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Sudanese woman making the traditional bread called *kiswa*.

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Food Insecurity in Sudan as seen from Kassala State

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Sudan's commitment to achieve Sustainable Development Goal 2 – zero hunger – can turn out to be even more challenging than anyone had bargained for. Due to prolonged conflict, environmental deterioration and other disasters such as drought and floods, a substantial share of the population is at risk of food insecurity. In Kassala State in Eastern Sudan, one in three families struggle to put enough food on the table. Based on survey data from Kassala State and other data sources, this policy brief discusses the incidence of food insecurity, explores families' survival strategies, and recommends measures that may combat food insecurity.

Key messages

- A third of the sampled households in Kassala State experience severe food insecurity.
- Households adapt and survive by relying on less preferred and/or less expensive food, limiting portion sizes, reducing the number of daily meals, restricting the amount of food consumed by adults in favor of small children, borrowing food, and relying on help from friends or relatives.
- The use of direct income transfers and other social safety nets, increasing smallholders' farm size, improving technology, securing access to credit, and providing better infrastructure such as roads and domestic water supply are important measures to combat food insecurity.
- Improving agricultural infrastructure, development of rural infrastructure, services, and facilities, and providing farmers with new farm technologies are important measures to increase food production.

In September 2015, all United Nations (UN) Member States including Sudan adopted the 17 Sustainable Development Goals (SDGs) to be achieved by 2030. Sudan has committed to achieve the Sustainable Development Goals, including Goal 2 – Zero Hunger – to end hunger, achieve food security, improve nutrition and promote sustainable agriculture. As in most other developing countries, in Sudan the achievement of SDG 2 and food security relies heavily on sustainable food production systems, resilient agricultural practices, boosting agricultural productivity and increasing investments in agriculture, both public and private, from domestic and foreign sources.

Achieving SDG 2 in Sudan will be challenging as the country suffers from serious food insecurity problems and fails to achieve food and nutrition security for a large part of the population. According to USAID (2019) chronic food insecurity in Sudan threatens lives, livelihoods and stability. Due to prolonged conflict, environmental deterioration and other disasters such as drought and floods, many of Sudan's people are at risk of food insecurity.¹ The level of the problem depends on the measure used, and to some extent also the data source. According to the

World Food Programme (2019) approximately 5.5 million people were food insecure in early 2018 – up from 3.8 million in 2017. It is estimated that more than 80 percent of the population may already be unable to afford the food they need on a daily basis to live a healthy life. The chronic malnutrition rate is 38 percent, with 11 out of 18 states recording the stunting prevalence among children at above 40 percent.²

According to data from UNDP-HDR (2018) the depth of food deficit in Sudan (184 calories deficit per person per day) is at a similar level to neighboring countries such as Ethiopia (201 calories deficit) and Malawi (179 calories), worse than Egypt (32 calories deficit) and Kenya (120 calories), but better than Tanzania (237 calories) and Uganda (284 calories).

Stunting is widespread in Kassala State

Kassala State in Eastern Sudan is one of the regions where a large share of the population are at risk. According to an assesment by the World Food Programme 22 percent of households in Kassala suffer from chronic food insecurity, while 26 percent are chronically moderately food insecure (WFP, 2012). However, our study of agricultural development

¹ See USAID: <https://www.usaid.gov/sudan/agriculture-and-food-security>, accessed 29 January 2019.

² See World Food Programme (2019): <https://www1.wfp.org/countries/sudan>, accessed 29 January 2019.

Households in Kassala**23%**

Food secure

33%

Severely food insecure

29%

Moderately food insecure

15%

Mildly food insecure

Households in rural Kassala**94%**

Severely food insecure

and food security in Kassala State suggests that the numbers are much higher.

Turning to stunting, which is the most used measures of permanent malnutrition, the Multiple Indicators Cluster Survey (MICS) (2014) reports on the variation across Sudan, showing the highest level of stunting among children in Kassala State (49 percent). Other states with a high level of chronic malnutrition are Central Darfur (48 percent), Blue Nile (47 percent), East Darfur (47 percent), Gadarif (46 percent), North Darfur (46 percent), and Red Sea (45 percent), while the lowest levels are found in Khartoum (22 percent) and Northern (23 percent) states, but also in River Nile (30 percent), South Darfur (34 percent), West Darfur (35 percent) and White Nile (37 percent). As these findings indicate, economic and social development appear to matter, but is not the only determinant of food insecurity.

