of subsistence farming, livestock rearing, trading and to a lesser extent fishing.[1] Located along and in close proximity to the Nile, households (HHs) have access to an abundance of wild foods and fertile soils; however, seasonal flooding occurs most years, often reducing harvest yields. HHs and traders often travelled from Fangak to Tonga (Upper Nile) to access markets to purchase food and non food items (NFIs). Additionally, at these larger markets HHs could sell livestock, critical for purchasing staple foods during the lean season. During times of low rainfall HHs would also increasingly fish and consume wild foods to meet consumption needs.

Hazards (Shocks)

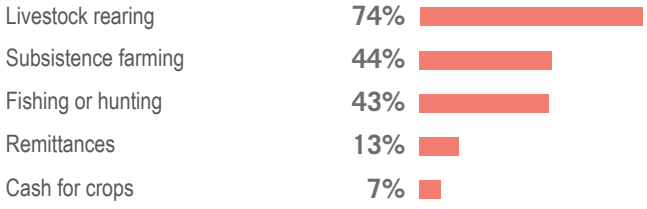
- Atypical flooding between July and November 2016 resulted in the destruction of food stocks, and the spread of both human and livestock diseases.
- In 2016, an upsurge in inter-communal fighting forced HHs to flee to hard-to-reach areas of Fangak that are considered to be safer.
- In May 2017, conflict in Tonga in Upper Nile led to an influx of internally displaced persons (IDPs) in Fangak and disrupted key supply chains and livestock markets.

Vulnerability (Resilience)

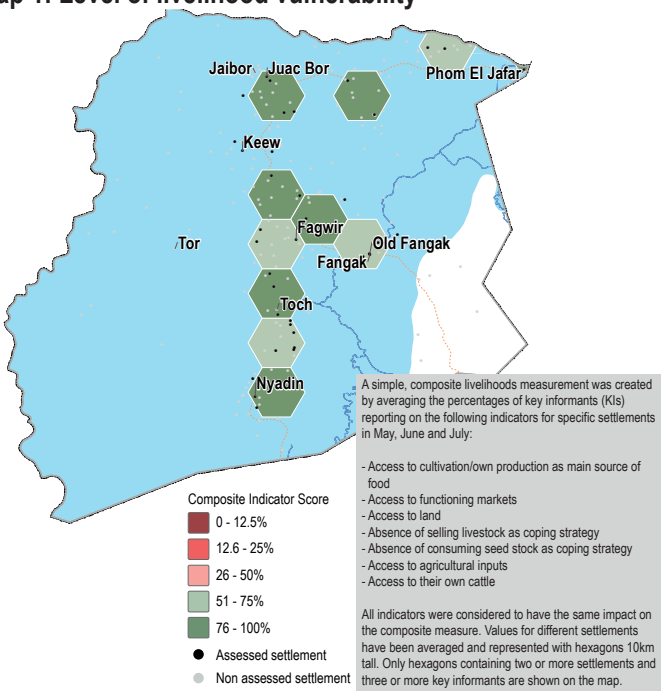
Atypical flooding in 2016 and an upsurge in conflict in May 2017 resulted in a disruption of current livelihood sources across assessed settlements in Fangak. According to REACH AoK data, 54% of assessed settlements reported that the destruction of crops due to natural disaster was the leading cause for inadequate access to food. Furthermore, the destructions of crops left HHs with limited seed stocks for this year's planting season, reflected by only 68% of assessed settlements reporting access to agricultural inputs. However, 89% of assessed settlements reported ownership and access to cattle[2], enabling access to livestock sales, as well as the provision of milk and meat. Three quarters (77%) of assessed settlements reported making use of pre-crisis livelihood sources including livestock rearing and farming.

Nearly all (88%) assessed settlements reported access to markets, although distance to markets and the price of commodities diminished their ability to effectively utilize markets for purchasing food and NFIs. KIs mentioned a reduction in supplies arriving to secondary markets in Fangak, forcing HHs to travel further distances to find critical commodities. As reported, 40% of assessed settlements with access to markets reported walking one hour to half a day to access markets and 13% walked a full day, limiting the amount of goods HHs can trade

Figure 1: Main livelihood sources reported by assessed settlements



Map 1: Level of livelihood vulnerability



at markets. Additionally, the price of sugar, oil and sorghum increased in every assessed settlement reporting access to markets, likely linked to the continued macroeconomic instability and the disruption of the northern corridor supply route, an important trade route for markets in Jonglei and Upper Nile. As a result, 33% of assessed settlements reporting high prices as a top three reason for inadequate access to food. Furthermore, an increase in conflict near key livestock markets, such as Tonga and Malakal, has restricted HHs' ability to trade livestock for staple foods.

Coping Strategies

According to FGDs, some HHs are leaving Fangak to seek food and sources of livelihood in other counties, such as Akobo. HHs that remain adopt a series of livelihood coping strategies to mitigate the negative effects of atypical flooding and limited market capacity. Nearly three quarters (73%) of assessed settlements without adequate access to food used social networks, typically kinship, to borrow food (50%) or send their children to live with them (23%), often considered moderate coping strategies. Furthermore, one-third of assessed settlements reported selling additional livestock, also a moderate coping strategy, and 16% reported begging, considered a severe strategy. A lower proportion of assessed settlements in Fangak sold livestock as compared to other counties in northern Jonglei, such as Uror County. This is likely due to the relatively high access to social networks for food and money, and the disruption of livestock markets, which is limiting the ability to sell assets for food.

Nearly half (49%) of assessed settlements had no access to humanitarian aid, decreasing the number of available options for HHs to mitigate the disruption of livelihood sources. Furthermore, there appears to be a distinct difference in livelihood sources between assessed settlements that have access to aid and those that do not. Over half (59%) of assessed settlements without access to aid considered fishing or hunting a current livelihood source as compared to 32% of assessed settlements with access to aid. As fishing and hunting are vulnerable to

animal migratory patterns and low water levels, assessed settlements without access to humanitarian assistance seem to rely on unstable sources of livelihoods.

