



# Life in the Nuba Mountains

Humanitarian Needs Assessment in Sudan's South Kordofan State

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By the Enough Team

October 2013



**enough**

The project to end genocide and crimes against humanity

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### ACKNOWLEDGEMENT OF THE ANONYMOUS AUTHORS

The authors would like to acknowledge the support and resources that made this report possible. We are especially grateful to everyone involved in designing the humanitarian assessment, collecting the information, and analyzing the data. We are also thankful for the financial support from our partners.

It is our hope that this assessment will be used to alert the world to the unfolding humanitarian disaster in South Kordofan state and inform those involved in the area about how to better meet the critical needs of civilians affected by conflict.

### COVER PHOTO

Displaced women and children gather outside of caves in the Nuba Mountains in South Kordofan, Sudan, June 2013. ANONYMOUS ENOUGH PROJECT CONTRIBUTOR

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## Editor's note

The following report documents findings from a holistic humanitarian-needs assessment conducted in South Kordofan state in July–August 2013 by an international non-governmental organization, or NGO. Due to security concerns, the organization wishes to remain anonymous but requested that the Enough Project publish the report and make public existing evidence of the humanitarian disaster unfolding today in Sudan. Given the lack of access to these rebel-held areas, there has been little information made public about the situation on the ground. This report strives to fill in some of these gaps.

The international NGO surveyed 810 households using a cluster survey methodology. Researchers also facilitated focus-group discussions disaggregated by sex and age. The two-stage sampling scheme of 30 by 27 was used with a confidence interval, or CI, of 5 percent. Thirty villages were randomly selected from 30 accessible payams, which is a local administrative division similar to a county. Then 27 households were interviewed in each of the 30 villages. Although the assessment survey was administered in every third house, the surveyors also went to every house between the first and last surveyed to gather nutritional data. Researchers conducted a total of 792 interviews, using a structured questionnaire designed to capture key data on demographics, water, sanitation, and hygiene—or WASH—food security, livelihoods, markets, and health.

The Enough Project was solely responsible for the report's final production and distribution but did not contribute to its content or findings. Steven Hansch, an expert in assessments of humanitarian crises at Relief International, vetted the assessment and found its research and methodology to be sound and its findings to be credible.

For an overview of what the international community can do to address the humanitarian crisis in South Kordofan and Blue Nile states, see the Enough Project's accompanying policy brief, "Aid as a Weapon of War: One More Reason to Adopt a Comprehensive Approach."

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## Executive summary

Sudan's South Kordofan state has been at the center of an armed conflict between Sudan Armed Forces, or SAF, and the Sudan People's Liberation Movement-North, or SPLM-N, since June 2011. Aerial bombardments and attacks on civilian populations have persisted throughout this period, disrupting life and driving hundreds of thousands from their homes. Most of South Kordofan's rain-fed sorghum belt has historically been self-sufficient in terms of agriculture production.<sup>1</sup> Starting in 2011, however, the food-security situation in SPLM-N-controlled areas of the state became increasingly complex and volatile. The ongoing conflict is primarily responsible for interrupting farmers' ability to plant, but food insecurity was also compounded by localized droughts in 2012 and flooding in 2013.<sup>2</sup>

This year's assessment finds:

- Nineteen percent of respondents had been displaced in the preceding six months, and 24 percent were currently displaced. Sixty-six percent of those who had been displaced fled because of fighting, and 10 percent fled to look for food. Thirty-seven percent of respondents stated that they had family currently living in refugee camps, and 67 percent stated that they did not feel safe in their current environment.
- Households in the region are cultivating 73 percent less land than before the conflict erupted. Both displaced and nondisplaced households have drastically reduced the land that they are cultivating. This year, displaced households only cultivated 17 percent of the acreage that they were farming before the eruption of violence. Nondisplaced households cultivated 30 percent of the acreage that they were using before violence. Households have even reduced cultivation since last year by around 7 percent.
- Seventy-four percent of nondisplaced households and 72 percent of displaced households have unacceptable—either poor or moderate—food consumption scores<sup>3</sup> when compared with the national average for South Sudan. Sixty-nine percent of displaced households and 64 percent of nondisplaced households were experiencing moderate to severe hunger.
- Sixty-two percent of households were restricting food consumption by adults in order for small children to eat. Displaced children eat two meals per day, and displaced adults eat 1.5 meals per day. Nondisplaced children eat 2.2 meals per day, and nondisplaced adults are eating 1.7 meals per day. To cope with limited access to food, 83 percent of households have been reducing the number of meals they are consuming on an average of 3.5 times per week, and 80 percent have been limiting their portion size at meals. Eighty-four percent hunt, gather wild food, or harvest immature crops an average of 4.2 days per week.

- Forty-three percent of households did not have enough food stored to last even a week. Ninety-one percent of households reported having enough food stocks to last one month or less. Fifty-six percent of households had to walk at least an hour to get to a market. Some communities were walking five hours to access weekly markets.
- Seventy-one percent of those surveyed had never attended any type of school. While 25 percent stated that they had attended primary school, only 3 percent said they had attended secondary school.
- Ninety percent of those surveyed practice open defecation, and 2 percent use an improved sanitation facility. Sixty-five percent of households did not have soap readily available within two minutes of being asked. Only 23 percent stated that they washed their hands at three or more of the five appropriate times and could also produce soap within two minutes of being asked.
- Seventy-six percent of households stated that they did not have any mosquito nets, and 68 percent of households stated that their child had malaria in the preceding four weeks. Seventy-six percent stated that at least one child in their household had experienced an episode of diarrhea in the preceding two weeks.
- Seventy-seven percent of mothers gave birth without assistance from a skilled attendant, and 23 percent stated that either a trained health professional—12 percent—or trained birth attendant—11 percent—had attended their last birth. The most common attendant was a female relative or neighbor—42 percent—followed by an untrained birth attendant—19 percent. Nine percent of respondents, however, stated that no one was present at their last birth.

The people of South Kordofan have displayed a sustained strength and resilience that has helped them survive despite the horrific conditions. Their coping mechanisms, however, are being threatened. The following immediate interventions are essential to meet the urgent needs of the people living in rebel-held areas of South Kordofan state:

- General food distributions and preventive malnutrition intervention
- Agricultural support
- Hand pump repairs
- Latrine construction
- Provision of mosquito nets

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## Findings

This assessment is meant to be shared with partners and used to develop effective humanitarian interventions for the affected populations. The findings paint a bleak picture of life in the Nuba Mountains and show the need for a comprehensive response.

