



Food and Agriculture
Organization of the
United Nations

South Sudan

DIEM – Data in Emergencies Monitoring brief, round 3

Results and recommendations
October 2022

Data collection 27 May to 29 July 2022

Methodology

The Food and Agriculture Organization of the United Nations (FAO) launched a household survey in South Sudan through the Data in Emergencies Monitoring (DIEM-Monitoring) System to monitor agricultural livelihoods and food security. Data were conducted through face-to-face surveys in all ten states of South Sudan: Central Equatoria, Eastern Equatoria, Jonglei, Lakes, Northern Bahr el Ghazal, Unity, Upper Nile, Warrap, Western Bahr el Ghazal and Western Equatoria.

A total of 3 090 households were surveyed between 27 May and 29 July 2022. All ten states surpassed the targeted sample size of 270 households per state. However, 17 households were dropped based on data quality issues. The sampling frame was based on the 27th round of the Food Security and Nutrition Monitoring Report of South Sudan in 2021. The lowest administrative unit of measurement in South Sudan is a *boma*, followed by a *payam*, a county and then a state, before reaching the national level. The data were collected at *boma* level and were aggregated in order to be representative at state level. Two-stage sampling was applied – cluster sampling to generate the list of clusters, followed by simple random sampling to ensure that all households in the targeted cluster had an equal chance of being selected. At the second stage, households were selected using simple random sampling. Regional base weights were computed at administrative level 1 because this was a face-to-face survey.

Figure 1. Countries with established DIEM-Monitoring Systems



Source of data: FAO. 2022. DIEM-Monitoring. In: *FAO Data in Emergencies Hub*. Rome. Cited 5 October 2022. <https://data-in-emergencies.fao.org>

Source of map: United Nations. 2020. *Map of the World*. Cited 5 October 2022. www.un.org/geospatial/content/map-world

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About DIEM-Monitoring

FAO established the DIEM-Monitoring System to collect, analyse and disseminate data on shocks and livelihoods in countries prone to multiple shocks. DIEM-Monitoring aims to inform decision making by providing regularly updated information on how different shocks are affecting the livelihoods and food security of agricultural populations.

At the core of the DIEM-Monitoring System are country-level dashboards. Readers are encouraged to explore these dashboards to gain more insight into the context of South Sudan and other countries.

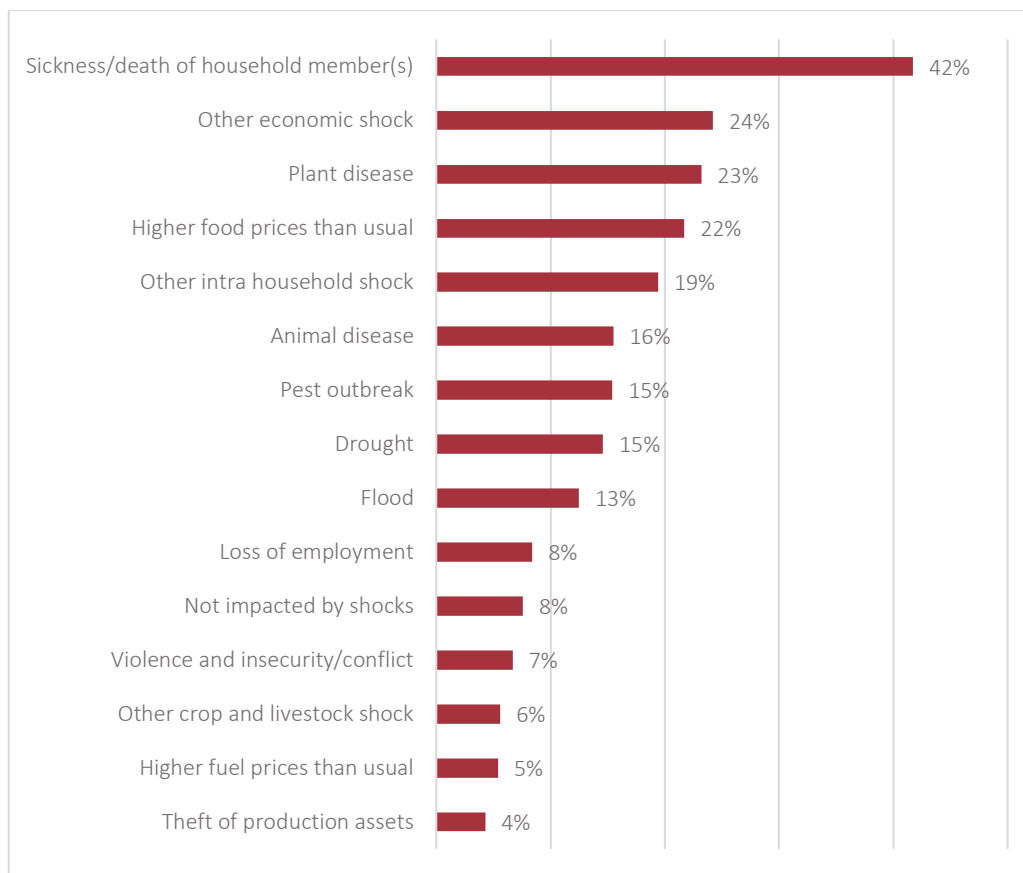
> Learn more at <https://data-in-emergencies.fao.org/pages/monitoring>

