INTEGRATED NEEDS TRACKING (INT)

Country-wide South Sudan

May 2021

OVERVIEW

17% (#13)

Counties identified with very high inter-sectoral needs severity

▲ +8% from April

FSL
(Counties with a high severity of FSL needs)

27% (#21)

▼ -10% from April

WASH
(Counties with a very high severity of WASH needs)

27% (#21)

▲ +15% from April

Health
(Counties with a very high severity of Health needs)

26% (#20)

▲ +3% from April

OVERVIEW & METHODOLOGY

The Integrated Needs Tracking (INT) system provides a monthly overview of emerging and ongoing intersectoral needs at the county level in South Sudan, in order to facilitate evidence-based decision-making. To do so, it draws from multiple up-to-date sources of data from the four emergency sectors: Food Security & Livelihoods (FSL); Water, Sanitation and Hygiene (WASH); Health; and Nutrition, as shown in Figure 1.

This data is then fed into an analytical framework that reflects the current risk level of intersectoral or sectoral emergency needs in each county. Each of the indicators has pre-determined thresholds that classify the county needs severity as 'Low', 'Moderate', 'High', or 'Very High'. This allows humanitarian actors to compare the relative needs between counties and how these change over time to aid response prioritisation. The more indicators converge on 'High' or 'Very High' in a county, the more likely it is that emergency needs are at their greatest severity in that county. Therefore, the findings presented in this factsheet should be considered indicative of the broad overall needs in the respective county in May 2021, and are not statistically generalisable.

For more information on the different data sources, indicators, and ranking thresholds please refer to Appendix I: Indicator breakdown and the INT terms of reference (ToR). In order to view sectoral specific analysis maps please refer to our interactive dashboard. [1]

In addition to these online resources, this factsheet is part of a series which REACH will release each quarter to display and synthesise key inter-sectoral and sectoral findings from the specified month. These factsheets will also include a specific early warning focus when relevant, identifying areas of particular concern in the coming months. For full access to previous INT publications and other REACH resources, please access the REACH Resource Centre.

KEY FINDINGS & PROJECTIONS

Whilst data in this factsheet relates to May 2021, an understanding of the context from the preceeding months is critical to understanding needs reported at this time. For most of South Sudan, the period between November and April represents the dry season, with reduced rainfall and households typically consuming produce from the previous harvest between August - October depending on location.[2]

Further unseasonal flooding occurred in January 2021 in central and eastern parts of the country due to high flows from the Nile. Flooding was exacerbated by existing flood water that had not yet receded from the previous year, and serves as a continued barrier to movement, food access, livelihood opportunities, and essential services[3].

This may lead to many households facing an earlier and more protracted lean season. Finally in May 2021, heavy rainfall was observed in northern counties. This occurred earlier than usual, ahead of the main rainy season.

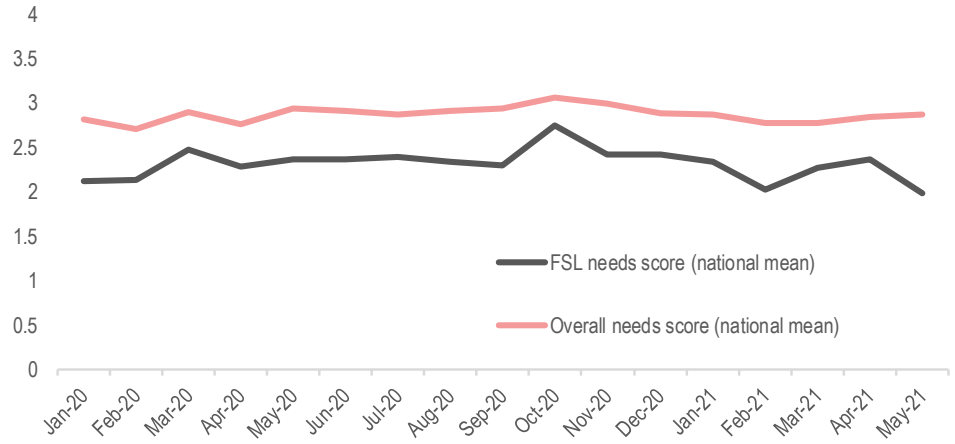
For May 2021, 13 counties were identified as having very high overall needs severity, six more than the preceding month. Although findings are indicative, this suggests a possible deterioration in humanitarian conditions.

[1] Dashboard access credentials are available on request.
[2] Famine and Early Warning Systems Network (FEWSNET) Livelihoods Zone Map and Descriptions for the Republic of South Sudan. Issued August 2018.
[3] REACH Fangak Shocks Verification Assessment. June 2021.