In view of the high stunting prevalence among children reported in Kassala compared to other states it is important and relevant to investigate potential underlying explanations for the high level of chronic malnutrition. Despite being relatively food secure, Kassala has one of the poorest scores when it comes to stunting. The fact that young children from this area end up too short (stunted) implies that there must be problems with the diet, health situation, sanitation or other factors that affect their nutritional intake or

uptake when they are small (normally before one years old).

According to the IPC Acute Food Insecurity Analysis in Sudan (2018) in the period from October to December 2018, Kassala State reported that 16 percent of the population were facing acute food insecurity. Most of Sudan was at a similar level, with a few exceptions (River Nile, Gazera and West Kordofan were all well below 10%). The report argues that the economic crisis of 2018 was an essential factor.

Case study: Food insecurity in Kassala State

To analyze food insecurity in Kassala State we used the FAO definition that includes the dimensions food availability (supply side), access (demand side), food utilization (whether the body can utilize the food) and stability (whether the other three criteria are met at all times). We measured food insecurity using the household food insecurity access scale (HFIAS), which aims to assess food access problems faced by households during a recall period of 30 days. We collected primary data from 500 households from five different areas both rural and urban, and with variation in type of irrigation. Another criteria for selection was the importance of these five localities in food production and employment of population in Kassala State.

Our survey indicates that the prevailing poor housing status and environment, and the prevailing services and infrastructure available for households are not appropriate for supporting food security. This is particularly reflected in the poor access to piped drinking water (only 34 percent of the households) and also from the fact that few households reported the use of toilets inside the house (19 percent). Inadequate access to safe drinking water, sanitation facilities and hygiene practices can undermine individual nutritional status and food security. There is poor infrastructure in the villages. This hinders households' access to social services and physical resources necessary to maintain food security. For instance, road infrastructure and availability of safe, reliable, and affordable transport services in rural areas help to facilitate the movement of food products, and therefore, facilitate availability and access to food and increasing food security.

Using the HFIAS index we find that only 23% of the sampled households in Kassala are food secure. Among the others, 33% are severely food insecure, while the rest are either moderately food insecure (29%), or mildly food insecure (15%).³ In rural Kassala most households (94%) are severely food insecure, which may be explained by the lower incomes among the rural population.

Regarding adaptation and survival strategies, households report that they rely on less preferred and or less expensive food, limit portion size at meal times, reduce the number of meals eaten in a day, restrict consumption by adults so small children can eat and borrow food or rely on help from friends or relatives.

Policy recommendations for improving food security

Sufficient household incomes are necessary to avoid food insecurity. Therefore policies aiming to improve households' farm and non-farm incomes are relevant for improving access to food and improving food security. Farm size is an important determinant of household

incomes and food availability among smallholders. Therefore, policies aiming to increase farm size among smallholders are relevant for improving food security. Other policies include improving agricultural infrastructure, and providing farmers with new farm technologies to increase food production. Similarly, the development of rural infrastructure, services, and facilities, such as construction of efficient transport networks to help moving food products from surplus to food deficit areas. On the demand side, policies include direct income transfers, food subsidies and other social safety nets. Additional measures involve supporting diversification of various kinds of income resources. Regarding utilization of food, policies interventions involve improvement of appropriate housing status, including drinking water and sanitation facilities.

References

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This policy brief is one of two briefs based on the findings in a CMI Sudan working paper (2020) that studies agricultural development and food security with the use of survey data from Kassala State. The researchers conducting the study are part of the Agriculture and Food Security cluster in the Assisting Regional Universities in Sudan (ARUS) programme. The ARUS programme is a collaboration between CMI, the University of Khartoum, Ahfad University for Women, the University of Bergen, and several regional universities in Sudan. The programme is funded by the Norwegian Embassy in Khartoum.

³ We use the measurement of household food insecurity access scale defined in four groups: food secure HFIAS (0-1), mildly food insecure HFIAS (2-7), moderately food insecure HFIAS (8-14) and severe food insecure, HFIAS (15-27) respectively.