### Demographics of the surveyed community

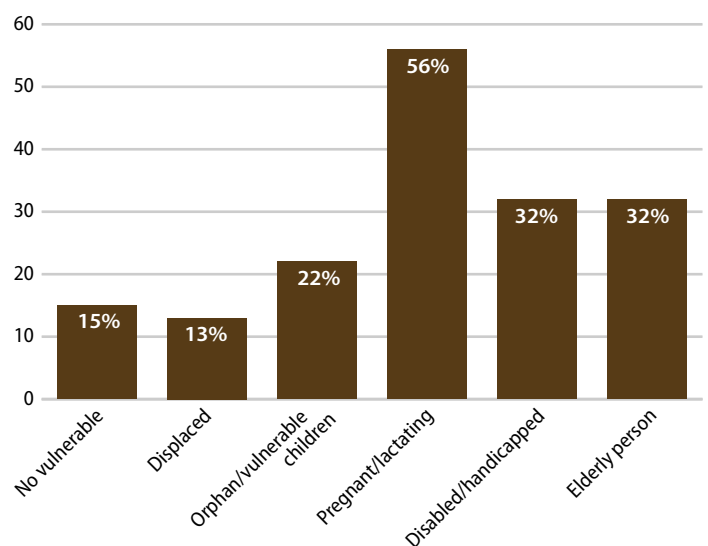
The average household size in the region is seven people. Within each household, there are approximately three adults over the age of 15, two children between the ages of 5 and 15, and two children under the age of 5. The majority of households surveyed—74 percent—stated that they were male-headed. Only 23 percent were female-headed, while roughly 2 percent and 1 percent declared that they were elderly-headed or child-headed, respectively. When asked whether or not they felt safe at home, 67 percent stated that they did not feel safe.

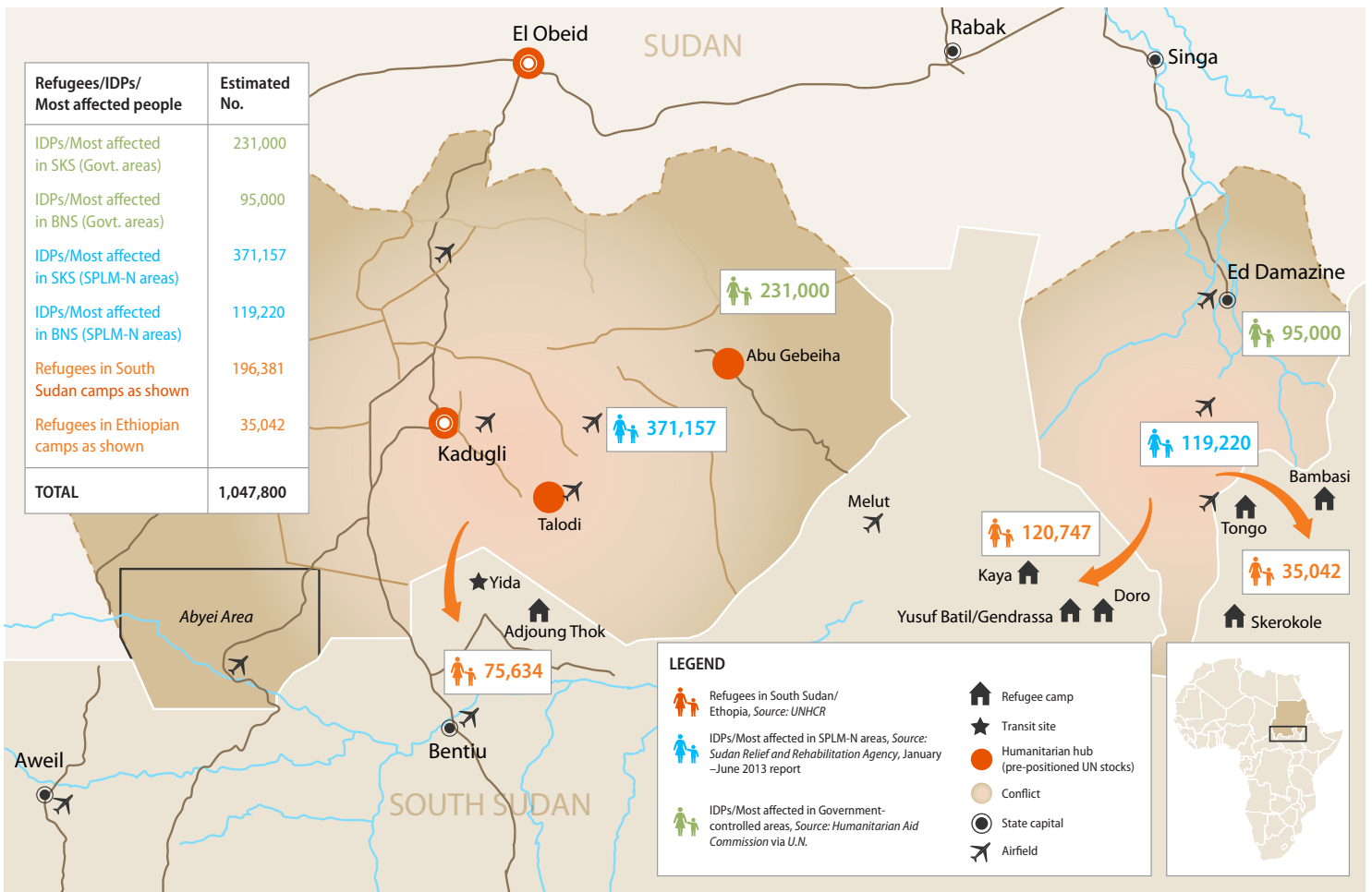
Respondents were specifically asked if they had any of the following members in their household: displaced people; orphans or vulnerable children; pregnant or lactating women; disabled or handicapped people; and elderly people. Only 15 percent stated they did not have vulnerable people in their households. A majority of families—56 percent—declared they had pregnant or lactating women in their households. Thirty-two percent had disabled or handicapped individuals; 32 percent had elderly people; and 22 percent had orphaned or vulnerable children. (see Figure 1)

Surveyors asked whether the family had been displaced within the preceding six months and if the family was currently displaced. Approximately 19 percent of respondents said that they had been displaced in the preceding six months, and 24 percent said they were currently displaced. Among those respondents who said they were currently or recently displaced, a large majority—66 percent—responded that their reason for displacement was due to fighting. The second-most common reason given for displacement was to look for food, with 10 percent of respondents citing this cause. (see Figure 2)

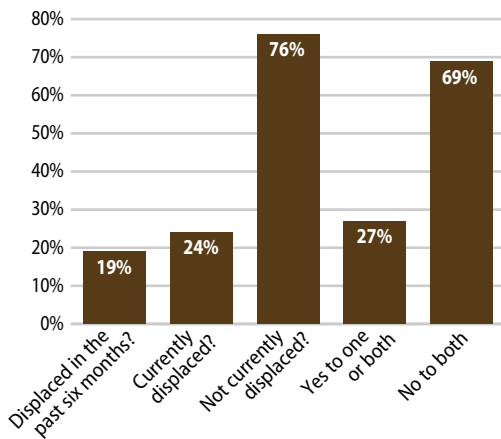
When asked about displacements of family members, 37 percent of respondents stated that they had family members currently living in refugee camps. Of these respondents, 77 percent stated that their family members were located in Yida camp in Unity state, South Sudan, and 16 percent stated that their family members were located in Kakuma camp in Kenya. Seven percent did not specify a location for displaced family members.