Figure 1: Integrated Needs Tracking (INT) Components

INT - SECTORAL TREND GRAPH

The graph below shows the national average for overall inter-sectoral and FSL needs severity scores on a monthly basis from January 2020 to May 2021[4]. Long term analysis of the INT shows that fluctuations in FSL needs severity are the main driver of change in overall needs severity, with the other three sectors generally more stable. Severity scores are calculated on a scale of 1-4, with 1 representing low severity, 2 moderate severity, 3 high severity, and 4 very high severity. Higher scores, especially for multiple indicators, indicate a greater risk of emergency needs in a given county.



[4] Due to lack of available data for August 2020, no severity scores were calculated, with the mid-value between July and September used as a substitute.

INT OVERALL NEEDS SEVERITY SCORES BY COUNTY - MAY 2021

Counties identified as having a very high severity of overall needs:*

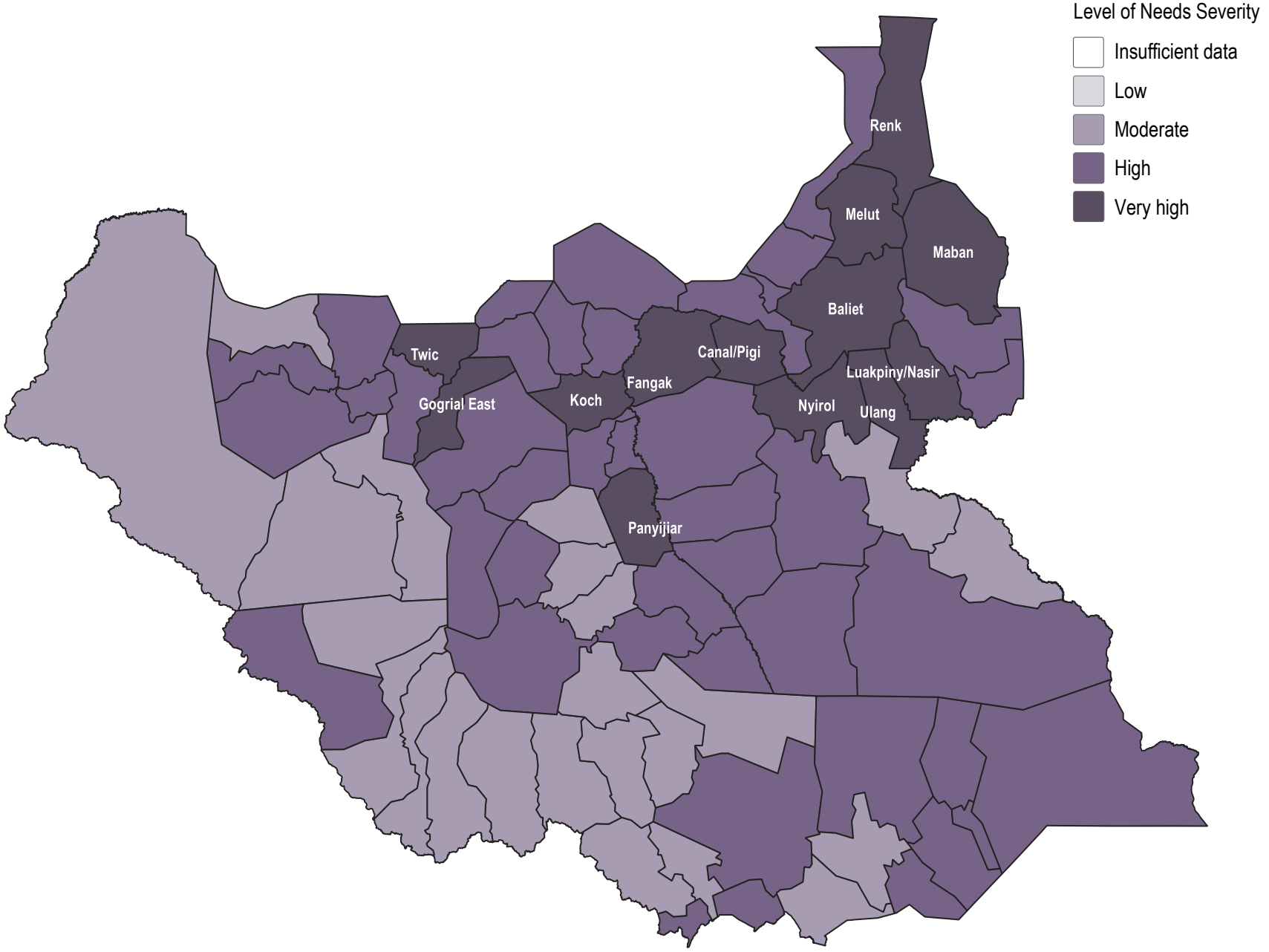
Baliet ▲
Canal / Pigi ▶
Fangak ▲
Gogrial East ▲
Koch ▲
Luakpiny / Nasir ▲
Maban ▲
Melut ▶
Nyirol ▲
Panyijiar ▶
Renk ▲
Twic ▲
Ulang ▶

Counties where needs severity has decreased from very high (April 2021) to high (May 2021):

Leer ▼
Mayendit ▼

Counties where needs severity has decreased from very high (May 2020) to high (May 2021):

Duk ▼
Gogrial West ▼
Leer ▼
Panyikang ▼
Tonj East ▼



* Arrows show whether needs severity has **increased**, **decreased**, or **remained consistent** when compared to the previous month (April 2021).

