



# Yambio County Food Security and Livelihoods Brief

South Sudan, February 2019

## Introduction

The Yambio food security and livelihoods (FSL) brief was conducted as part of GIZ's (The Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH) Food Security and Agricultural Development programme (2017-2019) and funded by BMZ (German Federal Ministry for Economic Cooperation and Development). The programme's main objective is to improve food security for populations affected by conflict and malnutrition. The overall aim is to improve the productivity of farms and reduce reliance on food aid. In the long term, surplus production can be used to supply markets, increasing resilience and income generating activities.

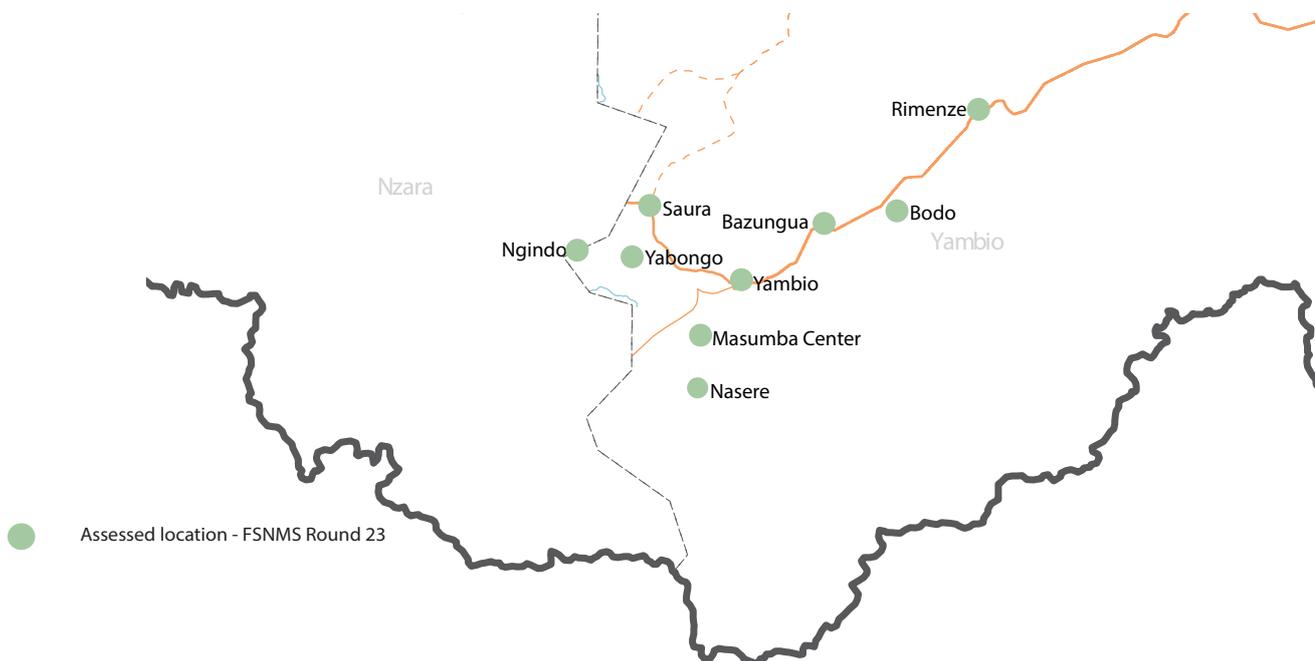
As a result of an increase in insecurity during the 2018 planting season, understanding food security in Yambio County has been a concern. According to OCHA data, approximately 18,500 internally displaced persons (IDPs) were in Yambio county due to insecurity in the first half of 2018, resulting in higher vulnerability to shocks, including unexpected reduction of local resources and high market prices, as many have less assets and resources to access food.<sup>1</sup> Additionally, the influx of IDP likely placed added pressure on local resources.