Food Security Overview

Food Availability and Access

The proportion of assessed settlements reporting adequate access to food was low (47%) and only 60% consumed two meals a day. Of those reporting adequate food access, 58% considered humanitarian assistance their primary source of food and only 24% reported own cultivation as the primary source of food. Reflecting the importance of access to humanitarian assistance, all assessed settlements that did not have access to humanitarian aid (49%) reported inadequate access to food and consumed only one meal per day.

In addition, assessed settlements without adequate access to food used a wide range of food consumption strategies including reducing meals per day (44%), limiting meal sizes (36%), eating less expensive or preferred food (33%), consuming wild foods (25%), spending days without eating (24%), adults not eating so children can eat (19%) and consuming own seed stocks (13%). According to FGDs, eating less preferred food is a common strategy used during the lean season, but more extreme strategies include consuming wild foods, spending days without eating, only children eating and consuming own seed stocks.

Diets of assessed settlements with adequate access to food reflected the high dependency on humanitarian assistance as the primary source of food. All assessed settlements with adequate access to food reported consuming staple foods, 65% ate pulses and 31% used oil. Despite high cattle ownership and engagement in livestock rearing, assessed settlements consumed minimal amounts of milk (3%) and meat (0%). As a result, the diet diversity of assessed settlements was poor, indicating limited access to food other than food items distributed during General Food Distributions (GFDs).

Across assessed settlements, 71% reported gastrointestinal related diseases including suspected cholera, diarrhoea and stomach pains, as a top three health concern. This is likely linked to the low access to clean water and high levels of open defecation. According to KIs, 61%

Map 2: Level of access to food

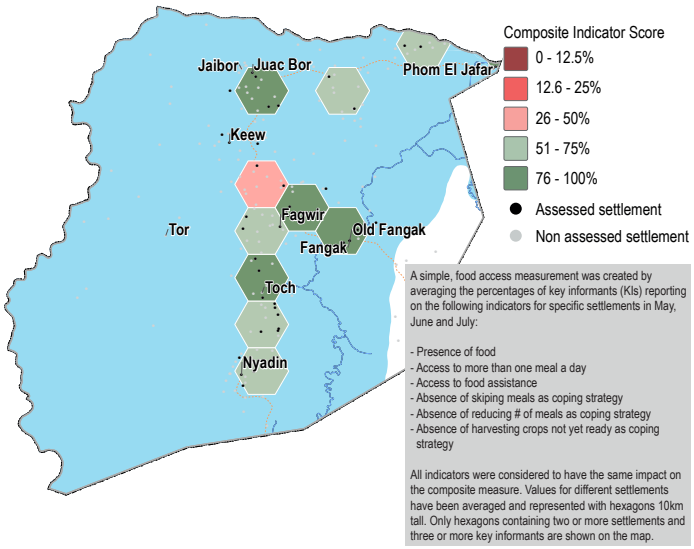


Figure 2: Average proportion of assessed settlements reporting adequate access to food

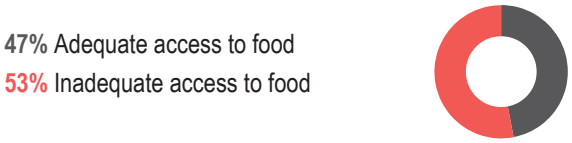


Figure 3: Average proportion of assessed settlements without adequate access to food reporting consumption-based coping strategies

of assessed settlements did not have access to clean water and no settlements reported using latrines, a proxy for open defecation which is closely associated with the spread of cholera. Furthermore, 25% of assessed settlements considered suspected cholera as the primary cause of death. The high occurence of reported diseases related to poor water quality could limit the absorption of key nutrients, thus deminishing the benefits of access to food.

Stability of Food Access

Assessed settlements' current access to food is relatively unstable due to consumption and sale of productive assets, a high reliance on GFDs, unstable supply chains and unpredictable weather patterns. One-third of assessed settlements reported selling livestock to cover consumption gaps, reducing wealth and access to milk for the next lean season. Further diminishing the level of future harvests, 13% of assessed settlements reported consuming seed stocks, which are reportedly already low due to the poor harvest last year.

Over half of assessed settlements relied on GFDs as their primary source of food, and settlements without access to food aid relied on less predictable food sources such as fishing and hunting.

Furthermore, current supply chains have been disrupted due to conflict, which is preventing commodities from reaching secondary markets. If there were to be an upsurge in conflict during the next dry season, it is probable that the availability of goods in markets will decrease further and prices will continue to rise, limiting HHs' ability to trade, a critical source of food in the lean season.

Due to Fangak's geographic location there is a constant risk of atypical flooding, which could further reduce food stocks and limit HHs' ability to replenish seed stocks. Additionally, flooding could increase the risk of water-borne diseases, which could in turn increase livestock mortality rates. As a result, assessed settlements are vulnerable to potential shocks that could reduce future food stocks and force HHs to adopt severe coping strategies to mitigate food consumption gaps.

1 FEWSNET Livelihood Zones Report 2013.

Nyirol County: Food Security and Livelihoods Profile

Jonglei State, South Sudan, May-July 2017

of KI interviews conducted: 222
# of assessed settlements: 46
# of FGDs conducted: 3

Livelihoods Overview

Typical Livelihoods

Populations in Nyirol are traditionally agro-pastoralists, with cultivation and livestock rearing important sources of livelihoods.[1] Pre-crisis, the main crops grown were sorghum, maize, groundnut, sesame and vegetables. Livestock is generally reared for both household (HH) and commercial purposes with poultry mostly for HH consumption. Additionally, markets allowed HHs to supplement low crop yields by selling livestock and natural products, firewood and wild food, to buy staple foods. Closer to the lean season, HHs gathered and sold tukul materials, increased their consumption of wild foods and sold off livestock in order to fill consumption gaps.