FOOD SECURITY & LIVELIHOODS (FSL) SEVERITY SCORES BY COUNTY

No counties identified as having a very high severity of FSL needs. The below list shows counties with high severity:*

Aweil Centre ▲
Aweil East ▲
Aweil South ▶
Aweil West ▶
Baliet ▲
Budi ▲
Fangak ▶
Gogrial East ▲
Kapoeta East ▶
Kapoeta South ▶
Koch ▲
Luakpiny/Nasir ▶
Maban ▲
Maiwut ▲
Malakal ▲
Mayom ▲
Melut ▲
Panyijiar ▶
Tonj North ▲
Twic ▶
Ulang ▶

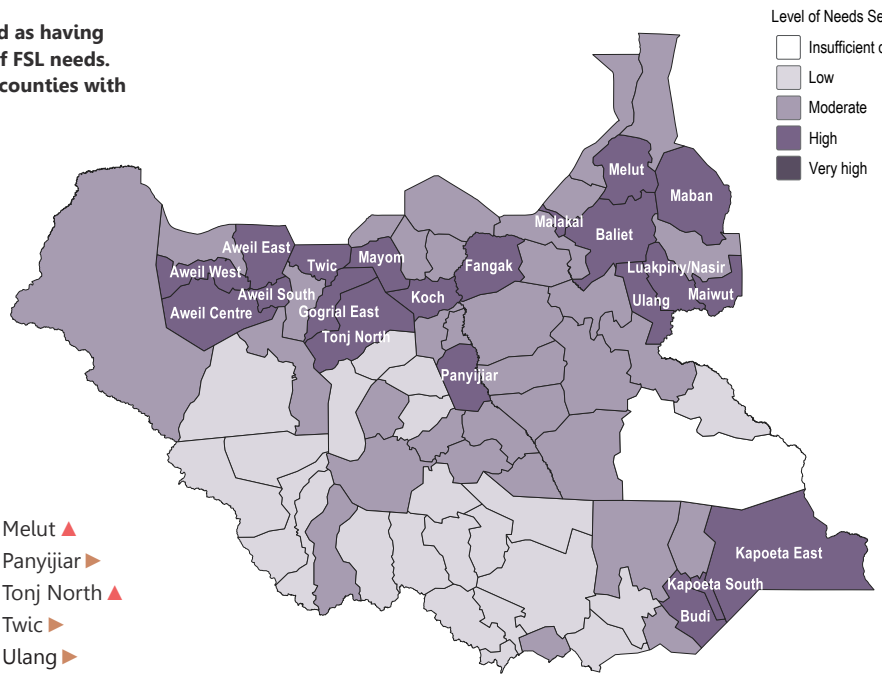


Figure 2: FSL Sub-Components

Food Security & Livelihoods severity scores are calculated by analysing various indicators from different sources. Please see on the next page for severity maps for food availability and access and agriculture. Due to the constraints of data collection in South Sudan, REACH Area of Knowledge (AoK) data is not available for Lainya, Longochuk, Maiwut, Pibor, and Pochalla counties. As this is a key data source for calculating FSL need severity, Integrated Phase Classification (IPC) analysis scores are used to determine FSL needs severity for these counties.

MARKETS

Market severity scores are calculated using REACH AoK data and JMMI/CLIMIS monthly market monitoring data.[4,5] Indicators include:

- **Market Access:** AoK - Proportion of settlements where Key Informants (KIs) reported no access to markets.
- **Cereal Prices:** JMMI/CLIMIS - Increase in average sorghum prices compared to previous three month average.
- **Bean Prices:** JMMI/CLIMIS - Increase in average fall bean prices compared to previous three month average.

Whilst no counties were identified as having a very high severity of market needs, the below list shows counties of high severity*:

Aweil East ▲
Ezo ▲
Yambio ▶

CLIMATE

The onset of the rainy season usually begins in April in both the equatorial maize and cassava livelihood zone and the highland forest and sorghum livelihood zone, as defined by FEWSNET. May also marks the start of the lean season, with the main rainy season across the rest of the country starting in June.[6]

Unusually heavy rainfall was observed across the northern counties, in addition to Kapoeta East and Kapoeta South in Eastern Equatoria in May 2021.

Although drought is historically an issue later on in the year, usually from September onwards, it is possible to forecast potential affected areas.