**FIGURE 1**  
**Vulnerable individuals in households**

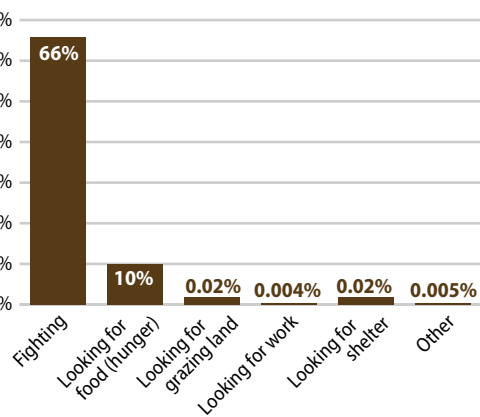




**FIGURE 2**  
**Displacement status**

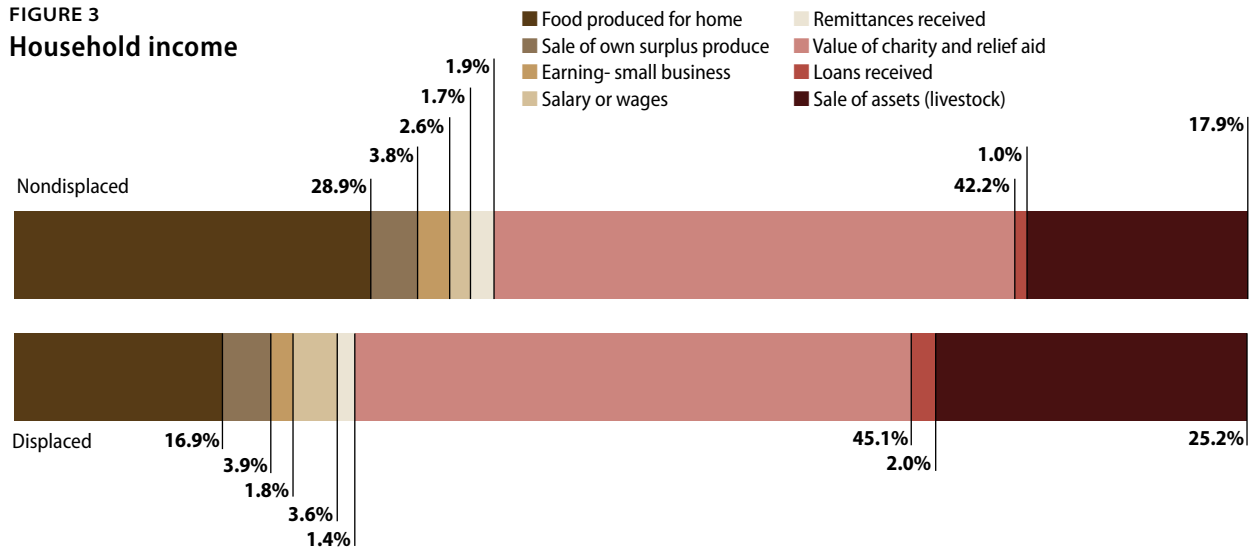


**Reason for current or past displacement (within past six months)**

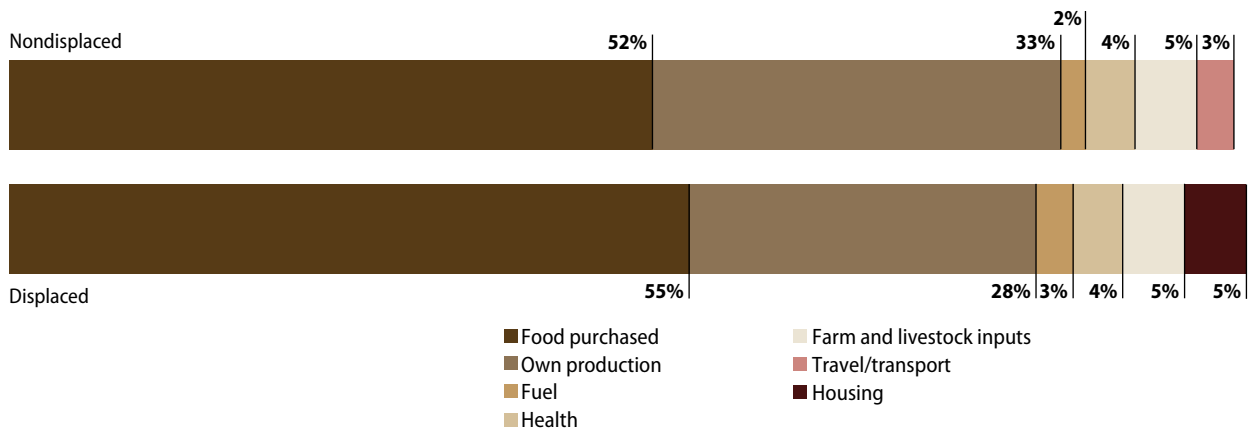


Nondisplaced households earn 14 percent more in monthly income than displaced households. Displaced households spent more funds on housing than nondisplaced households, and nondisplaced households spent more funds on travel and transportation. Nondisplaced households rely more on household food production as a source of income, while displaced households tend to sell assets. (see Figure 3)

**FIGURE 3**  
**Household income**



**Household expenses**





## Education

Respondents reported extremely low education levels. Seventy-one percent of respondents stated that they never attended school, while 25 percent stated that they only attended primary school.

Only 3 percent said they had attended any secondary school. (see Figure 4)

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## Water, sanitation, and hygiene

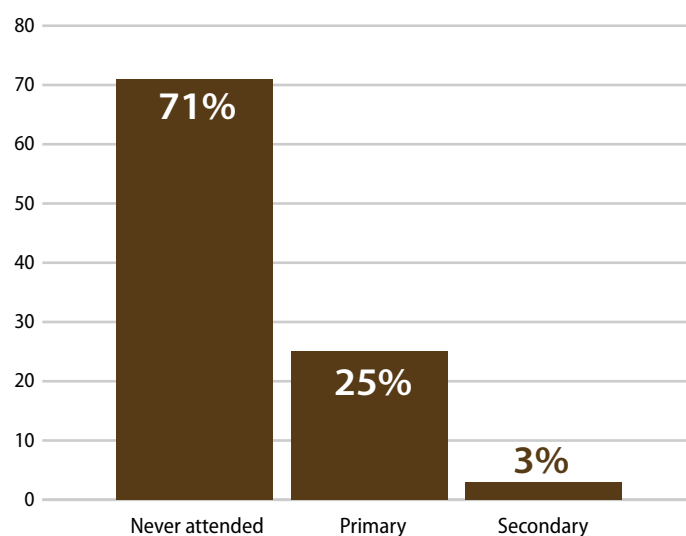
Approximately 48 percent of those surveyed stated that their primary water source dries up throughout the year. Almost a third—32 percent—of the population stated that they were using an unimproved water source as their primary water source.

In these communities, common unimproved water sources include unprotected dug wells or springs, carts with small tanks or drums containing water, and surface water. Households using improved sources—68 percent of respondents—used public taps or standpipes, tube wells or boreholes, protected dug wells, and rainwater collection. When asked about secondary water sources, 51 percent of the households stated that they use improved water sources, often at great distance, when their primary water sources are unavailable. In some cases, participants in focus-group discussions mentioned traveling between one to five hours to collect water from functional boreholes.

