



Photograph: World Vision

Food and Nutrition Matters

Adrian Cullis¹

Introduction

South Sudan joined the United Nations on the 14th July 2011 as its 193rd Member State, following the Independence referendum of January 2011 and the Independence Day celebrations of the 9th July 2011. Following a fifty-year war of independence, South Sudan will shortly celebrate its first decade as a sovereign state. This Discussion Paper assesses progress towards food and nutrition security and offers pointers for the future.

A decade of humanitarian assistance

At Independence, the population of South Sudan was estimated to be 9.8 million. Over the last decade, it has increased at around 1.3% per annum, to approximately 11.27 million. South Sudan's Gross Domestic Product (GDP) in its first year of independence was US\$ 1,900 per capita and hence, significantly higher than its neighbours. GDP was however largely dependent on oil revenue that accounted for US\$ 1,500 of Gross National Income. However, oil revenue was not well distributed, and around half of the 80% of the population living in rural areas depended on smallholder farming, livestock keeping, fishing, and harvesting wild fruits and vegetables, and lived below the international poverty line.ⁱ

As a result of unresolved independence issues, a bloody Civil War erupted in December 2013 and continued with periodic ceasefires to December 2017 and the signing of the Cessation of Hostilities Agreement. The fighting was only brought to an end through the support of the Intergovernmental Authority on Development's High-Level Revitalization Forum. Earlier in 2017, a World Bank report suggested the country was on the brink of economic collapse and Africa's potential 'bread-basket' had become a net food importer.ⁱⁱ

Since Independence, the United Nations has produced annual consolidated humanitarian appeals. Appeal amounts, estimates of the numbers of people in need, and numbers of people to be targeted, are presented for alternate years in Table 1. The numbers of people in need fluctuate from 4.6 million in 2013, to 7.5 million people in 2017, while targeted numbers range from 3.3 million to 5.8 million in the same years. To reach the numbers targeted, consolidated appeal amounts range from US\$ 1.16 billion in 2013 to US\$ 1.8 billion in 2015, two years after the start of the Civil War.

Table 1: Humanitarian response plan appeals

Year	Consolidated Appeal (US\$ billion)	People in need (million)	People targeted (million)
2013	1.16	4.6	3.3
2015	1.8	6.4	4.1
2017	1.6	7.5	5.8
2019	1.5	7.1	5.7
2021	1.5	5.7	5.6

Selected extracts from these UN appeal documents are presented in Table 2.

¹ Based on field work carried out in collaboration with Premium Agro Consults Ltd.

Table 2: Highlights from UN consolidated appeal documents

Year	Extracts
2012 ⁱⁱⁱ	<ul style="list-style-type: none"> - Tensions with Sudan continue - oil transit fees and future of the contested Abyei area - Erratic rain and insecurity increase the grain deficit to 474,000 mt - 60% above 2011 levels - Severe malnutrition results from food insecurity, disease, lack of access to primary healthcare, a lack of clean water and sanitation, and poor infant feeding practices
2014 ^{iv}	<ul style="list-style-type: none"> - Civil War affects millions, constrains movement and drives displacement
2016 ^v	<ul style="list-style-type: none"> - Fighting in Juba in July 2016 displaces 3 million people including 1.5 million children - Children recruited as soldiers and sexual/gender-based violence against women and girls escalates - 4.8 million (1 in 3) severely food insecure. 1 million children < 5 years acutely malnourished, including 270,000 severely malnourished - The exchange rate reaches 100 South Sudanese Pounds - 1 USD. Consumer prices rose 549% from September 2015 to September 2016
2018 ^{vi}	<ul style="list-style-type: none"> - 2 million IDPs and 2.2 million refugees - UN cites serious abuses - gang rape, abductions, sexual slavery of women and girls, and child recruitment of girls and boys - Farmers, mostly women, are displaced. Cereal production falls 25% from 2014-2017. The national cereal deficit rises to 500,000 mt - 80% of the population lives below the absolute poverty line. The number of people in IPC Phase 5 nearly doubles compared to 2018
2020 ^{vii}	<ul style="list-style-type: none"> - Transitional Government sworn in and appoints governors in 9 of 10 states (oil-rich Upper Nile state appointed in 2021). Despite the ceasefire, armed force recruits abandon some training centres due to lack of food/ medicine. No progress to-date on key accountability measures ,e.g. National Hybrid Court - Sub-national violence results in 2,000 civilian deaths, the result of shifting alliances - including between sections and clans. Links to political rivalries and targeted military/ armed campaigns and cattle raiding - Of 2,300 health facilities, 1,300 are non-functional; 2.4 million children drop out of school; 30% of schools damaged/ destroyed/ IDPs occupy school buildings; access to safe water - 35% and improved sanitation - 10% - South Sudan in the top 5 countries most vulnerable to climate change - torrential rains, seasonal flooding and drought. Flood impacts include livestock mortality, reduced land for cultivation, and truncated seasonal livestock migration. Floods affect 1 million in 2019-2020 - IPC projects July 2021 food security levels: >7 million severely food insecure or 60% of population, 20% in Emergency (Phase 4) and 1% in Catastrophe (Phase 5) by July 2021