Income and shocks

Approximately 92 percent of interviewed households experienced a shock in the three months preceding the survey (Figure 2). High food prices were the primary shock faced by almost a third of the country's population and were particularly felt by those who rely on markets to cover the food gap caused by low production at the household level (28 percent of households). The highest reported proportion in increased food prices was in the Greater Bahr el Ghazal region that included Northern Bahr el Ghazal (70 percent), Warrap (41 percent) and Western Bahr el Ghazal (33 percent). South Sudan is a source market for essential commodities for these three states. The increase was attributed to the closure of Abyei and the southern border due to the ethnic conflict that broke out in early June between Abyei and Twic counties.

Other economic shocks reported included currency devaluation (21 percent of households), plant diseases (20 percent of households), drought (18 percent of households), intra household shock (15 percent households) and floods (15 percent of all households interviewed). Flooding was mainly reported in the areas of Jonglei (45 percent), Unity (25 percent), Northern Bahr el Ghazal (22 percent), Upper Nile (22 percent) and Warrap (22 percent). According to the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) August 2022 Humanitarian Snapshot, 243 550 people were affected by heavy rains and flooding as of 31 August 2022 in Jonglei, Lakes, Northern Bahr el Ghazal, Unity, Upper Nile, Warrap and Western Bahr el Ghazal states.

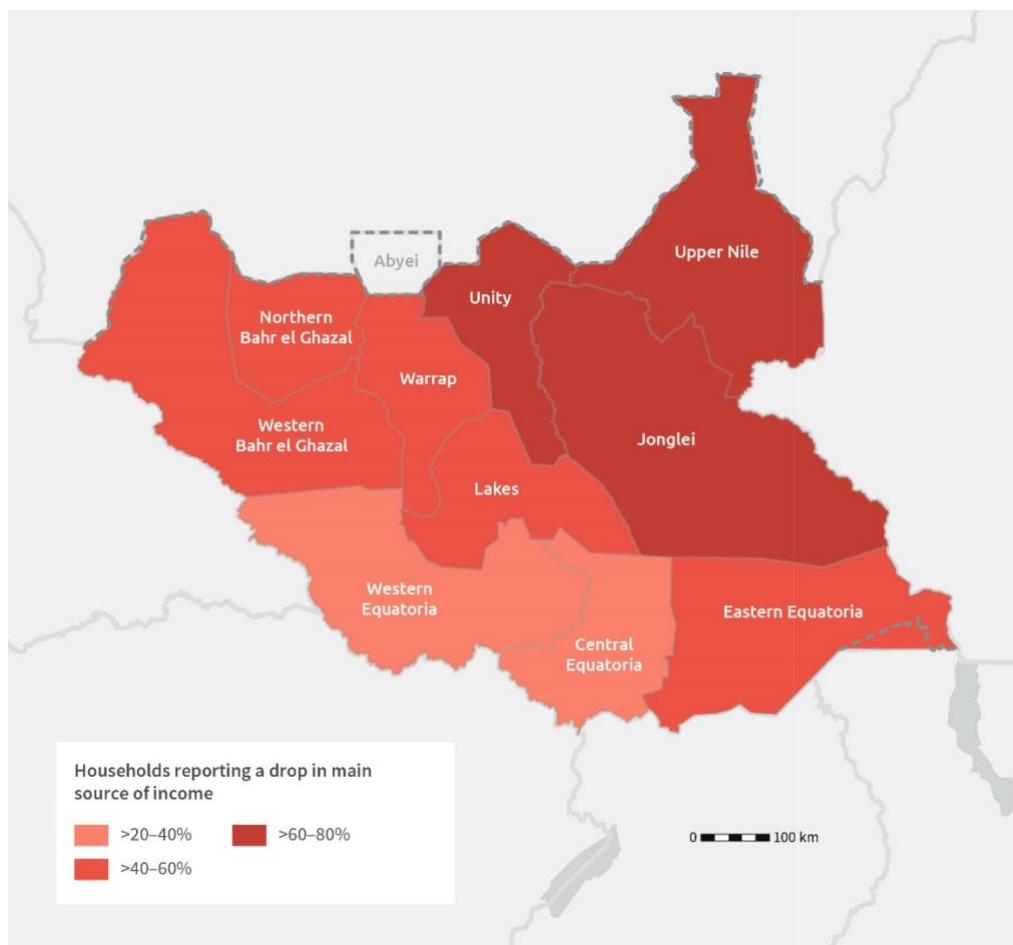
Figure 2. Main shocks reported (percentage of households interviewed)