During the focus-group discussions, participants stated that there were boreholes in the communities but that the majority of the hand pumps were broken and nonfunctional. Although some of the communities had the expertise necessary to repair the hand pumps and some areas had even raised funds for the purpose, spare parts were not available in the markets. Most of the alternative water sources are polluted, and many are used by both livestock and people, causing diseases to spread within communities. Some community members stated that they boil water before consumption to help purify it. Collecting water each day takes 30 minutes or longer for approximately 51 percent of the population.

Only 3 percent of households currently have access to improved sanitation. When asked about what sanitation facilities households were using, 90 percent responded that their households practice open defecation. Approximately 2 percent use an improved sanitation facility, and 1 percent of respondents use a shared facility. (see Figure 5) In the focus-group discussions, one of the reasons given for the limited use of latrines was the rocky nature of the terrain, which made it difficult to dig latrines.

FIGURE 4  
Level of education



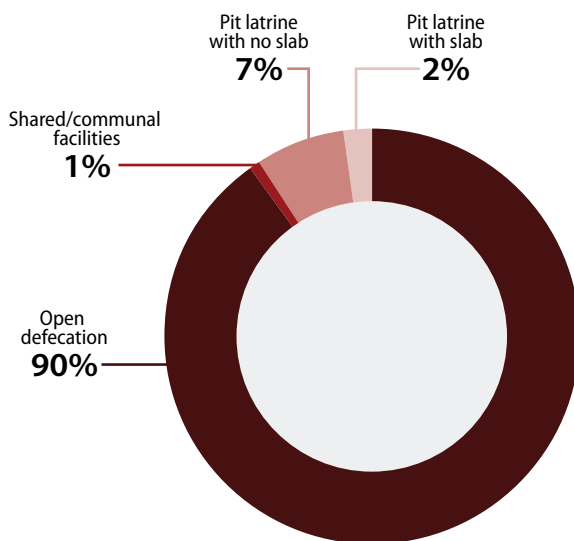
During the household survey, researchers asked respondents at which times they washed their hands. These responses were compared against a list of five appropriate hand-washing times: after defecation; after cleaning babies' bottoms; before food preparation; before eating; and before feeding children. Within the surveyed area, 63 percent of households claimed to wash their hands at three or more of the five appropriate times. Surveyors also requested that households show the soap that they had in the household and found that 35 percent of households could produce soap within two minutes of being asked. These indicators, when taken together, show that only 23 percent of the population claims to wash their hands at three or more of the appropriate times and can also produce soap within two minutes of being asked. (see Figure 6) Within the focus-group discussions, participants cited the high cost of soap as a reason for the lack of use.

In the household survey, researchers also asked respondents about the frequency of diarrhea among children under age 5 living in their homes. A large majority of the households surveyed—76 percent—stated that at least one child in their household had experienced an episode of diarrhea in the preceding two weeks. This response also matched the focus-group discussions regarding health, where participants stated that there were high levels of diarrhea and skin diseases among children as a result of poor water quality.

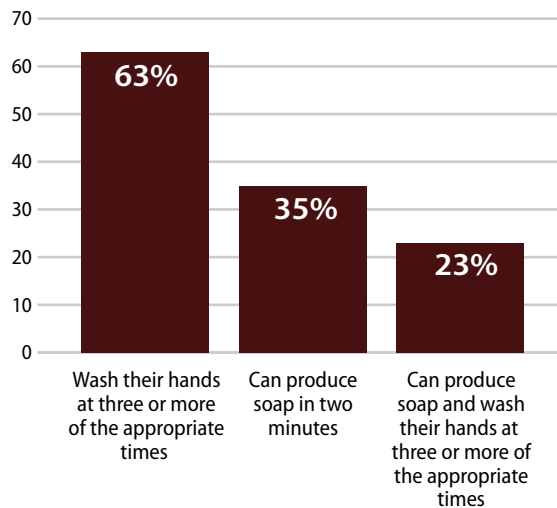
### Health care

In the focus-group discussions, participants stated that most of the health clinics in the region had closed and that functional clinics were located a one- to five-day walk away. Participants stated that the clinics that were still open did not have any trained health workers or medicine. Participants said that health services in the area were very expensive and that there was no transportation to the hospitals. Patients had to be carried on beds, donkeys, or bicycles, if they were available. They stated that most people have resorted to seeking help from traditional healers and herbalists. Surveyors also asked households whether they could determine when a child was sick. Respondents demonstrated a high level of knowledge, with 89 percent of households able to explain at least two ways to tell that a child was ill.

**FIGURE 5**  
**Sanitation facilities used**



**FIGURE 6**  
**Hand-washing practices**

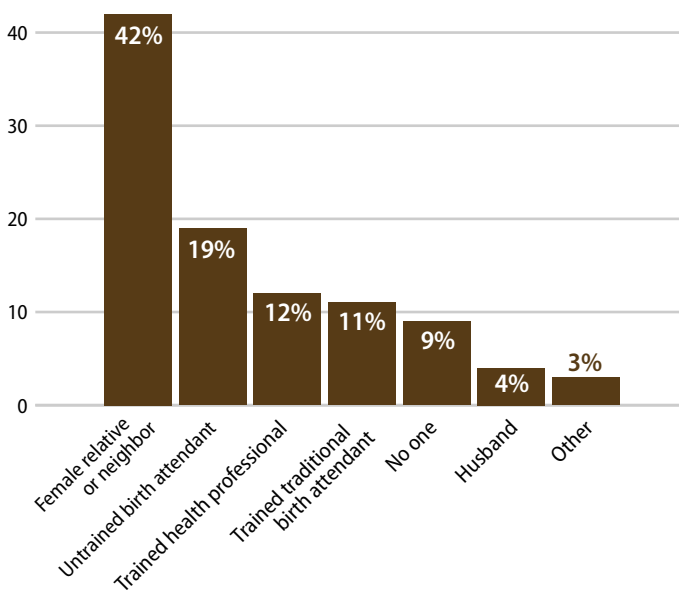


Only 23 percent of women who gave birth within the past five years stated that either a trained health professional—12 percent—or a trained birth attendant—11 percent—had attended their last birth. The most common attendant was a female relative or neighbor—42 percent—followed by an untrained birth attendant—19 percent. Nine percent of respondents stated that no one was present at their last birth. (see Figure 7)

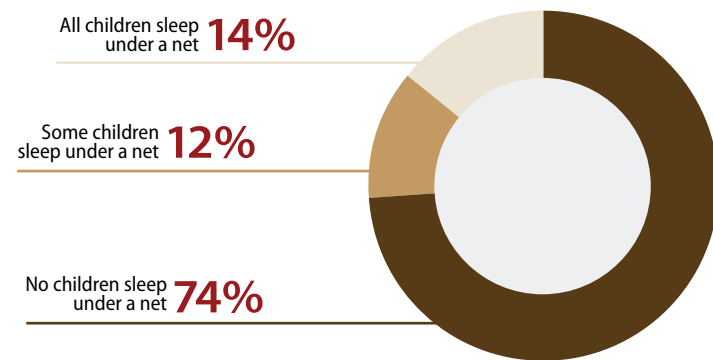
As part of the household survey, respondents were asked about the number of mosquito nets in their homes and the use of these nets. Approximately 76 percent of households stated that they did not have any mosquito nets; only 16 percent stated that they had one net, and 8 percent stated that they had two or more nets. For those households that had children under age 5, 74 percent stated that none of their children slept under a net. Roughly 12 percent stated that some of the children under age 5 slept under a net, and 14 percent stated that all children slept under a net. (see Figure 8)

The lack of mosquito nets correlates with increased incidences of malaria among children under 5. Approximately 68 percent of households stated that their child had malaria in the preceding four weeks. Forty-four percent said it was diagnosed, and 24 percent said it was determined through suggestive symptoms. (see Figure 9) During focus-group discussions, participants also cited the lack of available mosquito nets when describing high levels of malaria among young children.