To better understand the level of livelihood disruption and food insecurity related to the insecurity, the brief analyses information from REACH Area of Knowledge (AoK), focus group discussions (FGDs), and preliminary food security and nutrition monitoring system (FSNMS) data from the World Food Programme (WFP).<sup>2</sup> In December 2018, FSNMS teams collected a total of 104 randomly sampled household (HH) surveys from nine enumeration clusters. In addition, AoK data for Western Equatoria state in January 2019, consisted of 125 key informant (KI) interviews from 122 unique settlements.<sup>3</sup> To better contextualize the data, two FGDs were conducted along with direct observation from REACH field teams.

## Key Findings

- The combination of insecurity during the 2018 planting season, March through April, and short dry spells throughout the growing season, May through August, likely led to a below average harvest and decreased HHs' ability to rely on their own food stocks between harvest periods.
- According to preliminary FSNMS data, the combination of high market reliance and market price volatility has resulted in HHs in Yambio county being exposed to unpredictable market shocks. More than half, 52%, of HHs stated that markets are the main source of cereals after food stocks are depleted. Additionally, 34% of HHs reported unusually high food prices, suggesting that the combination of a below average harvest, supply chain disruptions and an earlier than normal increase in demand is already affecting market prices.
- According to FSNMS data, nearly half of the HHs in Yambio have poor food consumption scores (FCS) and low household diet diversity scores (HDDS), suggesting an overall poor diet diversity. However, 40% of HHs reported experiencing little hunger according to the household hunger score (HHS) and 84% engaged in stress food consumption coping, as per the reduced coping strategy index (rCSI), reinforcing the notion that HHs have sufficient a quantity of food.
- Findings indicate that insecurity disrupted livelihoods and had a negative impact on HH agricultural productivity which has had a spillover effect on HH food consumption. Direct food outcome indicators suggest that HHs have relatively poor food quality, however are consuming a sufficient quantity of food. Market dependency is expected to increase in the coming months as HHs deplete remaining food stocks and switch to markets as their primary source of cereals, however, price volatility is expected to decrease financial access to food.

Map 1: Assessed locations, October 2018



## Background

Yambio county consists of five sub-county administrative zones, payams, and shares a border with Democratic Republic of Congo (DRC) to the south. Livelihoods consist largely of cultivation, both for personal consumption and for sale, small remnant livestock keeping, bee keeping, and fishing.<sup>4</sup> The county is part of the Equatorial maize and cassava livelihood zone, distinguishable by its bi-modal rainfall patterns which occur from March to June and July to November. As a result of the bi-modal rainfall patterns, HHs typically experience two harvest periods, in July and November through December, primarily consisting of maize, sorghum, cassava, groundnuts and sweet potatoes.<sup>5</sup>

During the dry season, December to March, reliance on markets, hunting and foraging increases, with better off HHs typically selling surplus harvest at a higher profit margin. Additionally, proximity to the border provides the county with access to markets in Uganda, Kenya, Democratic Republic of Congo and Central African Republic. Poorer HHs, who typically have lower harvest yields, rely on the sale of natural products, such as charcoal, honey and fruit, in the market and labour opportunities.<sup>6</sup> The most vulnerable HHs typically experience the largest food consumption gaps from May through June, prior to the first harvest.

## Current contributing factors

### Dry spells and pest infestations

Agriculture continues to remain the primary livelihood reported by the majority of HHs. According to preliminary FSNMS data, 72% of HHs reported agriculture and sale of cereals, vegetables and other crops as their primary livelihood, with 94% reporting having access to land and 88% reporting having planted in the 2018 season. However, most of the agricultural activity is dependent on rainfall patterns, exposing HHs to the effects of dry spells and pest.<sup>7</sup> According to rainfall data, there was approximately a 20% decrease in rainfall during the beginning of the second planting season, first dekad of August, likely contributing to reportedly marginally lower per hectare yields.<sup>10</sup> Further, 61% of HHs reported that pest infestation was a limiting factor to agriculture