Hazards (Shocks)

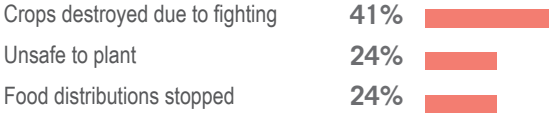
- In February and April 2017, conflict in Uror County led to an influx of new IDP arrivals in Nyirol.
- In April 2017, upsurge of conflict in Nyirol led to displacement of HHs within the county, with HHs seeking refuge in remote locations and in locations offering access to humanitarian assistance such as Lankien.
- Ongoing inter-communal conflict in both 2016 and 2017, including cattle raiding, continues to increase insecurity.
- In 2017, late rains have resulted in planting delays.

Vulnerability (Resilience)

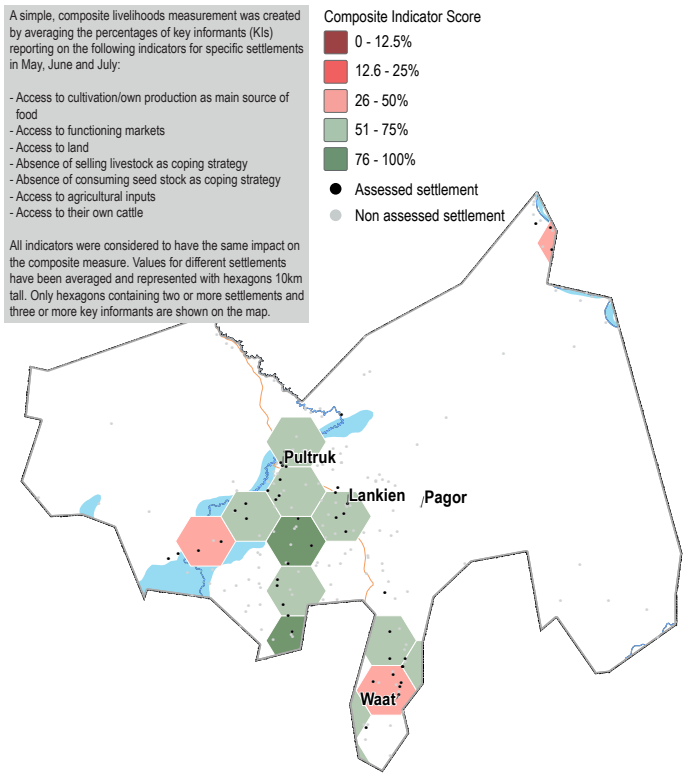
Access to traditional livelihood sources seems to remain relatively high, with 56% of assessed settlements reporting involvement in farming. In addition, access to livestock remains high, with 76% of assessed settlements reporting ownership and access to cattle. However, conflict has limited livelihood sources in Nyirol. From May to July, assessed settlements reported that the primary reasons for inadequate access to food were the destruction of crops due to conflict (41%) and an unsafe planting environment (24%). In addition on average only 45% of assessed settlements reported having access to agricultural inputs, citing abandonment of tools (19%) and looting (17%) as key issues.

As a result of on-going conflict, influx of IDPs and general macroeconomic instability, market access has been severely limited for assessed settlements in Nyirol. Only 38% of assessed settlements had access to markets. According to FGDs, insecurity has limited assessed settlements' ability to trade livestock and

Figure 1: Top 3 reasons provided for inadequate access to food among assessed settlements



Map 1: Level of livelihood vulnerability



natural products for staple foods and non-food items (NFIs) at nearby markets. In addition, due to the depreciation of the South Sudanese Pound (SSP), an increase in demand from new arrivals and a reduction in available commodities, prices in markets continue to rise, further diminishing the purchasing power of assessed settlements. According to REACH AoK data, the price of sugar has reportedly risen in 78% of assessed settlements with access to a market, the price of oil in 84% and the price of sorghum in 78%. Traditionally, markets provided employment opportunities for HHs, however, no assessed settlements reported HH members engaging in casual labour.

While assessed settlements continue to have access to livelihood sources, persistent insecurity and limited access to trade related to the spill-over of conflict from Uror to Nyirol appear to be main concerns among KIs.

Coping Strategies

A decrease in the scale of livelihood sources has led to an uptake in livelihood-based coping strategies in assessed settlements with inadequate access to food. The most common strategy used is selling livestock (40%), typically considered a low to medium stress strategy. However, according to KIs, HHs are selling well above average quantity of livestock to afford the continued increase in commodity prices. Assessed settlements also utilize kinship and social networks to borrow food (43%) and money (13%) to fill consumption gaps, both ranked as medium stress livelihood coping strategies.

Due to spikes in insecurity in Uror County and within southern

Nyirol, HHs are using humanitarian assistance as a coping strategy. According to a recent Oxfam assessment in Nyirol[2], over half of HHs have received agriculture or fishing support from humanitarian actors, providing HHs with additional means to mitigate any disruption in livelihood sources. In addition, many HHs have been displaced to remote locations or towns perceived to be safe. FGDs reported that HHs prefer to move to towns such as Lankien where there is a concentration of humanitarian assistance. However, continued influx of IDPs has strained local resources with reports of Lankien having minimal services other than humanitarian assistance. Furthermore, not all IDPs make it to Lankien and some are hiding in remote locations where access to cultivation, livestock, humanitarian assistance and markets are limited.

Food Security Overview

Food Availability and Access

The proportion of assessed settlements reporting adequate access to food increased from 37% in May to 61% in July, and on average 65% reported eating two meals per day. This is linked partly to an increase in humanitarian assistance after the outbreak of conflict in April. However, the use of food consumption coping strategies reported by assessed settlements without adequate access to food suggests severe food consumption gaps. On average 64% of assessed settlements reduce the number of meals consumed per day, 53% restrict adult consumption so children could eat, 44% limit portion sizes, 30% consume less