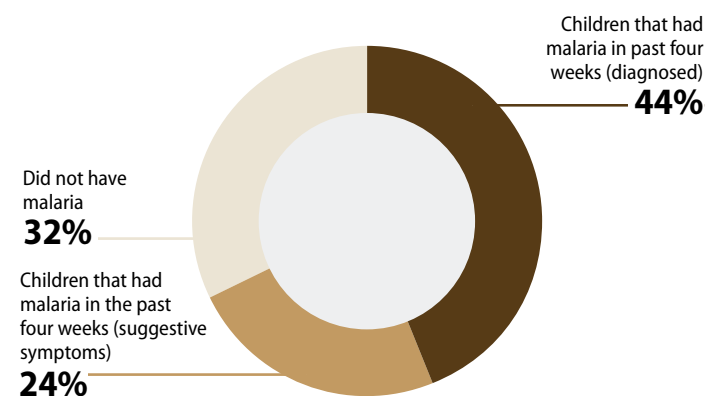
**FIGURE 7**  
**Who attended the birth**



**FIGURE 8**  
**Children sleeping under a net**



**FIGURE 9**  
**Children who had malaria in preceding four weeks**



## Farming and livestock

The people of South Kordofan have traditionally remained self-sufficient in food production, with food deficits only occurring on average once every five years.

The period between July and the end of September is typically the worst for food security in South Kordofan and precedes harvesting of the first crops in late September. (see Table 1) Ongoing conflict has driven many from their homes and fields, disrupting traditional farming and cultivation practices and exacerbating the effects of the lean season. According to the U.S. government’s Famine Early Warning Systems Network, or FEWSNet, rebel-controlled areas of South Kordofan will remain critically food-insecure—at the Integrated Food Security Phase Classification, or IPC, phase 4: emergency level—through September due to the conflict’s “impacts on trade and livelihoods during the peak of the agricultural lean season.”<sup>4</sup>

TABLE 1

Typical seasonal calendar for South Kordofan

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
					Preparation and Planting	Weeding		Harvest				
		Dry Season			Rainy Season							
					Lean Period							

Due to the current circumstances, household land under cultivation for the current season has dropped by 73 percent. (see Table 2) Without increased cultivation, households will experience a greater deficit of food stocks in the coming year.

TABLE 2

Land cultivated

Timeframe	Feddans of land being cultivated by displaced households	Feddans of land being cultivated by nondisplaced households
Feddans <sup>5</sup> cultivated in 2013	0.88	0.87
Feddans cultivated in 2012	0.82	0.93
Feddans cultivated in a normal year	4.94	2.81

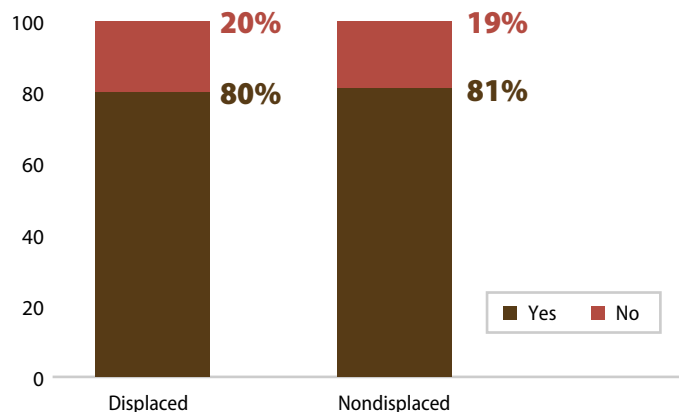
When surveyors asked households if they would cultivate more land if more seeds were available, most respondents said yes. (see Figure 10)

Prior to conflict, several rain-fed agricultural areas in South Kordofan were semi-mechanized, or cultivated partially by machine. Surveyors specifically asked whether communities in these areas still had access to functional tractors. Approximately 77 percent of respondents stated that they did not have access to a tractor; 16 percent stated they had access to a nonfunctional tractor; and 7 percent stated that they had access to a functioning tractor. (see Figure 11) Of the households that are currently planting, only 4 percent use irrigation for production.

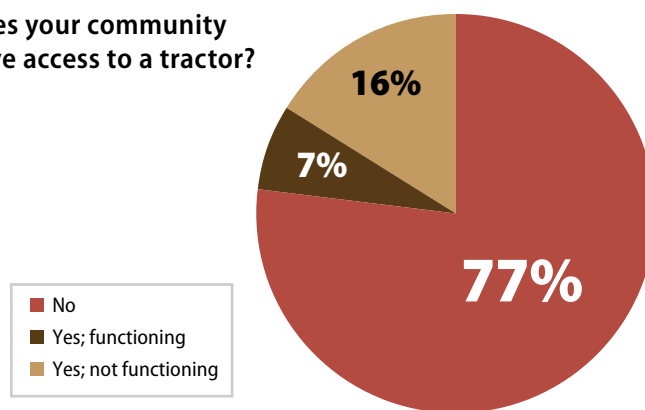
Roughly 62 percent of households stated that they kept some type of livestock, (see Figure 12) although the focus-group discussions revealed that a significant number of the livestock—more than 60 percent—had been lost due to rustlers, deaths from diseases, and lack of access to pasture and water.

Several focus-group discussions noted that livestock deaths increased after the Food and Agriculture Organization, or FAO, stopped providing medicine for livestock, which is currently not available in the region's markets.

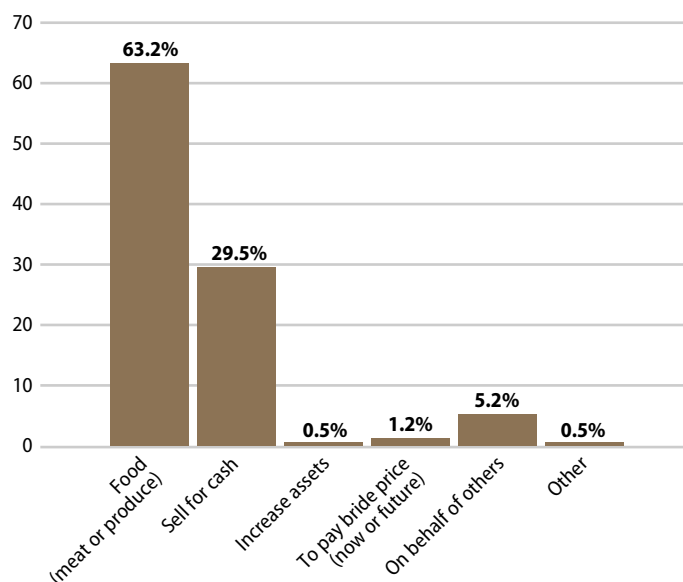
**FIGURE 10**  
Response to question:  
Would you plant more feddans with additional seeds?