Source of data: FAO. 2022. South Sudan: DIEM-Monitoring assessments results (May–July 2022). In: *FAO Data in Emergencies Hub*. Rome. Cited 3 October 2022. <https://data-in-emergencies.fao.org>

Primary household income sources included the farming of staples (as reported by 29 percent of households), the collection and sale of natural resources especially wild foods (18 percent) and rearing livestock and the production of livestock products (11 percent). Other income sources included informal agricultural traders (farm product distributors) (6 percent) and a reliance on debt for survival (5 percent). Compared to a normal year, 47 percent of households reported a decrease in their primary source of income within the three months preceding the survey. Approximately 20 percent reported an increase, while 22 percent did not experience any change of income as indicated in Figure 3.

Figure 3. Households reporting a drop in main source of income (percentage)



Source of data: FAO. 2022. South Sudan: DIEM-Monitoring assessments results (May–July 2022). In: *FAO Data in Emergencies Hub*. Rome. Cited 3 October 2022. <https://data-in-emergencies.fao.org>

Source of map: Esri, HERE, Garmin, FAO, NOAA, USGS. 2018. *Map of South Sudan*. Cited 3 October 2022. <https://data-in-emergencies.fao.org/pages/explore>

Final boundary between the Sudan and South Sudan has not yet been determined. Final status of the Abyei area is not yet determined.

Agriculture was the main source of income reported in Central Equatoria (59 percent), Lakes (45 percent), Western Equatoria (45 percent), Western Bahr el Ghazal (35 percent) and Eastern Equatoria (34 percent). In Northern Bahr el Ghazal (37 percent), Unity (27 percent), Western Bahr el Ghazal (25 percent) and Upper Nile (20 percent), the sale of natural resources was the main source of income reported. Livestock rearing and the sale of livestock and products was a key source of income in Unity (26 percent), Warrap (23 percent), Eastern Equatoria (19 percent) and Lakes (19 percent).