Map 2: Level of access to food

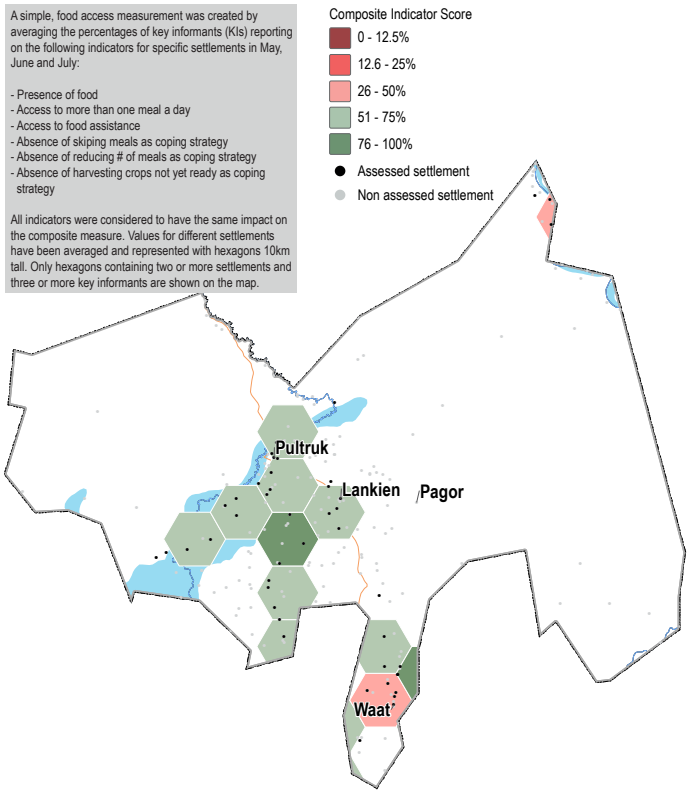
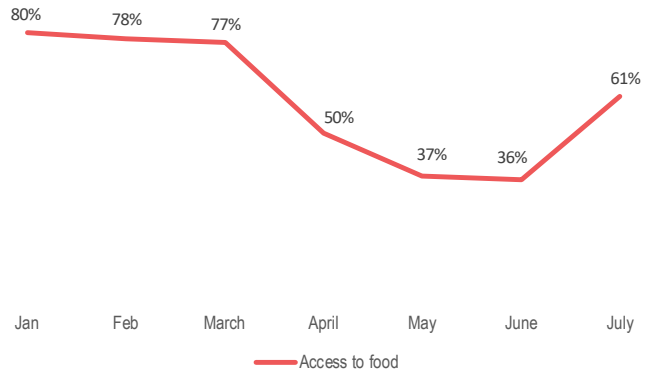


Figure 2: Proportion of assessed settlements reporting adequate access to food



expensive or less preferred food groups and a quarter (26%) reported consuming their own seed stocks.

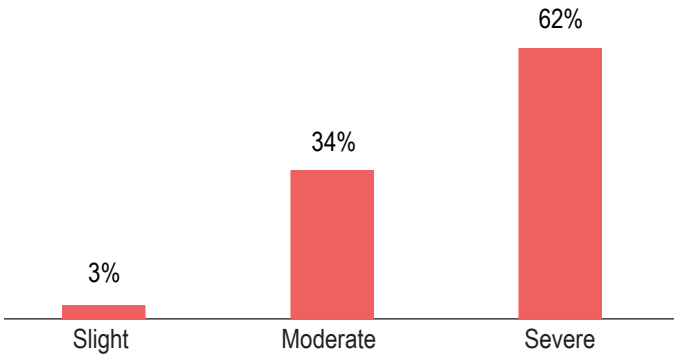
In addition, on average 53% of assessed settlements cited their own production as their main food source and nearly a quarter humanitarian assistance (21%). Other sources such as borrowing from friends and family, and foraging were reportedly the main sources of food in smaller proportions of assessed settlements, 16% and 7%, respectively. The relatively high levels of cultivation and livestock ownership, and low reliance on foraging contribute to a moderate diet diversity. Of the assessed settlements reporting adequate access to food, all consume staples, meat (69%), milk (62%), oil (37%) and pulses (33%), and to a lesser extent fish (17%) and vegetables (11%).

There appears to be a distinct difference between assessed settlements in the central part of the county, near Lankien, and the southern part, near Waat. According to KIs, continued insecurity has contributed to relatively lower access to food for assessed settlements located near Waat. HHs in the south are reportedly scattered throughout the bush, limiting their ability to access food through livelihood sources and markets. Furthermore, FGDs emphasized that most humanitarian assistance is concentrated near Lankien, increasing access to food for assessed settlements located in close proximity.

Over one-third (39%) of assessed settlements reported gastrointestinal issues such as suspected cholera and diarrhoea, as a top three health concern, often related to poor water quality and cooking practices. Nearly half (42%) of assessed settlements reported not using latrines, a proxy for open defecation, likely contributing to increased risk of waterborne diseases and poor ability to absorb key nutrients from food. Additionally, 43% of assessed settlements reported malnutrition as a top three health concern, suggesting important food consumption gaps.

In addition to REACH AoK data, Oxfam conducted a randomly sampled food security and livelihood (FSL) assessment in Nyirol from 19 to 31 July 2017, interviewing 1,200 HHs and measuring key food security indicators, including household diet diversity score (HDDS)[3], reduced coping strategy index (rCSI)[4] and household hunger score (HHS)[5]. According to this assessment,

Figure 3: Household hunger scale based on Oxfam Nyirol assessment



on average HHs experienced stressed HDDS, consuming only six different food groups within the previous seven days. This aligns with REACH AoK data presented previously, which suggest that assessed settlements have a moderate diet diversity. However, 17% of HHs reported a HDDS reflecting crisis (14%) and emergency (3%) levels. Furthermore, HHs headed by females were more likely to have crisis level HDDS than male headed HHs (17% compared to 6% respectively). Finally, likely a result of continued food consumption gaps and the disruption of livelihood sources, 62% of HHs were ranked as severe on the HHS, suggesting that HHs are not able to access a sufficient quantity of food.

Stability of Food Access

In Nyirol, food availability appears unsustainable, due to the use of coping strategies that reduce available productive assets combined with weather patterns and insecurity. The majority of assessed settlements are relying heavily on selling and consuming livestock, a strategy that is not sustainable in the long run. Additionally, a quarter of assessed settlements reported consuming seed stocks, likely reducing future crop yields. Furthermore, late rains have delayed the current cultivation season, likely prolonging the current lean season and reducing projected harvest, limiting HHs' ability to replenish depleted food and seed stocks.