Figure 1: Yambio county seasonal Calendar<sup>8</sup>

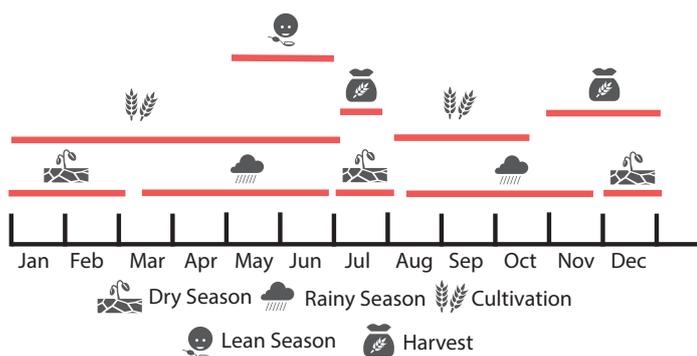
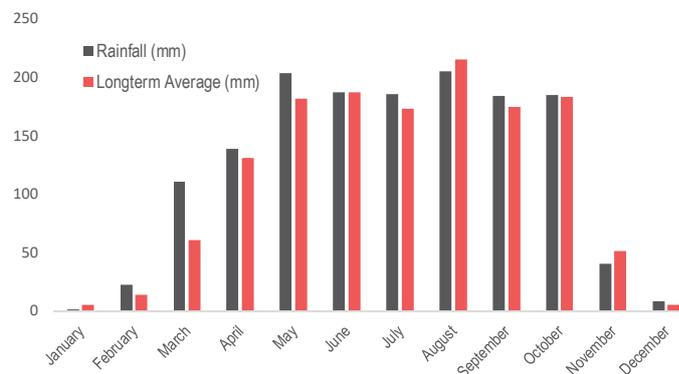


Figure 2: Monthly rainfall data in millimetres, 2018<sup>9</sup>



production. While the dry spell was minimal, relative to other parts of the country, the high pest infestation is likely to have reduced the total crop production.

## Insecurity

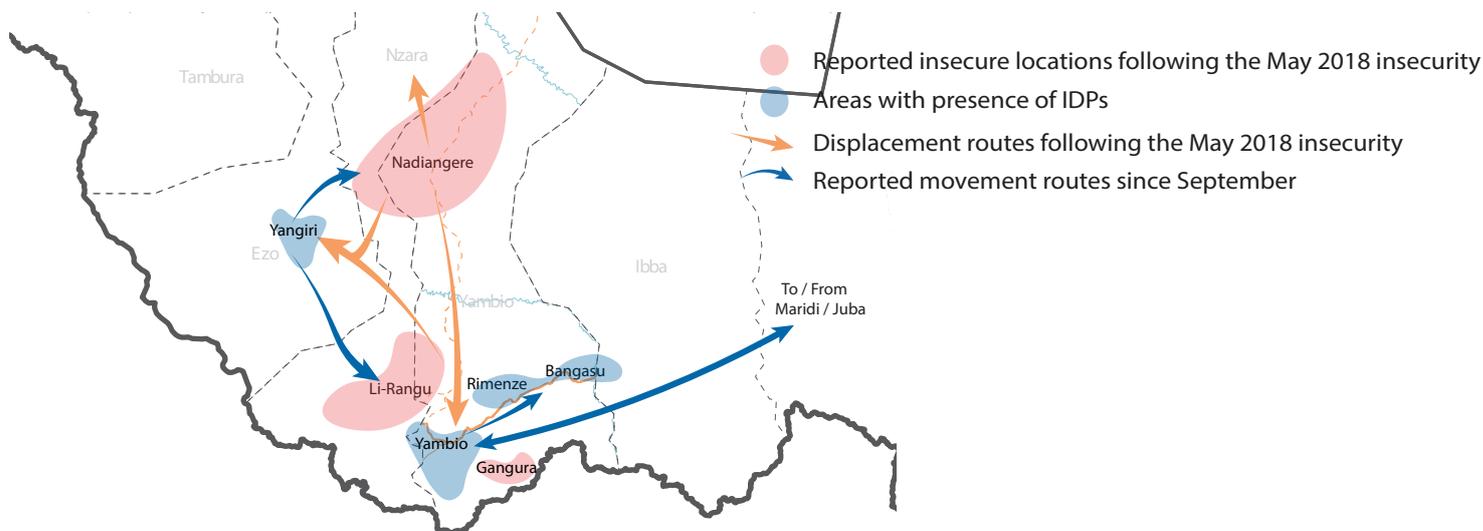
Insecurity was reportedly a major limiting factor for HH engagement in traditional livelihoods, such as agriculture. In May 2018 there was an increase in insecurity in the region; leading to large displacements and disruption of livelihoods, with reportedly an estimated 18,500 IDPs in Yambio county.<sup>11</sup> Further, insecurity reportedly contributed to an over extraction of local resources and an additional strain on the host community (HC) to provide a social safety net for newly arrived IDPs.