Currently, vegetation levels are higher than long-term averages across the country suggesting there are no areas of early drought concern.[5]

The above may be attributed to extensive flooding in 2020, which occurred across much of South Sudan. Due to this flooding, many areas reportedly still have high surface water levels.

Climate severity scores are calculated through remote sensing analysis of county-level rainfall and vegetation, conducted by CHIRPS.[7] The normalized difference vegetation index (NDVI) is used to provide a proxy for vegetation health. Indicators include:

- **Rainfall:** CHIRPS - Increase or decrease from long time average.
- **Vegetation (NDVI):** CHIRPS - Decrease in NDVI compared to long time average.

Whilst no counties were identified as having very high climatic severity in May 2021, 32 counties across northern South Sudan and 2 in Eastern Equatoria were identified as having high severity. In all cases, this was due to an increase in rainfall of >=30% compared to the long term mean. Also see page 6 for related findings from the Shocks Monitoring Index.

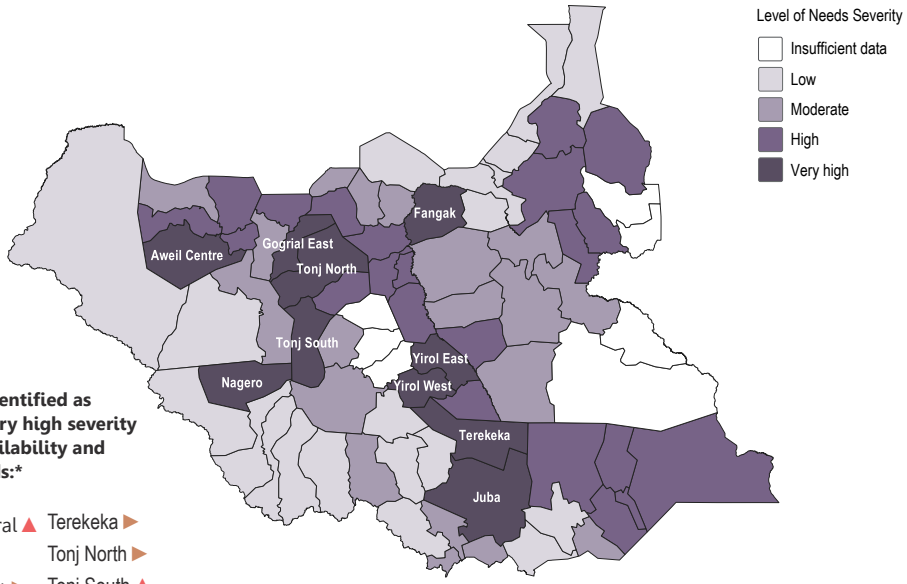
[4] REACH - Cash Working Group Joint Market Monitoring Initiative (JMMI).
[5] Crop and Livestock Information Monitoring System (CLIMIS).
[6] Climate, Peace and Security Fact sheet - South Sudan - NUPI (March 2021).
[7] Climate Hazards Infrared Precipitation with Station data (CHIRPS).
* Arrows show whether needs severity has increased, decreased, or remained consistent when compared to previous month (April 2021).

Food Availability & Access, Agriculture, and Livestock

Integrated Needs Tracking (INT) in South Sudan

May 2021

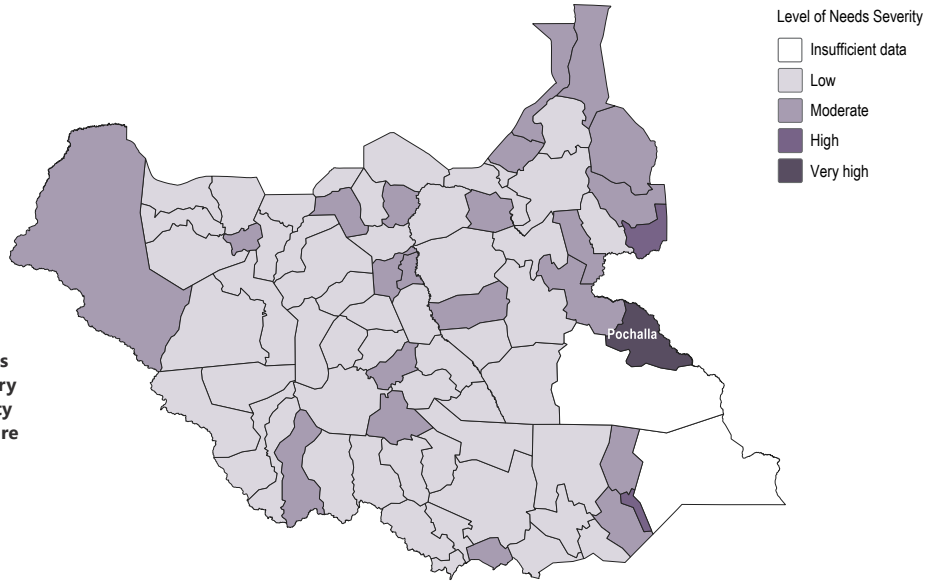
FOOD AVAILABILITY & ACCESS SEVERITY SCORES BY COUNTY



Counties identified as having a very high severity of food availability and access needs:*