**FIGURE 11**  
Does your community have access to a tractor?



**FIGURE 12**  
Primary reason for keeping livestock

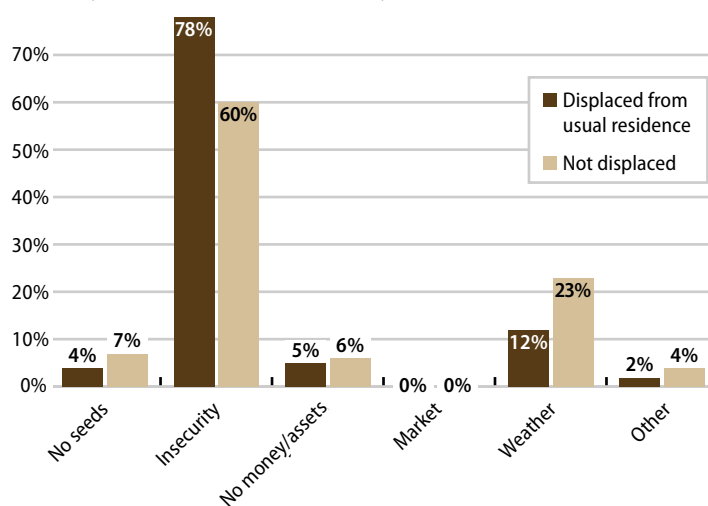


## Food security and market access

Both focus-group discussions and household surveys sought to identify barriers to food security. Households were asked to identify their “primary barrier to achieving food security,” with the largest number of respondents citing insecurity and the second-largest number citing weather. (see Figure 13)

Focus-group discussion participants were asked to rank food-insecurity factors, with 1 being the most significant barrier and 5 being the least significant barrier. (see Table 3) Participants understood insecurity to include conflict, thieves, and cattle raiding.

**FIGURE 13**  
**Primary barrier to food security**



**TABLE 3**  
**Focus-group discussion results: causes of food insecurity**

Cause	Rank				
	Priority 1	Priority 2	Priority 3	Priority 4	Priority 5
Insecurity	71%	14%			
Drought		71%			14%
Lack of advanced farming tools			100%		
Lack of seeds				43%	14%
Lack of farmland	29%			43%	
Poor harvest		14%			
Pests				14%	29%
Animal disease					43%

Ninety-one percent of households reported having enough food stocks to last one month or less, and approximately 43 percent of households stated they did not have enough food to last even a week. (see Table 4)

**TABLE 4**  
**Household food stocks**

Timeframe	Percentage
Less than one week	43%
One week to one month	48%
More than one month	9%

The ongoing conflict has further limited access to local markets and availability of commodities at the markets, prompting widespread displacement in search of food. Focus groups noted that market accessibility decreased significantly during the rainy season, and some communities have to walk one to five hours to reach weekly markets. The household survey revealed that 56 percent of households had to travel at least an hour to access a functional market. (see Figure 14)

Availability of goods, including primary commodities, appeared to vary widely across markets. Some reported availability of a variety of goods in markets, while others only had a few locally produced food items for sale. Primary commodities such as maize and beans were less widely available than goods such as sorghum and oil. (see Figure 15)

Where commodities were available in the market, information on their prices was collected in South Sudanese Pounds, or SSP. (see Table 5) Overall, participants in focus groups noted that prices were heavily inflated—three to five times the normal price. Households with access to cash could use South Sudanese, Sudanese, and Ethiopian currencies, while other households had to barter.

TABLE 5  
Household food stocks

Commodity	Average price, in SSP
Maize	18.26 per malwa
Beans	28 per malwa
Sorghum	17.2 per malwa
Oil	23.5 per liter

The unit of measure for cereals and pulses is a malwa, which has a liquid volume of approximately four liters.

FIGURE 14  
Market access:  
Distance to the nearest functional market

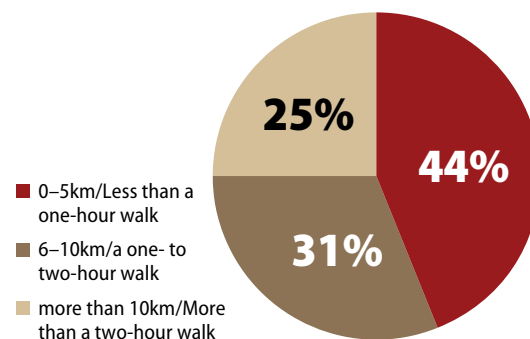
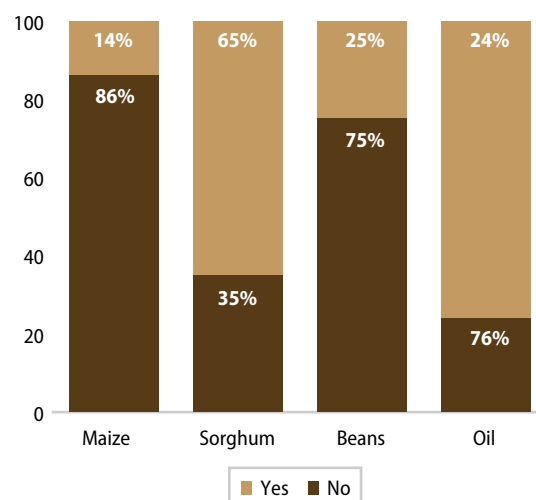


FIGURE 15  
Markets:  
Commodity availability in local markets



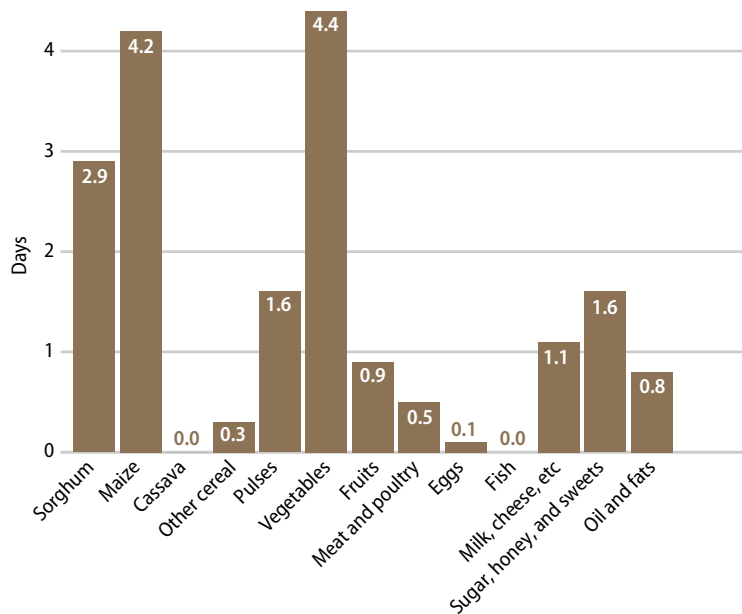
## Hunger and food consumption

Adult meal consumption was slightly lower for displaced households at 1.5 meals per day, compared with nondisplaced households, which consumed 1.7 meals per day. Nondisplaced children eat 2.2 meals per day, while nondisplaced adults eat 1.7 meals per day. (see Figure 16)