Insecurity also reportedly had a direct affect on the HC's livelihood opportunities. According to REACH AoK data, during the main planting season in 2018, KIs reported heightened insecurity in the county, limiting movement, area planted and trade.<sup>12</sup> Further, according to KIs, tensions between cattle herders in Lakes state and farmers in Yambio have been a major issue over the previous years. Pastoralists from Lakes reportedly migrate cattle through key livelihood zones in Western Equatoria state, including Yambio county, often leading to periods of disrupted access to livelihoods and occasional insecurity.<sup>13</sup> Additionally, preliminary FSNMS data recorded that 16% of HHs felt insecurity was as limiting factor during the agricultural season. According to KIs, the locations most affected by the disruption of the planting season are Gangura, Bangasu and Li-Rangu bomas, typically the most productive areas (map 2). Further, 36% of HHs reported that insecurity was a shock that had resulted in a decrease in HH income, disrupting HH financial access to markets for both food and non-food items. Overall, the heightened levels of insecurity led to a number of livelihood disruptions within the county.

## High market prices

Market demand seasonally increases during the dry season, February through March, as HHs deplete food stocks and rely on markets to supplement food gaps.<sup>14</sup> However, the earlier than normal depletion of food stocks has led to a higher than average seasonal increase in demand which is coupled with limited supply of staples, due to insecurity and low production. Further, KIs reported that increasing fuel prices and prior insecurity have disrupted supply chains. According to preliminary FSNMS data collected in December 2018, 34% of HHs were reporting unusually high

Map 2: Displacement patterns, October 2018



market prices; with 54% of HHs reporting that when food stocks are depleted the primary source for cereals is markets, which will likely increase demand and prices in the coming months. Despite, a market with a high availability of food and non-food items, and financial access to most HHs prior to 2018, insecurity has proven to be a major factor in limiting HHs financial and physical access to markets by disrupting trade flows and local supplies.

## Food consumption outcomes

With crop production reportedly disrupted by insecurity and dry spells, 34% of HHs reported cereal stocks will last three to six months, 27% reported cereal stocks are expected to last only one to two months and the remaining 39% reported no cereal stocks. The overall quality of food consumed is relatively poor, likely linked to influx of IDPs, limited market access and poor harvest. The two direct food consumption outcome indicators that are proxies for food quality, FCS and HDDS, suggested HHs had an overall poor diet diversity, with 46% of HHs having a poor food consumption score, reflective of consuming a low frequency of staple foods or other food groups, and 42% having a low household diet diversity, consuming 0-2 food groups in the previous 24 hours.<sup>15</sup> However, indicators that are typically used as proxies for food quantity, HHS and rCSI, reflected relatively sufficient quantity of food consumed, with 40% of HHs reporting little hunger in the previous 30 days and 84% engaging in only stress food consumption coping.<sup>16</sup> HHs are considered to be using stress food consumption coping when the frequency of predetermined food based coping strategies used in previous 7 days ranges between 4 and 18.<sup>17</sup> Overall, the food consumption outcome indicators suggest that while food quality was poor, the quantity of food consumed was relatively sufficient.

## Livelihood change

Similar to food consumption outcomes, the indicators that reflect livelihood change, namely livelihood coping strategies (LCS), suggest that local resources are stressed and HHs have a high exposure to market volatility.<sup>18</sup> According to LCS, 29% of HHs engaged in crisis strategies, including 27% of HHs harvesting crops early due to a lack of food. Further, 42% of HHs reported that they borrowed money to purchase food, often considered a stress coping strategy. However, nearly half of the population reporting