- Aweil Central ▲
- Fangak ▶
- Gogrial East ▶
- Juba ▲
- Nagero ▲
- Terekeka ▶
- Tonj North ▶
- Tonj South ▲
- Yirol East ▶
- Yirol West ▶

AGRICULTURE SEVERITY SCORES BY COUNTY



Counties identified as having a very high severity of agriculture needs:*

- Pochalla ▲

FOOD AVAILABILITY & ACCESS (OVERVIEW)

Food availability & access severity scores are calculated using REACH AoK data. Indicators include:

- **Hunger severity:** AoK - Proportion of settlements where KIs reported insufficient availability of food and high severity of hunger.
- **Wild foods causing illness:** AoK - Proportion of settlements where KIs reported illness through the consumption of wild foods.
- **Only children eating:** AoK - Proportion of settlements where KIs reported adults skipping meals so that children can eat as a coping strategy.
- **Going all day without eating:** AoK - Proportion of settlements where KIs reported consuming no meals all day as a coping strategy.
- **Unsustainable food source:** AoK - Proportion of settlements where KIs reported reliance on gifts and aid as food sources.

AGRICULTURE

Agriculture severity scores are calculated using REACH AoK, FSNMS, and CFSAM data. Indicators include:[7, 8]

- **Access to land and inputs:** AoK - Proportion of settlements where KIs reported no access to agricultural land and inputs.
- **Crop production:** CFSAM - Deviation in 2019 crop production compared to five-year mean.
- **Fall army worm (FAW):** FSNMS - FAW infestation being reported by households in assessed communities.

LIVESTOCK

Livestock severity scores are calculated using REACH AoK data. Indicators include:

- **Access to livestock:** AoK - Proportion of settlements where KIs reported no access or possession of livestock. Only analysed in counties where 50% or more of settlements reportedly own livestock.[10]
- **Selling livestock:** AoK - Proportion of settlements where KIs reported selling livestock as a livelihood-based coping strategy.
- **Livestock disease:** AoK - Proportion of settlements where KIs reported presence of livestock disease.

No counties were identified as having a very high severity of livestock needs, the below list shows counties of high severity:*

- Bor South ▲
- Budi ▶
- Duk ▶
- Fangak ▲
- Kapoeta East ▶
- Malakal ▲
- Panyijiar ▶
- Tonj North ▲
- Twic ▲

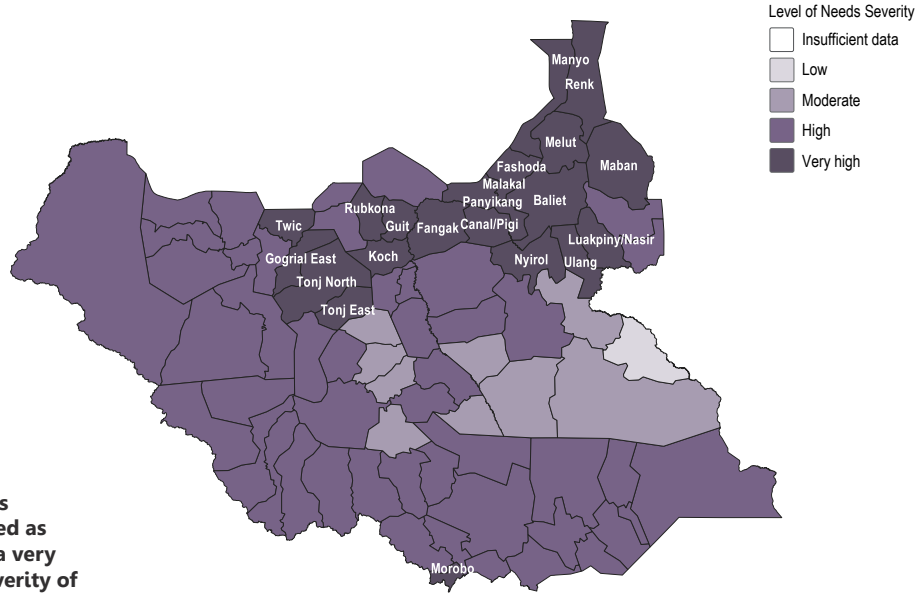
[8] Food Security & Nutrition Monitoring Survey (FSNMS).
[9] Crop & Food Security Assessment Mission (CFSAM)
[10] IPC Acute Food Insecurity & Acute Malnutrition Analysis October 2020 – July 2021. Issued 18 December 2020.
* Arrows show whether needs severity has **increased**, **decreased**, or **remained consistent** when compared to the previous month (April 2021).