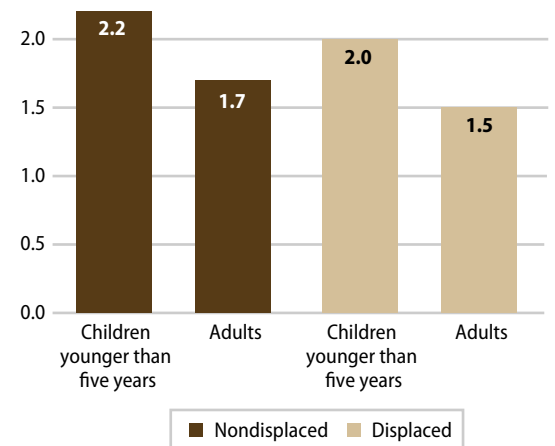
The Household Hunger Scale, or HHS,<sup>6</sup> results indicated that 69 percent of displaced households and 64 percent of nondisplaced households were experiencing moderate hunger—with a score of 2 to 3—to severe hunger—with a score of 4 to 6. (see Figure 17)

The Food Consumption Score, or FCS, test was used to gauge both diversity and frequency of food consumption over a week. Results show that 74 percent of nondisplaced households and 72 percent of displaced households have unacceptable—poor and moderate—consumption levels, according to FCS metrics.<sup>7</sup> (see Figure 18) The most frequently consumed food items were vegetables at 4.4 days per week; maize at 4.2 days per week; and sorghum at 2.9 days per week. Consumption of proteins and oils or fats was poor at 0.8 days per week. (see Figure 19)

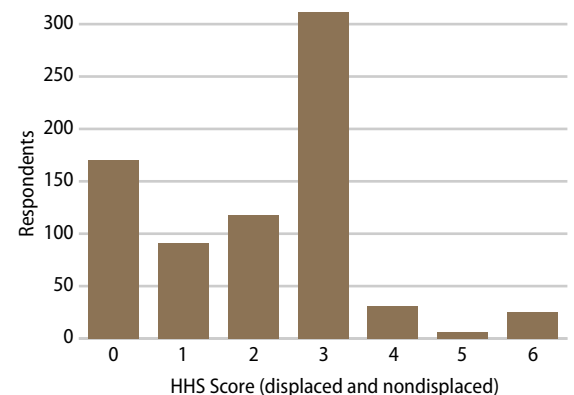
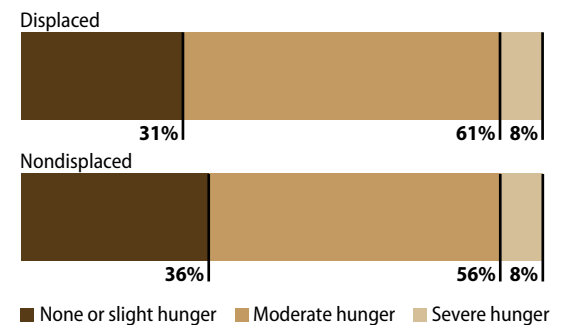
**FIGURE 19**  
**FCS: Average number of days food items are consumed per week**



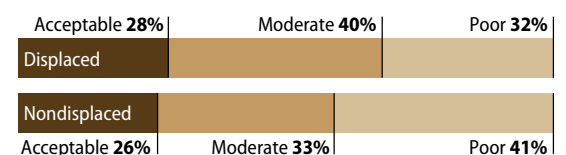
**FIGURE 16**  
**Meals per day**



**FIGURE 17**  
**Household-hunger scale**



**FIGURE 18**  
**Food consumption score**





## Coping strategies

Researchers also surveyed the population's strategies for coping with food insecurity using the Coping Strategies Index, or CSI. The area's first score of 53 will serve as a base-line figure for comparing future assessments of food-insecurity coping strategies.<sup>8</sup> The most widely and frequently used coping strategies included:

1. Gathering wild food, hunting, or harvesting immature crops: 84 percent of households used this strategy an average of 4.2 days per week.
2. Reducing the number of meals eaten in a day: 83 percent of households used this strategy an average of 3.5 days per week.
3. Limiting portion sizes at meals: 80 percent of households used this strategy an average of 3.5 days per week.

The data revealed that large portions of the population had reduced the size and frequency of their meals. The most common food-insecurity coping strategies overwhelmingly involved gathering wild food, hunting, or harvesting immature crops. (see Figure 20 and Table 6)

**FIGURE 20**  
**CSI: Average days strategies are used per week**

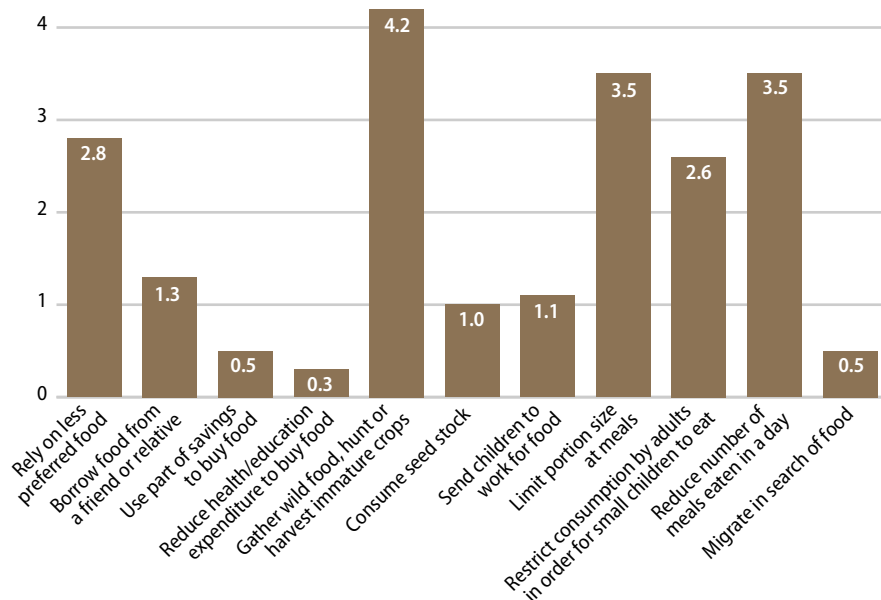


TABLE 6

## CSI: Average days strategies are used per week

Strategy	Frequency of use								Total users	Percentage
	Never	1	2	3	4	5	6	7		
Rely on less-preferred food	260	54	120	87	43	38	31	159	532	67%
Borrow food from a friend or relative	370	105	156	96	36	15	2	12	422	53%
Use part of savings to buy food	640	50	58	11	18	7	1	7	152	19%
Reduce health/education expenditure to buy food	730	15	17	5	5	1	2	17	62	8%
Gather wild food, hunt, or harvest immature crops	129	21	72	109	76	64	43	278	663	84%
Consume seed stock	528	61	76	56	18	13	7	33	264	33%
Send children to work for food	513	36	100	53	33	11	10	36	279	35%
Limit portion size at meals	162	96	116	60	32	36	42	248	630	80%
Restrict consumption by adults in order for small children to eat	299	79	100	69	37	17	18	173	493	62%
Reduce number of meals eaten in a day	135	151	106	54	34	21	15	276	657	83%
Migrate to other places in search of food, including sending family to Yida	657	56	15	10	14	12	0	28	135	17%

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## Recommendations

This humanitarian needs assessment offers an unusually comprehensive and detailed picture of the conditions of daily life in rebel-held areas in South Kordofan state. It expands on a 2012 assessment by an international organization that focused more narrowly on food security and nutrition in South Kordofan, which published the results of Mid-Upper Arm Circumference, or MUAC, screenings that were conducted on children 6 to 59 months old.<sup>9</sup> No similar assessment has been carried out in Blue Nile state.