Figure 3: HHS for Yambio county, December 2018<sup>19</sup>

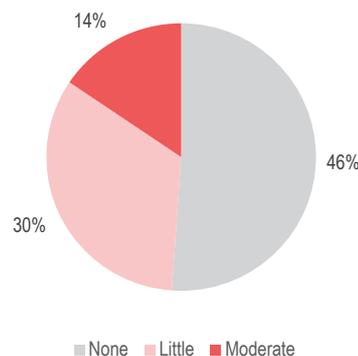


Figure 4: FCS for Yambio county, December 2018<sup>20</sup>

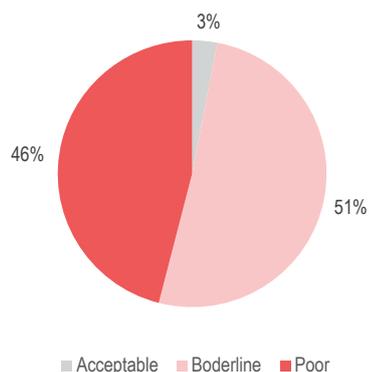
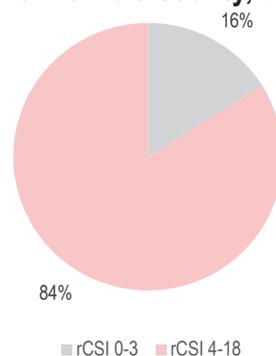
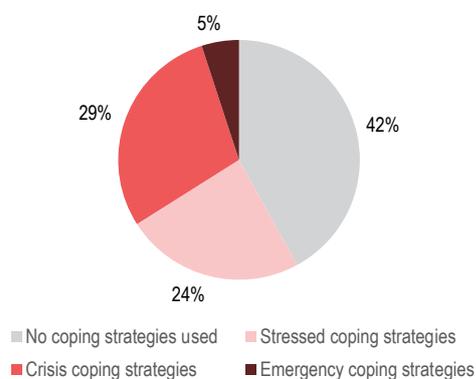


Figure 5: rCSI for Yambio county, December 2018<sup>21</sup>



**Figure 6: Livelihood Coping Strategies for Yambio county, December 2018<sup>22</sup>**



to borrow money further reflects the level of market dependency and aligns with the percentage of HHs reporting unusually high prices as a limiting factor to accessing food. With over half of the population indicating that markets will become the main source of cereals when stocks are depleted, continued market volatility as a result of poor crop production will likely lead to higher than normal demand in the dry season. According to KIs, most supply routes have begun to reopen, however, it is likely demand will out-pace supply, leading to seasonal price trends that are above average. Overall, HHs experienced a significant disruption of their traditional livelihoods, agriculture, which has led to below average crop production and food stock levels, likely resulting in higher market dependency and food expenditure share.

## Conclusion

Yambio county has been primarily affected by the spike in insecurity during the planting season in 2018, which led to a number of subsequent effects that have disrupted HH food security. First, the influx of IDPs into Yambio town and surrounding areas following the insecurity in the first half of 2018, likely led to excessive pressure on local resources and host communities to share food stocks. At the same time, HHs that typically depend on agriculture planted less than normal hectares and a reported pest outbreak led to relatively lower crop yields. As a result, HHs are reportedly depleting food stocks at faster than normal rates, leading to higher market demand. Further, the insecurity disrupted trade routes, leading to lower supplies in the market which is also contributing to higher prices, as the relatively higher demand and lower supplies exacerbate market price volatility. According to outcome indicators, most HHs are consuming a sufficient quantity of food, however, FCS and HDDS suggest that the quality of food consumed is relatively poor. Overall, Yambio county is expected to continue to depend on food stocks for the coming months but will likely shift to higher than normal market dependency until the onset of the first set of rains and the subsequent green harvest. If security remains stable, HHs are likely to be able to engage in normal agricultural activities, resulting in an increase in the first harvest compared to the 2018 harvest.