Water, Sanitation & Hygiene (WASH) and Health

Integrated Needs Tracking (INT) in South Sudan

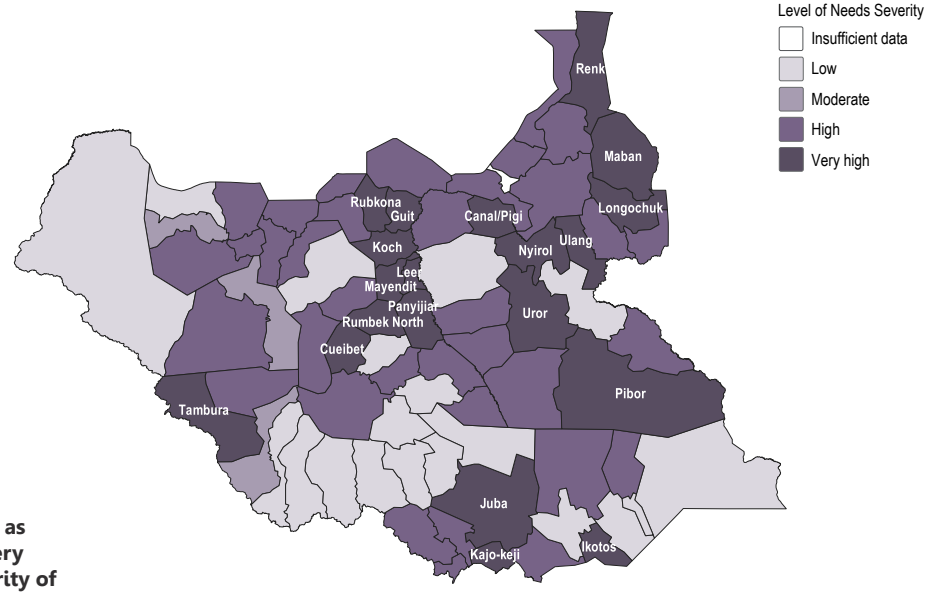
May 2021

WASH SEVERITY SCORES BY COUNTY



Counties identified as having a very high severity of WASH needs are listed below.

HEALTH SEVERITY SCORES BY COUNTY



Counties identified as having very high severity of health needs are listed below.

WASH

WASH severity scores were calculated using REACH AoK, CHIRPS, and WHO Integrated Disease Surveillance Response (IDSR) data. Indicators include:

- **Clean, timely & safe water:** REACH AoK - Proportion of settlements where KIs reported no access to clean timely and safe water.
- **Open defecation:** REACH AoK- Proportion of settlements where KIs reported the practice of open defecation.
- **Acute Watery Diarrhoea:** WHO IDSR - Morbidity above historic rates.
- **Malaria:** WHO IDSR - Morbidity above historic rates.
- **Cholera:** WHO IDSR - Any confirmed cases equals high severity.
- **Rainfall:** CHIRPS - Increase or decrease from long time average.

Counties identified as having a very high severity of WASH needs:

Baliet ▲	Malakal ▲	Tonj North ▶
Canal Pigi ▶	Manyo ▲	Twic ▲
Fangak ▲	Melut ▶	Ulang ▶
Fashoda ▲	Morobo ▶	
Gogrial East ▲	Nyirol ▲	
Guit ▶	Panyikang ▲	
Koch ▲	Renk ▲	
Luakpiny / Nasir ▲	Rubkona ▲	
Maban ▲	Tonj East ▶	

HEALTH

Health severity scores are calculated using WHO IDSR data[11]. Indicators include:

- **Acute Watery Diarrhoea:** WHO IDSR - Morbidity above historic rates.
- **Malaria:** WHO IDSR - Morbidity above historic rates.
- **Cholera:** WHO IDSR - Any confirmed cases equals high severity.
- **Acute Respiratory Infection (ARI):** WHO IDSR - Morbidity above historic rates.
- **Measles:** WHO IDSR - Morbidity above historic rates.
- **Ebola:** WHO IDSR - Any confirmed cases equals high severity.

Counties identified as having very high severity of health needs:*

Canal Pigi ▶	Maban ▶	Rubkona ▶
Cueibet ▶	Mayendit ▶	Rumbek North ▶
Guit ▶	Nyirol ▶	Tambura ▶
Ikotos ▲	Panyijiar ▶	Ulang ▶
Juba ▶	Pibor ▲	Uror ▶
Kajo Keji ▶	Renk ▲	
Koch ▲		
Leer ▶		
Longochuk ▶		

[11] WHO Weekly disease surveillance bulletins 2021

*Arrows show whether needs severity has **increased**, **decreased**, or **remained consistent** when compared to the previous month (April 2021).