Understanding the livestock economy of South Sudan study^{viii}

Field work for the South Sudan livestock economy study undertaken in 2020-2021 in five agro-pastoral and pastoral livelihood zones included wealth ranking. While the exact definitions varied, all focus groups made reference to household livestock holdings, family composition and, in the four agro-pastoral zones, land holdings. Average household allocation scores for the different wealth groups are presented in Table 3.

Table 3: Average household allocation scores for different wealth groups (n=20 men's groups)

Wealth group	Livelihood zone				
	Dinka ironstone	Toposa pastoral	Dinka NW floodplain	Nuer NW Nile	Nuer NE
'Wealthy'	11	40	15	3	4
'Average'	28	26	18	37	26
'Poor'	44	21	31	28	30
'Very poor'	17	13	36	32	40
Total	100	100	100	100	100

Average scores for the number of 'very poor' and 'poor' wealth groups in the agro-pastoral areas ranged from 60% to 70%.^{ix} In contrast, the corresponding number in the pastoral livelihood zone was 34%. Women's focus groups ranked livestock holdings as 'adequate' to meet household food needs in only the 'wealthy' and 'average' categories, while livestock holdings for the 'poor' and 'very poor' categories were ranked as inadequate. Wealth ranking estimates suggest median 'poor' and 'very poor' agro-pastoral households owned around 1.3 - 1.5 TLU/ adult equivalent.^x

Women focus groups in the sample livelihood zones confirmed that in the pre-Civil War era, households owned larger herds with the result that more milk was widely available than it is today. The women also noted that strong social networks supported the sharing of milk within and even between communities. Amongst other illustrations, they offered the following:

- Children were fed almost exclusively on animal milk after weaning,
- Poorer neighbours were gifted milk and lactating livestock to help them meet their milk needs,
- Sometimes there was so much milk that it could not be consumed, and excess was poured on the manure heap.

As a result of declining livestock numbers, diets are more diverse today than they used to be. Wet and dry season household food scores for 'average' wealth households,^{xi} are presented in Table 4 and 5. In the wet season, fruit and vegetables, crops, milk/ghee/blood^{xii} and wild products harvested from the rangelands scored the highest in that order, while in the dry season, fish, milk/ghee/blood, wild products, and fruits and vegetables scored the highest. Fish ranked first in the dry season because of the high scores in the Dinka NW floodplain and Nuer NE livelihood zones.^{xiii} Access to milk, ghee and blood is reportedly particularly limited in the wet season in the Dinka NW floodplain and Nuer NE livelihood zones. Fortunately, as indicated, large amounts of fish are consumed in the dry season in both zones and, high in protein and fish oils, help to mitigate nutritional problems.

The reduced availability of milk and milk products has resulted in a more diversified diet with an increased dependence on crops. However, flooding and insecurity have affected agricultural productivity, and food security has been further undermined by volatile and high food prices. These factors impact on child nutrition as have the limited access to potable drinking water and child health services. The IPC January 2021 update forecasts a deterioration in child nutrition from 2020 to 2021, with an estimated 1.4 million children expected to suffer from moderately acute malnutrition - the highest figure since 2013 - and numbers suffering from severe acute malnutrition expected to increase from 290,000 to 310,000 children during the coming year.