Endnotes:

- 1 IOM DTM Event Tracking: Yambio, August 2018.
- 2 The FSNMS is a biannual, pre-harvest and post harvest, survey conducted by the World Food Programme (WFP), United Nations Food and Agriculture Organization (FAO) and United Nations Children's Fund (UNICEF) across each county in South Sudan.
3. Through AoK, REACH collects data from a network of Key Informants (KIs) who have sector specific knowledge and gain the information from regularly traveling to and from the settlement, direct or indirect contact with people in the settlement, or recent displacement. Data collected is aggregated to the settlement level and all percentages presented in this fact-sheet, unless otherwise specified, represent percent of assessed settlements within Yambio with that specific response. Although current AoK coverage is still limited and its findings not generalisable with a specified level of precision, it provides an indicative understanding of the needs and current humanitarian situation in assessed areas.
4. FEWSNET South Sudan Livelihood Zone Report, 2018.
5. Ibid.
6. Ibid.
7. Ibid.
8. Ibid.
9. WFP Dataviz.
10. Ibid.
11. IOM DTM Event Tracking: Yambio, August 2018.
12. REACH Situation Overview: Western Equatoria South Sudan, April - June 2018.
13. REACH Report: Maridi County - Conflict and Livelihoods, forthcoming.
14. FEWSNET South Sudan Livelihood Zone Report, 2018.
15. The Food Consumption Score (FCS) is a composite score based on dietary diversity, food frequency, and relative nutritional importance of different food groups. The FCS is able to capture both dietary diversity and food frequency over the previous seven days. It is considered a core indicator by WFP VAM and Integrated Phase Classification (IPC). HDDS was developed under the Food and Nutrition Technical Assistance Project (FANTA) project and is considered a proxy indicator for socio-economic status. The indicator provides insight into the macro- and micro-nutrients consumed by households. It asks households which of the 12 food groups were consumed in the previous 24 hours. ([https://www.fantaproject.org/sites/default/files/resources/HDDS\\_v2\\_Sep06\\_0.pdf](https://www.fantaproject.org/sites/default/files/resources/HDDS_v2_Sep06_0.pdf))
16. The Household Hunger Scale (HHS) is unique in having been internationally developed and validated for cross-cultural use. The HHS consists of three questions and three frequencies that, when administered in a population-based household survey, allows for estimating the per cent of households affected by three different severities of household hunger. <http://www.fao.org/fileadmin/>

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user\_upload/wa\_workshop/docs/HH\_Hunger\_Scale.pdf.) The rCSI measures behaviour: the things that people do when they cannot access enough food. There are a number of fairly regular behavioural responses to food insecurity—or coping strategies—that people use to manage household food shortage. The rCSI asks the frequency a HH engaged in 5 strategies in the previous 7 days.

17. The rCSI strategies are:

Rely on less preferred and less expensive food

Limit portion size at meals

Restrict consumption by adults in order for small children to eat

Reduce number of meals eaten in a day

Borrow food or rely on help from friends or relatives

18. The LCS is a threshold indicator that is often used as a proxy for the level of livelihood change and severity of coping strategies used by HHs to access food. The indicator asks HHs if they engaged in any of the 10 predetermined coping strategies because of a lack of food. (<https://www.wfp.org/content/coping-strategies-index-field-methods-manual-2nd-edition>).

19. WFP FSNMS Round 23. HHs with little to no hunger reported that they rarely went without enough food or went to bed hungry or went all day without eating. HHs with moderate HHS, likely went to bed hungry or all day without eating a couple of times in the previous month, HHs with a severe or very severe HHS likely went to bed hungry and did not eat all day multiple times in the past 30 days.

20. The FCS is calculated by taking the weights of various food groups (cereals, animal proteins, vegetables, etc.) multiplied by the days the HH consumed each group. The HH is then placed into a category, poor, borderline, acceptable, based on the score. Poor is reflective of a HH with a score from 0-21; borderline 21.5 - 35; acceptable > 35.

21. The thresholds for the rCSI, 0-4 (No coping), 4-18 (Stressed coping) and 19 and above (Crisis coping) are predetermined by the rCSI module, allowing for comparability across survey areas.

22. The LCS is contextualized for South Sudan. The LCS is separated into three severity categories, stressed, crisis, emergency, which are associated with engaging in a specific coping strategy. For example, crisis strategies are considered to be severe and negatively affect a HH, however, crisis strategies are usually reversible and likely do not harm a HH's ability to cope in the future.