SHOCKS MONITORING INDEX (SMI)

South Sudan

May 2021

OVERVIEW

4% (#3)

Counties identified with very high shocks severity scores

Conflict	Displacement	Flood	Drought	Disease
(Counties with a high conflict severity score)	(Counties with a high displacement severity score)	(Counties with very high flood severity scores)	(Counties with very high drought severity scores)	(Counties with a high disease severity score)
0% (#0)	1% (#1)	29% (#23)	9% (#7)	0% (#0)

OVERVIEW & METHODOLOGY

The Shocks Monitoring Index (SMI) is an analytical framework that provides a monthly overview of the occurrence and frequency of various shocks. The SMI is designed to be a complimentary feature to the INT system, particularly as a proxy early warning component. SMI helps to understand the level of concern/severity associated with specific thematic shock groups: conflict, displacement, climate, and disease incidence. The aim of the SMI monitoring index is to monitor the frequency and typology of major exogenous shocks, the severity of specific shock themes / pillars, and to better quantify the severity of accumulating / re-occurring shocks over time.

For each shock pillar, indicators are drawn from a range of secondary data sources and analysed to produce county-level statistic scores. These indicator scores are then aggregated based on pre-established thresholds as 'Minimal Severity', 'Moderate Severity', 'High Severity', 'Very High Severity' and then weighted based on significance in triggering a shock, in order to build an overall severity score for each pillar. An additional "accumulating shock" severity score is calculated by weighting severity scores for the past six months per county to build a shock accumulation (re-occurrence) severity score for each county. The scores allow for real-time tracking of the implication of shocks, serve as a proxy early warning system, and to guide the decision making of humanitarian actors.

For more information on the different data sources, indicators, and ranking thresholds please refer to Appendix 2: Indicator breakdown and the SMI terms of reference (ToR).

KEY FINDINGS

For most of South Sudan, the period between November and April/May represents the dry season, with reduced rainfall, and households typically consuming produce from the previous harvest (between August - October depending on location).[1]

Atypically heavy flooding across much of eastern and central South Sudan between July and October 2020 reportedly led to a reduced harvest and a deterioration in food security.[2]

Further unseasonal flooding occurred in January 2021 in parts of central and eastern South Sudan due to high flows from the Nile. Flooding was exacerbated by existing flood water that had not yet receded from the previous year, and serves as a continued barrier to movement, food access, livelihood opportunities, and essential services.

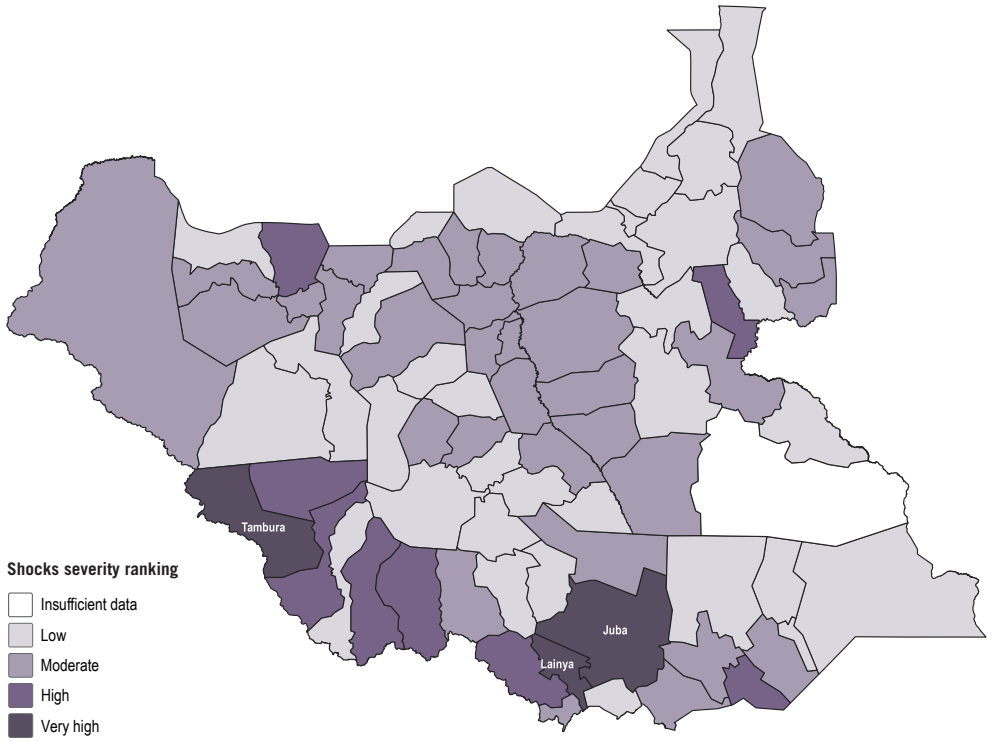
This may lead to many households facing an earlier and more protracted lean season in 2021. Finally in May 2021, heavy rainfall was observed in northern counties, ahead of the main rainy season.