Furthermore, if insecurity were to increase during the dry season, HHs will likely seek safer locations with limited access to cultivation and access to humanitarian aid. As a result, it is possible that displaced HHs will increase their dependence on negative coping strategies such as foraging wild foods and excess selling of livestock, reducing current and future food availability, access and utilization. It is also probable that insecurity will continue to limit market capacity, further restricting assessed settlements' ability to access food through trade.

The use of the Oxfam International logo in the Nyirol County profile is due to the use of the data from the Oxfam Nyirol FSL assessment conducted during July 2017, which supplemented the REACH AoK data.

1 FEWSNET Livelihood Zones Report 2013.

2 Oxfam Nyirol assessment July 2017.

3 Household Dietary Diversity Score (HDDS)- commonly used to indicate quality of food consumption, and to a lesser degree, quantity.

4 Coping Strategies Index (CSI) – a method developed by Maxwell et al (2008) to track changes in HH behaviours and indicate degrees of food insecurity when compared over time or to a baseline.

5 Household Hunger Score (HHS) – a method developed by Food and Nutrition Technical Assistance (FANTA) based on perceptions of food insecurity at household levels.

Twic East County: Food Security and Livelihoods Profile

Jonglei State, South Sudan, May-July 2017

of KI interviews conducted: 251
# of assessed settlements: 87
# of FGDs conducted: 2

Livelihoods Overview

Typical Livelihoods

Typically, livelihoods in Twic East revolved around agriculture and livestock. Sorghum, harvested in September, was the main staple, while fishing, hunting and foraging wild foods would supplement depleted food stocks during the lean season. Some households would also run small businesses, such as tea shops, and use the income generated to purchase food at the markets.

Hazards (Shocks)

In the past year, Twic East has experienced both natural and man-made disasters:

- In August 2016, large-scale floods reportedly displaced over 20,000 people[1].
- Cattle raids and child abductions are a persistent security concern in Twic East. With several attacks reported this year, intercommunal tensions remain high.

Vulnerability (Resilience)

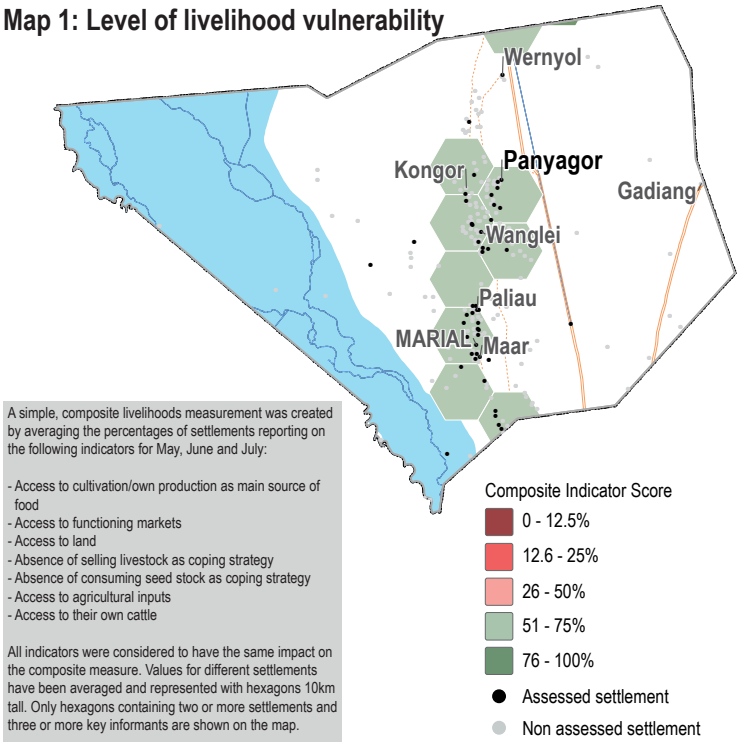
Agriculture has suffered severely from these shocks. The floods destroyed much of the 2016 harvest, while the insecurity has made it dangerous to cultivate for the next harvest. Eighty-seven percent of assessed settlements citing inadequate access to food reported that the primary reason was that it was unsafe to cultivate[2]. As a result only 2% of assessed settlements reported cultivation as the main food source. The insecurity has also disrupted cattle keeping, with cattle reportedly taken in raids. The proportion of assessed settlements reporting cattle keeping fell rapidly from 85% in May to 12% in July.

Hunting and fishing are also reportedly to be unsafe due to the insecurity. However, as perceptions of security during the day improved in July, the proportion of assessed settlements reporting hunting and fishing rose from 21% in May to 46% in July. Thus, they remain important but unstable livelihood sources.

With typical livelihoods disrupted, households have turned to casual labour. Twic East has the highest proportion of assessed settlements reporting casual labour in Western Jonglei (31%). This work is likely enabled by the high levels of market access, with 90% of assessed settlements reporting access to a market.

Reflective of the increased dependence on casual labour, purchasing was cited as the main food source by 39% of assessed settlements. However, for those who rely on markets, the high rates of inflation in South Sudan, combined with disruption from ambushes on the trade route from Juba, are raising prices, and reducing consumer purchasing power. Twenty-seven percent of settlements reporting inadequate access to food cited high prices to be the secondary reason.

Map 1: Level of livelihood vulnerability



A simple, composite livelihoods measurement was created by averaging the percentages of settlements reporting on the following indicators for May, June and July:

- Access to cultivation/own production as main source of food
- Access to functioning markets
- Access to land
- Absence of selling livestock as coping strategy
- Absence of consuming seed stock as coping strategy
- Access to agricultural inputs
- Access to their own cattle

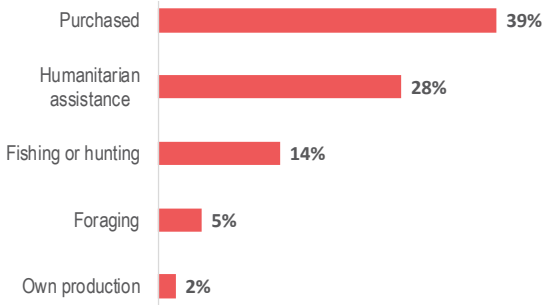
All indicators were considered to have the same impact on the composite measure. Values for different settlements have been averaged and represented with hexagons 10km tall. Only hexagons containing two or more settlements and three or more key informants are shown on the map.