Table 4: Average wet season food consumption scores for households of 'average' wealth group (n=20 women's groups)

Food sources	Dinka ironstone	Toposa pastoral	Dinka NW floodplain	Nuer NW Nile	Nuer NE	Scores	Rank
	Scores out of 100	Scores out of 100	Scores out of 100	Scores out of 100	Scores out of 100		
Milk, ghee and blood	26	21	9	32	8	96	3
Meat and bush meat	8	4	5	21	11	49	5
Chicken/ eggs	2	8	-	5	3	18	7
Crops - maize/ sorghum/ groundnuts	34	8	31	16	21	110	2
Fruit/ vegetables - greens/ tomato/ okra/ egg plant	18	14	55	17	21	125	1
Wild products - fruits/ vegetables/ honey	8	44	-	-	3	55	4
Fish/dried fish	4	1	-	9	33	47	6
Total	100	100	100	100	100	500	

Table 5: Average dry season food consumption scores for households of 'average' wealth group (n=20 women's groups)

Food sources	Dinka ironstone	Toposa pastoral	Dinka NW floodplain	Nuer NW Nile	Nuer NE	Scores	Rank
	Scores out of 100	Scores out of 100	Scores out of 100	Scores out of 100	Scores out of 100		
Milk, ghee and blood	12	19	6	35	12	84	2
Meat and bush meat	-	6	7	10	11	34	6
Chicken/ eggs	9	14	3	25	6	57	5
Crops - maize/ sorghum/ groundnuts	21	12	19	12	20	84	2
Fruit/ vegetables - greens/ tomato/ okra/ egg plant	16	3	34	3	8	64	4
Wild products - fruits/ vegetables/ honey	27	46	-	2	4	79	3
Fish/dried fish	15	-	31	13	39	98	1
Total	100	100	100	100	100	500	

New ways of working

The 2016 World Humanitarian Summit in Istanbul called for New Ways of Working (NWoW) in order to: bridge the humanitarian-development divide; align efforts through collective outcomes to reduce risk and vulnerabilities; reduce the number of people requiring humanitarian assistance; and increase support to strengthen local capacities and Government-delivered services. In South Sudan, emerging from a prolonged and bloody civil war, where more than half the population requires urgent food assistance, where about 40% of the population is internally displaced or lives as refugees in neighbouring countries, and where routine humanitarian/ development access is limited, the delivery of NWoW is inevitably not without major operational challenges. Expectations for change need to be tempered by the context.

One area where the humanitarian-development divide is already being bridged in South Sudan is child nutrition. In addition to the delivery of community-based management of acute malnutrition, Government and aid organizations are providing nutrition-specific and nutrition sensitive interventions as outlined in Table 6.^{xiv}

Table 6: Nutritional programming in South Sudan

Emergency nutrition

Nutrition specific

- Nutrition appropriate emergency food assistance – including pre-positioning of food
- Community management of acute malnutrition
- In-patient and out-patient therapeutic treatment and stabilisation
- Micro-nutrient supplements
- Infant and young child feeding counselling services - promoting breastfeeding and good feeding practices

Nutrition sensitive

- Cash transfers
- Emergency water and sanitation including water tankering, repair and construction of water points and latrines
- Emergency seed distribution
- Emergency livestock vaccination and treatment interventions
- Emergency livestock feed interventions
- Livelihood support
- Child protection

Development nutrition

Nutrition sensitive

- Nutrition assessments and routine monitoring and surveillance
- Early warning systems
- Micro-nutrient supplements
- WASH – non-emergencies
- Health and nutrition messaging
- Shelter and settlement
- Social protection
- Livelihood interventions:
 - Animal health - private veterinary pharmacies
 - Livestock vaccination
 - Restocking/ livestock provision
 - Agriculture inputs supply
 - Post-harvest storage
 - Fishing inputs supply
 - Vegetable gardens

Discussion

The deteriorating child nutrition outcomes forecast in the IPC January 2021 update underlines the immediate and medium-term challenges faced by South Sudan’s humanitarian actors. With the prospect of a return to under-nutrition levels associated with the Civil War, nutrition offers a useful proxy indicator into South Sudan’s wider post-independence political failure. The world has yet to hold its leaders to account for failure to deliver adequate nutrition to the most vulnerable - typically pregnant and lactating women and young children, but perhaps the time has come. The findings of the ‘*Understanding the Livestock Economy of South Sudan*’ study referenced in this Discussion Paper certainly confirm the importance of national leaders taking increased and personal responsibility in this field.

Aid agencies involved in the routine delivery of emergency nutrition assistance are sufficiently experienced to understand what is required and where, when and how it should be delivered to ensure the best possible outcomes with the resources available. For this reason, this Discussion Paper simply reinforces the need for adequate investment support. In this context, it is concerning that the UK Government is considering around 60% cut in assistance to South Sudan.^{xv}

Moving from policy to practice, women agro-pastoralists and pastoralists participating in the study offered the following insights that may be of interest and help inform emergency nutrition programming in South Sudan. Further research may however be required at the State level, to identify, confirm and document lessons learned and good practice.