For May 2021, three counties were identified as having very high overall shocks concerns: Juba and Tambura primarily due to climatic factors (flooding and drought); whilst results indicate conflict and displacement as the primary concerns in Lainya. Although findings are only indicative, this suggests a possible deterioration in humanitarian conditions.

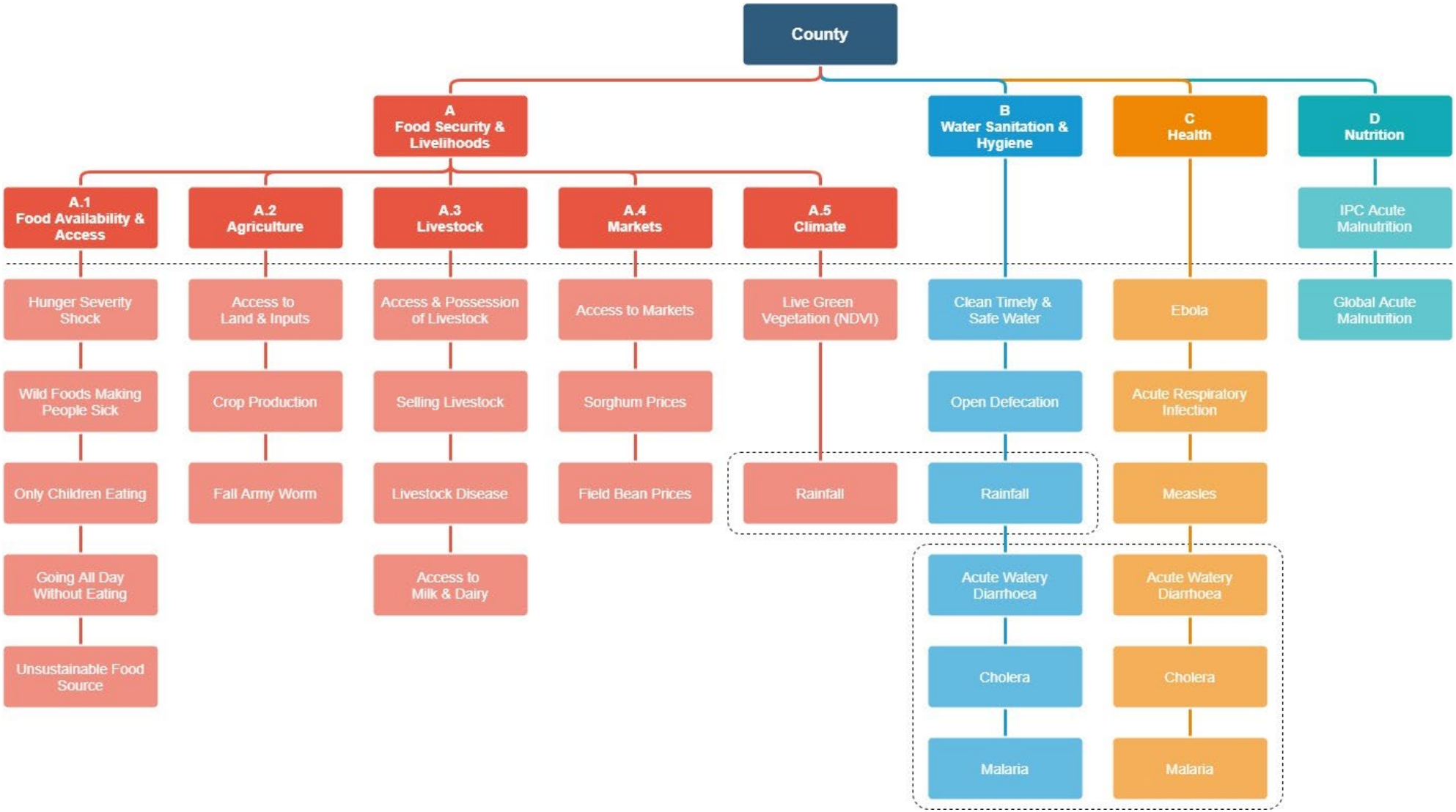
Very high severity scores for flooding were identified in 23 counties, and in 7 counties for drought. In Lainya, very high severity scores were found under the displacement pillar, with at least 8000 people becoming displaced due to conflict-related clashes between cattle keepers and host communities[1,2].

[1,2] OCHA South Sudan Humanitarian Snapshot May 2021

SMI - OVERALL SHOCKS SEVERITY SCORES BY COUNTY - MAY 2021



Appendix 1: INT Indicator Diagram



[1]This is a multiple choice question for all households for which KIs did not select none.

Appendix 2: SMI Indicator Diagram