Coping Strategies

As typical livelihoods can no longer provide stable and adequate access to food, support networks play a critical role in the resilience of settlements in Twic East. For those households who still have neighbours or relatives with food, borrowing food is a common coping strategy, reported by 32% of assessed settlements citing inadequate access to food.

Much of the food available comes from humanitarian assistance. NGO food distributions and cash for assistance/food for assets (CFA/FFA) programmes were the second largest source of food in the county, cited by a combined total of 28% of assessed settlements. The proportion of settlements reporting of casual labour in Twic East may also be partially due to the prevalence of CFA/FFA programmes. The dependency of many households in Twic East on food assistance is further underlined by the fact that almost half (49%) of assessed settlements reporting insufficient food accessc cited the halting of food distributions as a reason.

Figure 1: Main source of food reported in assessed settlements



Food Security Overview

Food Availability and Access

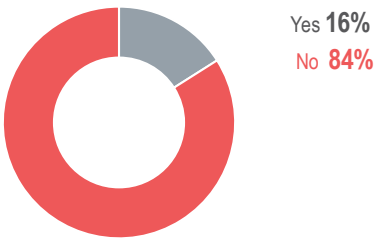
Given the disruption to typical livelihoods, only 16% of assessed settlements reported adequate access to food. In particular, access dropped to 0% in June, typically believed to be the most 'lean' month before the maize harvest is gathered. Another seasonal strain is the fact that thou tree fruits, a key wild food, begin to go out of season in May.

In response to the limited access to food, settlements reported coping strategies that are considered severe or moderately severe, according to focus group discussion (FGD) participants. The coping strategy most frequently cited by settlements reporting inadequate access to food was eating less expensive food (58%), such as red sorghum, which is believed to be less nutritious. Other common coping strategies focused on reducing consumption, either by decreasing meal sizes (reported by 52% of assessed settlements with inadequate access to food) or by reducing the number of meals (reported by 50% of assessed settlements with inadequate access to food), which indicates severe gaps in food consumption.

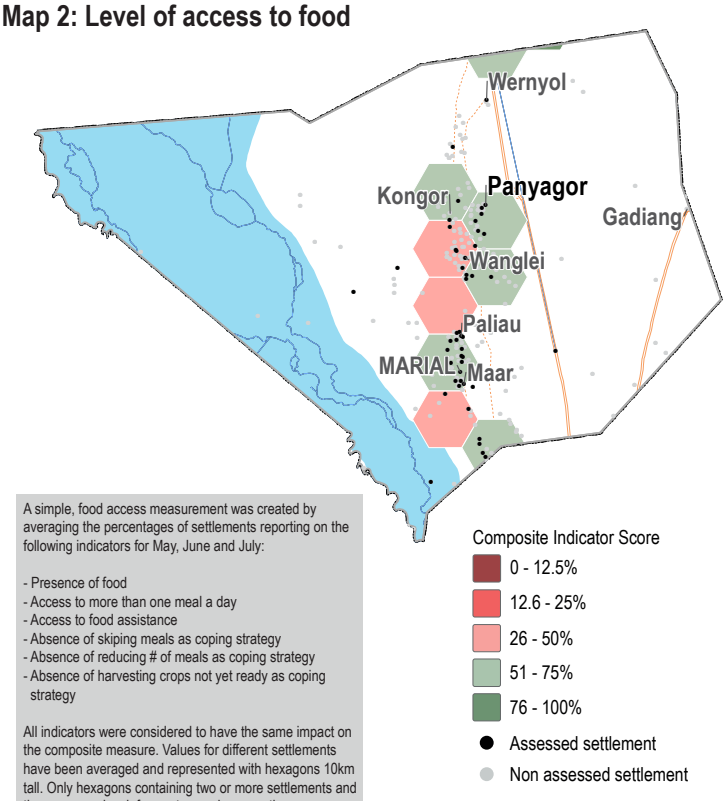
Even for those settlements citing adequate access to food, the reported consumption of different food types reportedly varied from month to month, suggesting that diversity of diets is not stable in Twic East.. As cattle ownership fell, so too did meat consumption, from 33% of assessed settlements citing adequate access to food in May, to 17% in July. On the other hand, the beginning of the vegetable harvest led to an increase in reported vegetable consumption, from 20% of assessed settlements with adequate access to food in May, to 100% in July (albeit of a small baseline). Staples, such as sorghum and maize, remain the only constant food type, reported to be consumed in 80% of settlements with adequate access to food.

With regard to utilisation, residents in Twic East reported relatively high levels of access to clean water (92%), reducing the risk of contracting digestive diseases through food. Fifteen percent of settlements reported digestive diseases to be their main health problem. While still a cause for concern, this proportion is lower than in neighbouring counties such as Ayod.

Figure 2: Percentage of assessed settlements reporting adequate access to food



Map 2: Level of access to food



A simple, food access measurement was created by averaging the percentages of settlements reporting on the following indicators for May, June and July:

- Presence of food
- Access to more than one meal a day
- Access to food assistance
- Absence of skiping meals as coping strategy
- Absence of reducing # of meals as coping strategy
- Absence of harvesting crops not yet ready as coping strategy

All indicators were considered to have the same impact on the composite measure. Values for different settlements have been averaged and represented with hexagons 10km tall. Only hexagons containing two or more settlements and three or more key informants are shown on the map.

Stability of Food Access

A small increase in food availability can be expected in the coming months as the September sorghum harvest arrives. However, the conditions that are undermining livelihoods and resulting in limited food access are likely to persist.

There are few signs that the intercommunal violence will subside. Hence, it is likely that many households will only be able to cultivate their fields, fish, and hunt, during windows of relative calm.