1. Emergency nutrition - nutrition specific

- *Nutrition appropriate emergency food assistance* - increased use could be made of locally sourced animal proteins in emergency food assistance baskets including milk and milk products, eggs and poultry meat, fish and meat using voucher-based schemes. The increased use of animal proteins would address micro-nutrient deficiency and support the delivery of culturally appropriate child feeding counselling services

2. Emergency nutrition – nutrition sensitive

- *Cash transfers* - unconditional and conditional cash transfer can be augmented by nutrition voucher schemes as outlined above
- *Emergency livestock vaccination and treatment interventions* - with an increased focus on the routine delivery of vaccination services for poultry and small ruminants that are more accessible to poorer and women-headed households and to IDPs and refugees
- *Decentralised animal health* - as an adjunct to emergency vaccination and treatment, women are interested to become more involved in the delivered of animal health services to address the treatment of locally economically important livestock diseases. Women can therefore be trained as community animal health workers (CAHWs) to provide such services in their home communities. Such women can be supported by women owned and managed micro-private veterinary pharmacies that are linked with women's savings and credit groups (although managed privately)
- *Emergency livestock feed interventions* - while recognising the challenges involved, it is widely recognised that in times of severe food shortages agro-pastoral and pastoral households seek to provide food for core breeding animals, including the sharing of food aid. In addition, therefore, to providing food assistance, expanded support to women's groups to procure, prepare and distribute small amounts of feed for poultry and small ruminants may help protect and maintain livestock production and productivity with the associated nutritional benefits
- *Emergency seed distribution* - with a primary focus on seed fairs that promote the multiplication and sharing of locally important field crops, vegetables and fruit trees as opposed to imported hybrid seeds that require sophisticated market systems and cash

3. Development nutrition

- *Restocking/ livestock provision* - with support targeted to women-headed, 'very poor' and 'poor' households, IDPs and refugees and a focus on the provision of small and manageable numbers of poultry and small ruminants
- *Fishing inputs supply* - the provision of inputs, training and management for locally sustainable fisheries
- *Agricultural input supply* - seeds and tools for displaced communities where emergency needs have been met. As recognised above, with a primary focus on seed fairs and locally appropriate tools
- *Processing and storage* - for locally important and perishable vegetables, crops and fruit, to extend availability in particular, where possible, into the 'lean season'
- *Vegetable gardens* - technical training and ongoing advisory support for agro-ecological/ perma-gardening methods for increased vegetable production in community and private managed gardens

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Tana Copenhagen ApS | tanacopenhagen.com | Palægade 3, 4th DK-1261 Copenhagen K
Denmark | [+45 3536 1915](tel:+4535361915)

Endnotes

- i Maxwell et. al. (2012).
- ii World Bank. (2017).
- iii United Nations Office for Coordination of Humanitarian Affairs. (2013)
- iv United Nations Office for Coordination of Humanitarian Affairs. (2015).
- v United Nations Office for Coordination of Humanitarian Affairs. (2017).
- vi United Nations Office for Coordination of Humanitarian Affairs. (2019).
- vii United Nations Office for Coordination of Humanitarian Affairs. (2021).
- viii The Understanding the Livestock Economy of South Sudan study was commissioned by the East Africa Research Foundation to help inform contemporary investment choices in the livestock sector.
- ix The findings validate the IPC update that indicates more than 7 million people, slightly more than 60 per cent of the population of South Sudan, are expected to face severe acute food insecurity in 2021.
- x These findings appear to validate research in Karamoja, Uganda that estimates agro-pastoralists and pastoralists require around 3 and 4 TLU/adult equivalent - or four and five cattle or thirty and forty sheep/goats - respectively to meet their food needs, respectively Catley et. al (2018).
- xi Time constraints prevented separate focus group discussion with women from different wealth groups. The findings therefore point only to seasonal dietary differences for 'average' wealth group households.
- xii In some communities, ghee sales are restricted as ghee is saved for the elders to consume.
- xiii Fish are a particular good source of protein and can be often be accessed relatively safely even during times of heightened insecurity.
- xiv United Nations Children's Fund et. al. (2015). United Nations Children's Fund. (2020).
- xiv Reliefweb. (2021).

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