While this report highlights the resilience of those living in the Nuba Mountains area, it also provides a stark warning of the rapidly deteriorating situation in South Kordofan state. Policymakers must take concrete steps to alleviate immediate food insecurity and also help historically self-sufficient communities to regain their long-term ability to cultivate the land:

1. Culturally appropriate staple foods should be distributed to support the South Kordofan population through the next lean season.
2. Seeds should be distributed to help households reach their pre-war levels of agricultural productivity and build longer-term, sustainable food security, reducing dependence on humanitarian assistance.
3. Providing training, parts, and assistance with hand-pump repairs are essential to ensure access to clean water. Providing boreholes near families with vulnerable members should be prioritized.
4. Expanding the number of latrines and alternative facilities, particularly in areas where rocky terrain presents a construction challenge, can improve public health and stem the spread of disease.
5. Distributing mosquito nets and providing public information about their use, particularly for households with young children, should be prioritized. According to the World Health Organization, mosquito nets reduce overall child mortality by an average of 18 percent and malaria infection by at least 50 percent.<sup>10</sup>

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## Endnotes

- 1 Famine Early Warning Systems Network, "Livelihoods Zoning 'Plus' Activity in Sudan" (2011), p. 9, available at [http://www.fews.net/docs/Publications/sd\\_livelihoods%20descriptions.pdf](http://www.fews.net/docs/Publications/sd_livelihoods%20descriptions.pdf).
- 2 For an assessment of Sudan's current food security outlook, see Famine Early Warning Systems Network, "Sudan," available at <http://www.fews.net/pages/country.aspx?gb=sd&l=en> (last accessed September 2013). For accounts of flooding, see U.S. Agency for International Development, National Oceanic and Atmospheric Administration, and Famine Early Warning Systems Network, "Climate Prediction Center's Africa Hazards Outlook For USAID/FEWS-NET August 8 – August 14, 2013" (2013), available at [http://www.fews.net/docs/Publications/afr\\_Aug08\\_2013.pdf](http://www.fews.net/docs/Publications/afr_Aug08_2013.pdf); International Federation of Red Cross and Red Crescent, "Sudan: Floods" (2013), available at <http://www.ifrc.org/docs/Appeals/12/MDRSD014FR.pdf>. For accounts of drought, see U.S. Agency for International Development, National Oceanic and Atmospheric Administration, and Famine Early Warning Systems Network, "Climate Prediction Center's Africa Hazards Outlook For USAID/FEWS-NET July 25 – July 31, 2013" (2013), available at [http://www.fews.net/docs/Publications/afr\\_Jul25\\_2013.pdf](http://www.fews.net/docs/Publications/afr_Jul25_2013.pdf). For a look at the seasonal and planting calendar in the region, see United States Agency for International Development and Famine Early Warning Systems Network, "Sudan Food Security Outlook May 2012" (2012), p. 1, available at [http://www.fews.net/docs/Publications/Sudan\\_OL\\_2012\\_05\\_final.pdf](http://www.fews.net/docs/Publications/Sudan_OL_2012_05_final.pdf).
- 3 The Food Consumption Score, or FCS, is an indicator developed by the World Food Programme and used to measure food consumption and food security. It is a composite figure based on frequency, diversity, and nutritional value of food consumed. For calculation and rationale in the use of this figure and for parameters for "poor," "borderline," and "acceptable" food consumption scores, see World Food Programme, "Food Consumption Analysis" (2008), pp. 8–9, 13–14, available at [http://documents.wfp.org/stellent/groups/public/documents/manual\\_guide\\_proced/wfp197216.pdf](http://documents.wfp.org/stellent/groups/public/documents/manual_guide_proced/wfp197216.pdf).
- 4 U.S. Agency for International Development and Famine Early Warning Systems Network, "Sudan Food Security Outlook Update August 2013" (2013), available at [http://www.fews.net/docs/Publications/Sudan\\_FSOU\\_2013\\_08\\_final.pdf](http://www.fews.net/docs/Publications/Sudan_FSOU_2013_08_final.pdf). For more information on the classifications of food insecurity, see FEWSNet, "IPC Acute Food Insecurity Reference Table for Household Groups," available at <http://www.fews.net/ml/en/info/pages/scale.aspx> (last accessed September 2013).
- 5 A feddan is an Egyptian unit of measurement corresponding to slightly more than an acre.
- 6 The Household Hunger Scale, or HHS, is an indicator used to measure household hunger in areas experiencing food insecurity. It has been formulated to allow for cross-cultural comparison between different populations. For an introduction to the indicator and its use, see Megan Deitchler and others, "Introducing a Simple Measure of Household Hunger for Cross-Cultural Use" (Washington: Food and Nutrition Technical Assistance Project, 2011), available at <http://www.fantaproject.org/sites/default/files/resources/TN12-HHS-Feb2011.pdf>. For additional materials on the validation and measurement guide to HHS, see Food and Nutrition Technical Assistance, "Validation of a Measure of Household Hunger for Cross-Cultural Use," available at <http://www.fantaproject.org/research/validation-hhs> (last accessed September 2013).
- 7 For calculations and metrics for FCS thresholds, see World Food Programme, "Food Consumption Analysis," pp. 8–9.
- 8 For more on the ways to measure and understand the Coping Strategies Index, or CSI, see Daniel Maxwell and Richard Caldwell, "The Coping Strategies Index: Field Methods Manual" (Rome: World Food Programme, 2008), available at [http://home.wfp.org/stellent/groups/public/documents/manual\\_guide\\_proced/wfp211058.pdf](http://home.wfp.org/stellent/groups/public/documents/manual_guide_proced/wfp211058.pdf).
- 9 Enough Project, "Rapid Food Security And Nutrition Assessment: South Kordofan" (2012), available at <http://www.enoughproject.org/files/SK%20Rapid%20Assessment%20Report.pdf>.
- 10 World Health Organization, "Insecticide-Treated Mosquito Nets: A WHO Position Statement" (2008), available at <http://www.who.int/malaria/publications/atoz/itnspopaperfinal.pdf>.

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Enough is a project of the Center for American Progress to end genocide and crimes against humanity. Founded in 2007, Enough focuses on the crises in Sudan, South Sudan, eastern Congo, and areas affected by the Lord's Resistance Army. Enough conducts intensive field research, develops practical policies to address these crises, and shares sensible tools to empower citizens and groups working for change. To learn more about Enough and what you can do to help, go to [www.enoughproject.org](http://www.enoughproject.org).

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