Even when it is possible for people to access land for cultivation, only 17% of assessed settlements reported access to agricultural inputs, reportedly because households were forced to consume seeds during the lean season. As a result, agriculture is not likely to fill the gaps in food consumption any time soon.

Given that the long-term disruption to typical livelihood sources has already driven many households in Twic East to resort to severe and moderately severe coping strategies, populations in the county are now highly vulnerable to further shocks. This is particularly concerning given KI reports of reduced rain in May and June depleting the maize harvest this year. In June, 19% of assessed settlements with inadequate access to food reported natural disasters destroyed crops as the primary reason. These shocks may further reduce households' food stocks for the leans season.

1 Source: Eye Radio, Floods Displaxe over 20,000 in Twic East, 9 Aug 2016.
2 Unless otherwise stated, all figures are an average across the months of May, June and July.

Uror County: Food Security and Livelihoods Profile

Jonglei State, South Sudan, May-July 2017

of KI interviews conducted: 225
# of assessed settlements: 50
# of FGDs conducted: 6

Livelihoods Overview

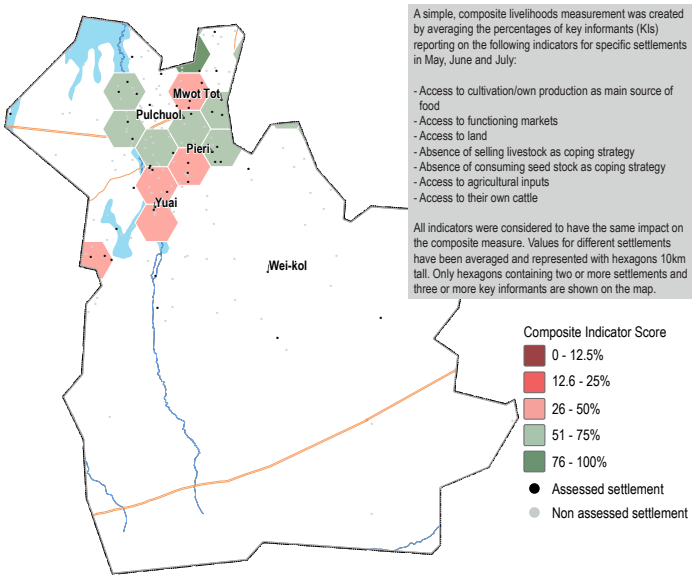
Typical Livelihoods

Pre-crisis, households (HHs) in Uror were predominantly agro-pastoralist. HHs relied on subsistence farming, growing crops such as local sorghum, maize, sesame and okra, and livestock rearing, both for commercial and domestic purposes[1]. HHs also traditionally engaged in fishing during the wet season and hunting throughout the year. Finally, markets played a critical role in facilitating trade between HHs and suppliers, including the sale of livestock and natural productions (i.e. wild fruits and tea), to supplement traditional reduction of food stocks during the lean season.

Hazards (Shocks)

- An outbreak of fighting in February 2017 followed by a re-escalation of armed conflict in April 2017, forced a large portion of HHs to relocate to safer areas, with many of them fleeing to remote locations within Uror and neighbouring counties.

Map 1: Level of livelihood vulnerability

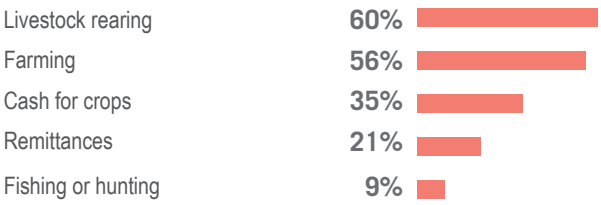


Vulnerability (Resilience)

In Uror, conflict had a negative affect on assessed settlements' access to livelihoods, with 62% of assessed settlements from May through July reporting that the destruction of crops by armed actors (48%) and unsafe planting environments (15%) was the leading cause of inadequate access to food. Furthermore, 75% of assessed settlements reported no access to agricultural inputs, and 62% indicated the inputs were either abandon, stolen or hidden, all of which are proxies for high levels of insecurity. Despite the limitations to cultivation, from May to July on average 67% of assessed settlements reported engaging in subsistence farming or growing cash crops[2], although FGD participants noted that plots are small. In addition, 71% of assessed settlements reported some HHs owned and had access to cattle, indicating that although livelihood sources are reportedly limited due to insecurity assessed settlements still have access to basic livelihood sources.

While access to livelihoods appears to be relatively high, market access has considerably declined from 81% of assessed settlements having access in April to an average of only 25% of assessed settlements from May through July. According to FGD participants, this is attributable to the looting of markets during fighting as well as broader conflict-related disruptions of market supply chains to the country. In addition, prices continue to rise due to hyperinflation and persistent supply constraints. From May through July on average, 95% of assessed settlements with access to markets reported that sugar was unavailable or increased in price, the price of oil increased in 81%, and sorghum also increased in 90% of assessed settlements. As a result, HHs' terms of trade (i.e. amount of food a HH can receive by selling one head of cattle) has decreased, thus, diminishing the wealth of HHs possessing cattle and limiting their ability to access food through selling livestock.

Figure 1: Main livelihood sources reported by assessed settlements



Coping Strategies

Assessed settlements without adequate access to food practiced multiple livelihood coping strategies ranging from low to high severity to compensate for adverse shocks. Utilizing social networks to borrow food or money is considered a moderate coping strategy and was the most commonly reported strategy (64%). Furthermore, selling livestock was practiced by 50% of assessed settlements without adequate access to food. Although HHs typically rely heavily on livestock for the production of milk and trade during the lean season, KIs emphasized that the amount of livestock sold this season is well-above average to compensate for the depletion of food stocks and increased commodity prices. Finally, 13% of assessed settlements without adequate access to food reported that some HHs engaged in begging, often considered a severe coping strategy.