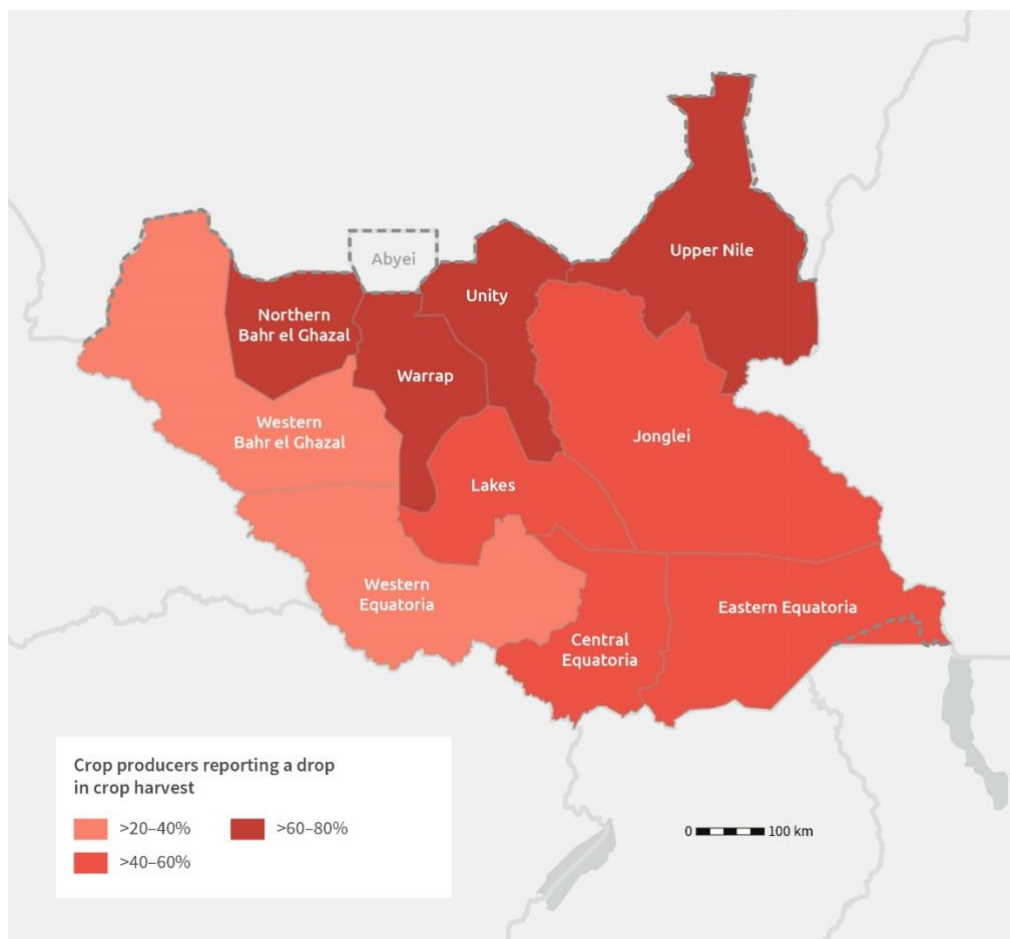
Crops

Ninety-eight percent of interviewed households depended on rain fed agriculture. Primary crops cultivated in the previous agricultural season included sorghum (53 percent), peanut (20 percent) and maize (17 percent). Two-thirds of cropping households had approximately half a hectare to slightly more than 1 hectare (one to three *feddans*) available for cultivation (over 66 percent), while other farmers had less than half a hectare (one *feddan*) (2 percent). Compared to a normal year, the area planted decreased for 44 percent of interviewed farmers, remained the same for 22 percent of farmers and increased for 23 percent of farmers.

Approximately 83 percent of cropping households indicated that they experienced crop production difficulties during the last season including plant pests and diseases (55 percent), crop losses and damages (53 percent) due to poor storage, poor seed quality (28 percent) due to seed recycling, lack of water or irrigation for farming (23 percent), lack of access to labour (14 percent) and lack of seeds (13 percent). About 46 percent of farmers relied on the market to purchase seeds, 68 percent primarily depended on their own production and preserved part of their harvest to plant during the following season, and 13 percent depended on free seed distributions from the government and humanitarian agencies.

Due to the cropping challenges cited by surveyed farmers compared to a normal year, 48 percent of cropping households reported a reduction in crop yield, while 20 percent reported an increase, and 19 percent did not indicate any change in harvest (Figure 4).

Figure 4. Crop producers reporting a drop in harvest (percentage of households)



Source of data: FAO. 2022. South Sudan: DIEM-Monitoring assessments results (May–July 2022). In: *FAO Data in Emergencies Hub*. Rome. Cited 3 October 2022. <https://data-in-emergencies.fao.org>

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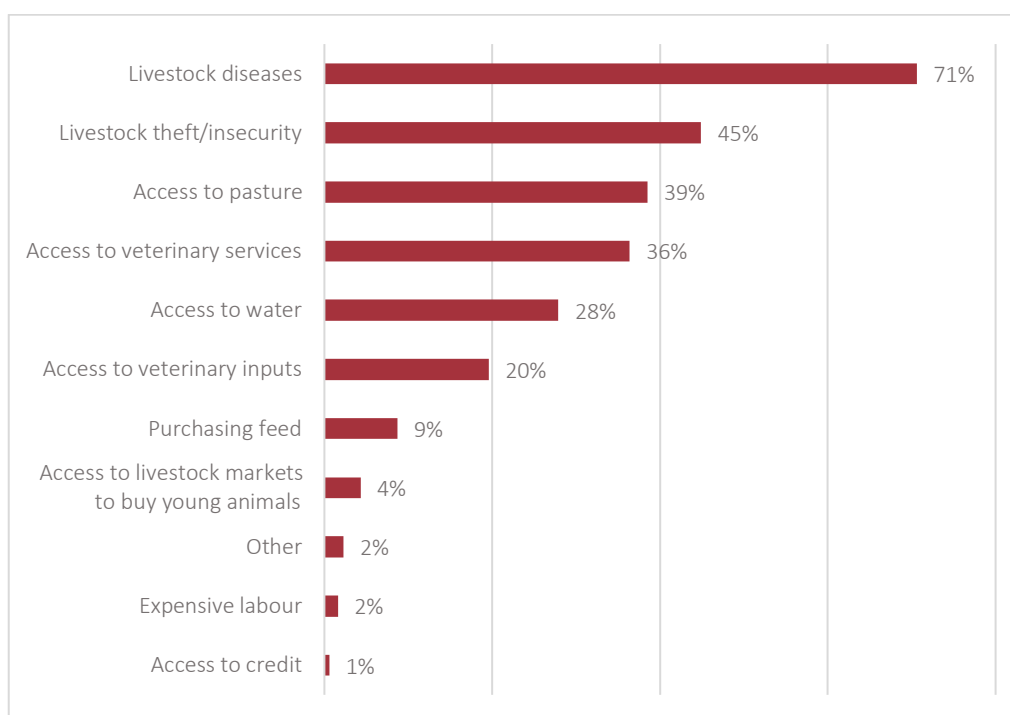
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Of the cropping households that engaged in the sale of crops, 36 percent reported marketing challenges. These challenges varied from high marketing costs (65 percent), low prices (47 percent), damages and losses (18 percent) and low demand (18 percent).

Livestock

According to the survey, the main livestock reared by households included cattle, goats, poultry and sheep. Approximately 43 percent of households reported livestock production difficulties that included livestock pests and diseases (71 percent of households), theft and insecurity (45 percent), lack of access to pasture (39 percent), lack of veterinary services (36 percent), lack of access to water (28 percent), lack of veterinary inputs (20 percent) and high price of feed (9 percent) (Figure 5). Almost all of the households (98 percent) depended on pasture for livestock production and only a few supplemented with feed purchases (2 percent).

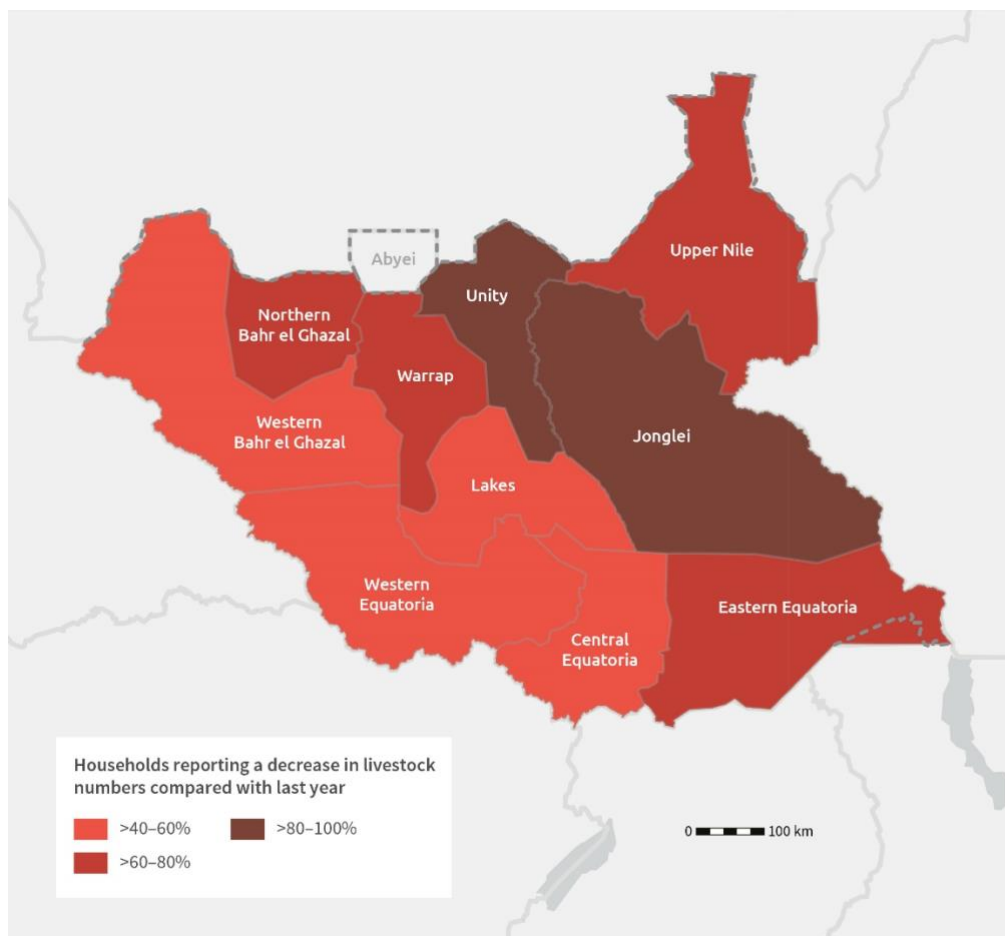
Figure 5. Main livestock production difficulties (percentage of households)