Frequent usage of livelihood coping strategies could be linked to the minimal access to humanitarian assistance. Only 15% of assessed settlements reported access to humanitarian aid, limiting the number of options available to cope with reduction in livelihoods and continued displacement. According to KIs, insecurity is the primary reason assessed settlements cannot access aid. After the upsurge of conflict in April, many HHs fled to remote locations, limiting their ability to access aid and other basic services. As a result, HHs are resorting to various coping strategies to compensate for the inability to access markets and food assistance.

Food Security Overview

Food Availability and Access

Reflective of high levels of insecurity, the proportion of assessed settlements reporting adequate access to food has severely declined as the year progressed, from an average of 66% of assessed settlements from January to March 2017 to on average only of 25% from May through to July. Furthermore, 59% of assessed settlements reported eating one meal or less per day, indicative of stark food consumption gaps. Consistent with the most severe strategies described by FGD participants, assessed settlements without adequate access to food reported reducing the number of meals eaten per day (58%), adults not eating so children could eat (56%), spending days without eating (35%) and reducing meal sizes (32%), suggesting assessed settlements are utilizing high stress consumption strategies to compensate for the reduction in food availability.

Nearly a quarter (20%) of assessed settlements reported foraging, or fishing or hunting as a primary source of food, reflective of 25% of assessed settlements utilizing wild foods to fill consumption gaps. In particular, FGD participants emphasized the dependency on wild leaves such as thou (local date trees), typically consumed only in times of emergency.

In January, high proportions of assessed settlements had adequate access to food, access to humanitarian assistance, and reported humanitarian assistance as the primary source of food. As the year progressed and insecurity increased all three factors moved downward,

Map 2: Level of access to food

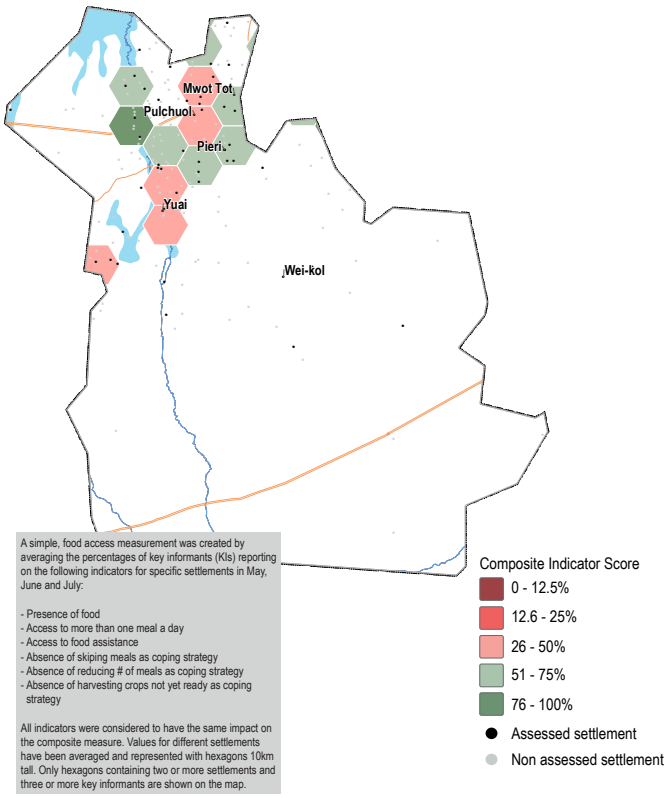
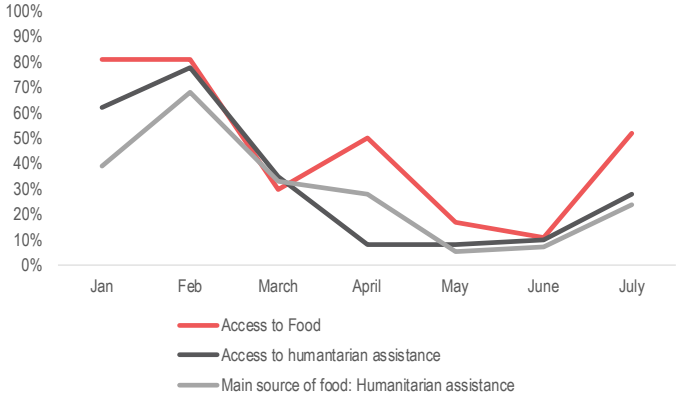


Figure 2: Proportion of settlements reporting adequate access to food, access to humanitarian assistance, and humanitarian assistance as a main source of food.



with the exception of April when there was a spike in food access. This downward trend emphasizes how an increase in conflict can lead to a reduction in food aid for assessed settlements, which also leads to a reduction to adequate access to food.

Assessed settlements with adequate access to food have a relatively positive diet diversity, including the consumption of staples foods (100%), milk and dairy (67%), meat (45%), fish (29%) and vegetables (27%), and to a lesser extent pulses (18%) and fruit (14%). However, FGDs mentioned that it is common for HHs to consume the same meal everyday, which does not constitute a balanced diet.

Over half (51%) of assessed settlements reported malnutrition as a top three health concern and 26% reported it as the leading cause of death, indicating severe and prolonged reduction in food availability, access and utilization.

Stability of Food Access

Overall increased armed conflict in Uror led to low levels of cultivation, coupled with minimal food assistance and market access across assessed settlements, leaving populations at further risk of increased food consumption gaps. According to KIs, assessed settlements are engaging in coping strategies that are depleting productive assets, such as excess selling of livestock and consumption of seeds.

Moreover, below average rains at the start of cultivation delayed the planting season and will likely extend the lean season. Without access to humanitarian assistance, it is probable that assessed settlements will continue to use severe coping strategies to compensate for the reduction in food availability.

Finally, if there was an upsurge of conflict during the dry season, it will likely lead to further disruption of livelihood sources, market access as well as humanitarian assistance. Insecurity will likely continue to motivate populations to displace to perceived safer areas, often in remote locations, where their ability to cultivate will be low and access to basic services and humanitarian assistance will be limited.

1 FEWSNET Livelihood Zones Report 2013.
2 Cash crops include crops that are grown for the sole purpose to sell to markets or commerical vendors to generate additional income and are not consumed by the HH.