Source of data: FAO. 2022. South Sudan: DIEM-Monitoring assessments results (May–July 2022). In: *FAO Data in Emergencies Hub*. Rome. Cited 3 October 2022. <https://data-in-emergencies.fao.org>

There was a reduction in herd size by an average of eight units per state in the twelve months preceding the survey (Figure 6). The highest recorded decrease was in Unity State (decrease of 37 livestock units) and Jonglei (decrease of 12 livestock units). In addition to the cited challenges, the reduction in herd size was attributed to the death of animals (49 percent), theft (16 percent), trading of livestock (10 percent) distress sales for food and income needs (10 percent), and killing or providing for ceremonies (10 percent). Unity State is prone to violence, armed conflict and cattle rustling which is reflected in the most dramatic reduction in herd size.

Figure 6. Households reporting a decrease in livestock number compared to last year



Source of data: FAO. 2022. South Sudan: DIEM-Monitoring assessments results (May–July 2022). In: *FAO Data in Emergencies Hub*. Rome. Cited 3 October 2022. <https://data-in-emergencies.fao.org>

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Of the 6 percent of households that were neither farming nor rearing animals, some practiced fisheries on lakes and rivers (82 percent), mainly on the White Nile River. Most fishing households reported a reduction (55 percent) in fish production during the three months preceding the survey, which respondents attributed to the lack of fishing inputs (63 percent), difficulty finding fish (60 percent), difficulty accessing labour (11 percent) and fuel access challenges (7 percent). The fishing materials that fisher folks reported to have challenges accessing were fishing nets (97 percent), gear (44 percent), boat repair (36 percent), bait (15 percent) and ice for fish preservation (13 percent).

Food security

The Food Insecurity Experience Scale (FIES)¹ findings indicated that the majority of households experienced moderate to severe food insecurity (80 percent), while 50 percent of households experienced severe food insecurity. Central Equatoria, Eastern Equatoria, Jonglei, Lakes,

¹ FIES results are subject to change. The country scale will continue to evolve over additional rounds of data collection allowing for more consistent comparability across rounds.

Northern Bahr el Ghazal, Upper Nile and Warrap states had more than 80 percent of their population facing moderate and severe recent food insecurity.

Unity State had the highest proportion (82 percent) of its population facing severe food insecurity, as the area faced recurrent violence and flooding. Western Bahr el Ghazal had the lowest proportion (25 percent) of its population facing food insecurity due to good weather and alternative coping mechanisms.

Approximately 59 percent of households experienced low dietary diversity, as they consumed less than three food groups in the 24 hours preceding the survey. Twenty-eight percent of respondent households consumed three to four food groups (moderate dietary diversity) while 13 percent consumed more than five food groups (high dietary diversity). Unity State had the worst Household Dietary Diversity Score, with no households reporting the consumption of more than four food groups.

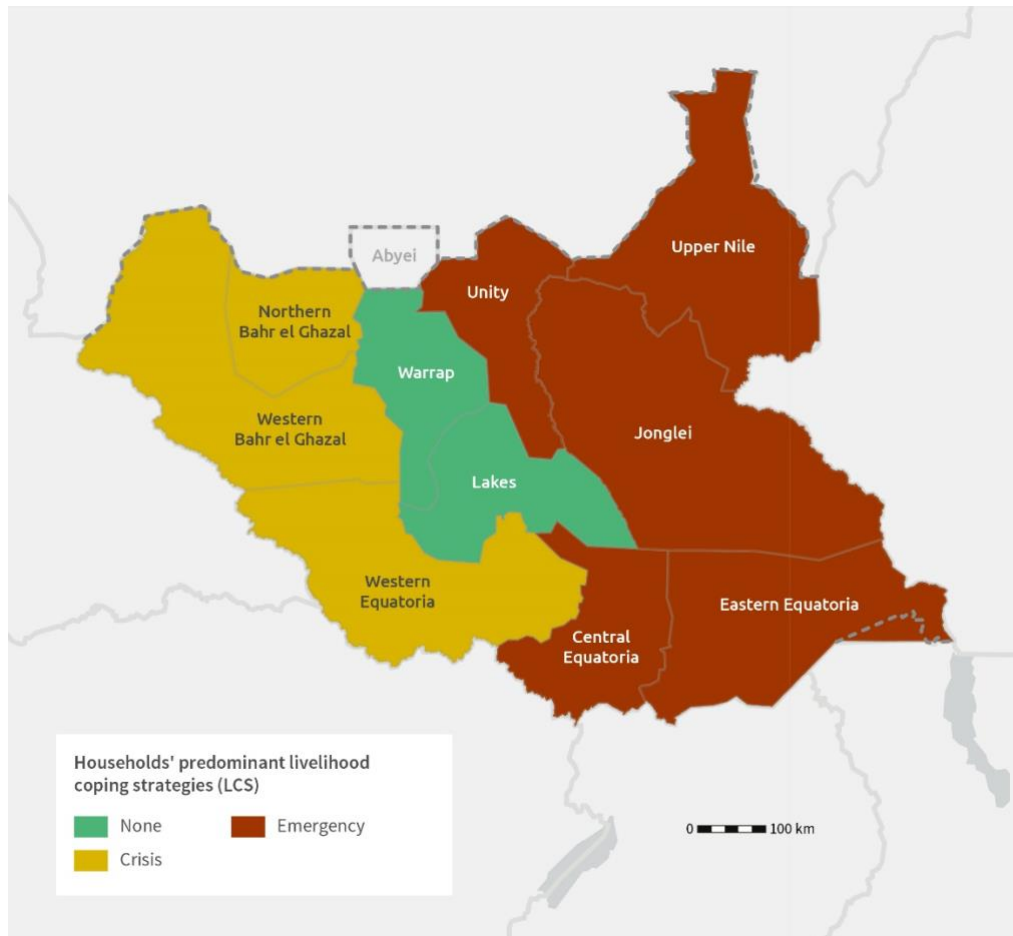
According to the reduced Coping Strategies Index, only 6 percent of households were in the Integrated Food Security Phase Classification (IPC) indicative Phase 1 (none/minimal food insecurity). Fifty-eight percent of households were in IPC indicative Phase 2 (stressed) and 36 percent were in IPC indicative Phase 3 (crisis) or worse.

In terms of the food consumption score (FCS), 30 percent of households were in IPC indicative Phase 1 and 2 (none/minimal and stressed, respectively), 32 percent of households had an FCS in IPC indicative Phase 3 (crisis) while 38 percent were in IPC indicative Phase 4 (emergency). Approximately 70 percent of the households in Central Equatoria State consumed no more than two food groups, highlighting the challenges facing the most vulnerable people in urban settings who depend on market purchases for food amid challenges of income, access and currency depreciation resulting in an erosion of purchasing power.

Approximately 14 percent of households were engaged in stress livelihood coping mechanisms to access food and income, 28 percent of respondents employed crisis coping strategies and 38 percent engaged in emergency coping strategies (Figure 7). The remaining 20 percent did not engage in any coping strategies.

Unity and Upper Nile states had the highest proportion (75 and 71 percent respectively) of their population exercising emergency livelihood coping strategies. This trend was driven by insecurity, flooding and higher food prices.

Figure 7. Predominant livelihood coping strategies (percentage of households)



Source of data: FAO. 2022. South Sudan: DIEM-Monitoring assessments results (May–July 2022). In: *FAO Data in Emergencies Hub*. Rome. Cited 3 October 2022. <https://data-in-emergencies.fao.org>

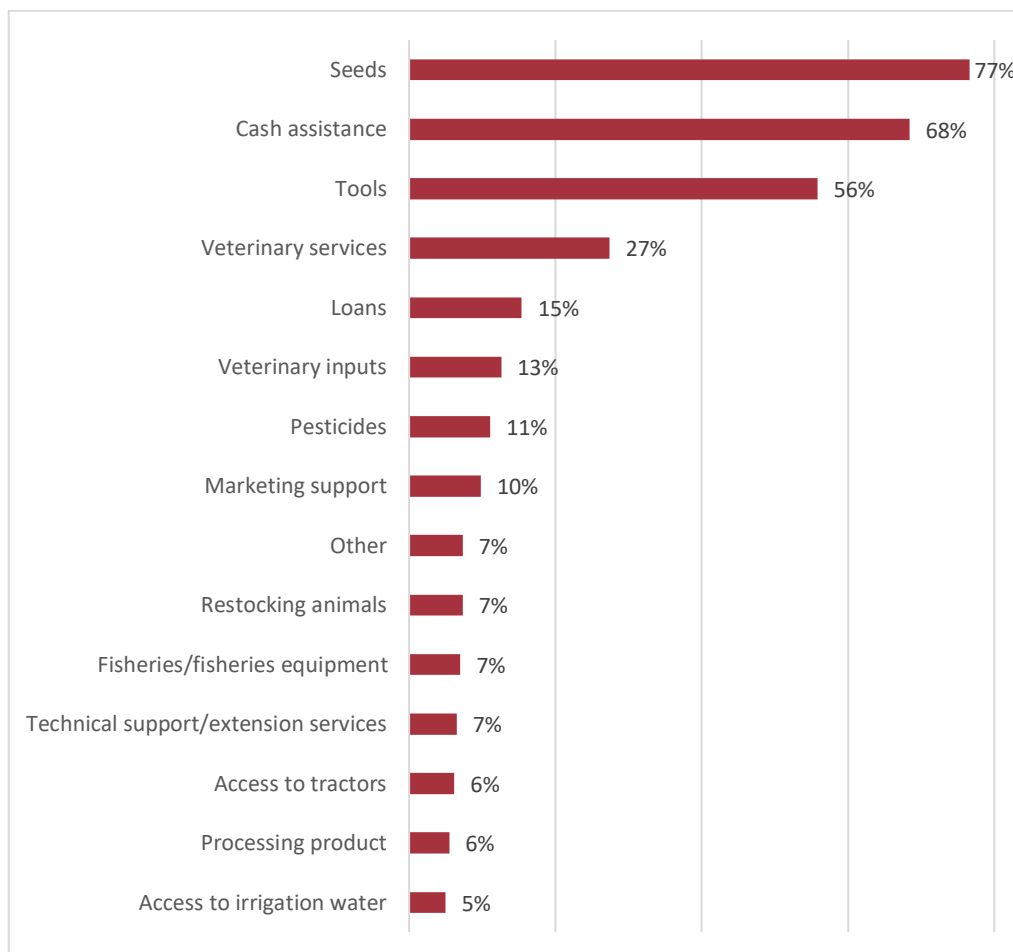
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Needs

Most surveyed households (96 percent) stated a need for assistance in the next 3-6 months. Needs were prioritized by households and included seeds (77 percent), cash (68 percent), farming tools (56 percent), veterinary services (27 percent), loans (15 percent), veterinary inputs (13 percent) and pesticides (11 percent) (Figure 8).

Figure 8. Assistance needed in the coming three-six months (percentage of households)



Source of data: FAO. 2022. South Sudan: DIEM-Monitoring assessments results (May–July 2022). In: *FAO Data in Emergencies Hub*. Rome. Cited 3 October 2022. <https://data-in-emergencies.fao.org>

In terms of assistance received during the three months preceding the survey, 60 percent of households did not receive any form of assistance. Approximately 27 percent of households reported that they received food assistance, 20 percent received seeds, 6 percent benefitted from veterinary extension services and 4 percent received cash vouchers.

Recommendations

Short-term recommendations (1-6 months)

- > Provide food and livelihood assistance to vulnerable households to reduce food consumption gaps, engage in programmes aimed at disaster risk reduction and resilience building, as well as protecting livelihoods.
- > Implement social protection programmes (cash transfers, cash for work, etc.) to promote food security and reduce poverty and vulnerability because of a reduction or loss in income.
- > Support farmers with inputs that include certified and quality seeds of different varieties (crops, vegetables, fruit, etc.), and tools to take advantage of the second planting season and the upcoming dry planting season.
- > Invest in programmes that provide veterinary inputs and veterinary services, including training programmes and cold chain facilities, in the livestock keeping regions.
- > Support fishing households with equipment such as nets, gears and storage facilities.
- > Provide support to farmers with pesticides/insecticides.

Medium/long-term recommendations (6 months and beyond)

- > Educate farmers and fishing households on post-harvest handling technologies.
- > Educate farmers on organic pest control methods.
- > Conduct trainings on post-harvest handling and preservation methods as well as provide storage facilities to reduce/prevent post-harvest crop losses.
- > Strengthen market value livestock chains to ensure pastoralists are protected from price manipulation by traders and brokers.



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FAO. 2022. *South Sudan: DIEM – Data in Emergencies Monitoring brief, round 3 – Results and recommendations, October 2022*. Rome.
<https://doi.org/10.4060/cc2490en>