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SPECIAL REPORT

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Food Security and Nutrition Vulnerability and Risk Analysis in Former Warrap and Northern Bahr el Ghazal States

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Summary

The trends reported in the Integrated Food Security Phase Classification (IPC) show a growing food security crisis in South Sudan, with a high proportion of people sliding into crisis and emergency food insecurity level. The underlying fears concern an emerging acute lack of food in almost all parts of the country, with millions of people, many of them rural women and children, affected. At the peak of the lean season in August to September 2016, Northern Bahr el Ghazal had 72% of its population facing crisis and emergency¹ level. It should also be noted that Northern Bahr el Ghazal's food security indicators continue to be alarming with 62% of the population being severely food insecure (phase 3,4,5) by the peak of the lean season (July)². In January 2017, the Sudd Institute, with generous support from Food and Agriculture Organization (FAO) of the United Nations, explored the proximal risk factors undermining food security resilience and triggering or perpetuating emergency level vulnerabilities in the former states of Warrap and Northern Bahr el Ghazal. Examining 6 major assumptions using Participatory Rural Appraisal (PRA) tools to draw important information from rural households, the results are instructive and in direction of our expectation. They provide insights into appropriate response options for combating food security vulnerability in the region that is nearly sliding into famine. We outline the key results as follows:

Vulnerability causes

- **Poverty** permeates much of the studied populations and retards food production. The poorest members of the society are generally physically weak to adequately farm; they also lack resources to invest in alternative, more productive livelihoods. Furthermore, poverty amplifies competition over limited resources, resulting in violence and costly human flight.
- **Market dependence and changes in traditional wealth** led to unsustainable changes in livelihoods. The growth in the cash economy during the CPA era is alleged to have changed young people's attitude and mindsets, leading to a parsimonious engagement in the traditional economy. This leaves many young people jobless in the rural areas, consequently perpetuating poverty in their immediate families or inducing migration to the urban areas. This means that the traditional wealth system is either declining or changing fast in many parts of the country. The wealth source has changed over the years, with salaries becoming increasingly important in the recent periods. This transition is partly traced back to the liberation days when the SPLM/A largely depended on locally raised resources, especially cattle, the result of which has been near depletion of these livelihood sources, rendering the studied communities vulnerable to insistent food security risks.

As the economy collapses, with hyperinflation as a result, low and stagnant wages are not keeping pace with high inflation rates. As communities steadily become less self-sufficient the UN food distribution system has become an essential recourse for their livelihood.

¹ IPC August 2016 (unpublished)

² IPC February 2017

³ Without adaptation, predicted changes in temperature, precipitation, seasonality and the frequency and severity of extreme events have the potential to decrease crop and livestock production significantly in the near future and disrupt supply chains.

This economic system allows many parts of the country to depend on food assistance, creating dependency on international humanitarian organizations.

As the traditional economy declines, there is a marked shift of wealth towards business people and government employees. Traders and government employees, a negligible fraction of the population, control the modernizing economy. The result is a crowded out barter system, as the demand for money heightens, lending leverage to those with cash. Thus, money, cattle, and other resources are now concentrated in the hands of the elite, posing serious food security threats for a vast majority of the population.

- **Security** impacts massively on livelihood sustainability. Border conflicts, violent ethnic feuds, some of these associated with natural resources, and the recent civil war have deeply undermined livelihoods in the studied areas. Local food production has been limited, displacement back to North Sudan induced, and trade routes closed.
- **Devaluation and the oil shutdown** drastically reduced state's revenues and household's purchasing power. Resultant austerity measures and high inflation rates have meant significant loss of incomes and diminished purchasing power for government employees. Since then food prices have unabatedly hiked.
- **Climate Change**, which is increasingly evident in South Sudan, is causing floods and droughts. Both events negatively affect crop growth, causing the food insecurity.

Policy ideas

Short-term

- **Food relief is urgently needed.** Scaling up internationally backed relief programming and targeting it to households and areas with an immediate need can save millions of lives.
- **Food subsidies could boost commodity supplies, assist low-income households, and alleviate the burden of high food prices.** This policy advice is intended to appeal to the government or its partners to purchase enough food and trade it at a relatively low cost to poor families or households.
- **The UN relief support needs increased oversight, perhaps even government's hands off. Corruption hampers access to UN food in the studied areas. Use of local chiefs to identify the needy and distribute relief food is suggested.**
- **Ending the current violence makes for an essential point of departure into improving food security in the country.** There ought to be political stability for South Sudan to regain economic stability.

Medium-term

- **Supplying seeds and farming equipment fosters an impetus for long-term**

food security improvement. As the hunger looms, an urgent relief response is essential, but such makes for a Band-Aid strategy towards food security stabilization. A long-term food security design demands enlisting plans that eventually wean the population from international aid. Hence, increased farming support is suggested this coming rain season. Thus, of importance is the provision of seed varieties, depending on livelihood zone, to local farmers. But because farming in South Sudan tends to be quite rudimentary, with majority of the farmers being illiterate, providing seeds and farming equipment alone may not significantly improve food production. We therefore propose a complementary capacity building element, especially the use of extension technologies, to enhance agricultural practices, hence increasing food security.

- **Making safe, drinking water more accessible in more fertile lands in the country fosters increased crop production.** There is little farming activity taking place in areas that are considered fertile but lack safe, drinking water. Given the experience of the last two years, where crops have not been doing well in the lowlands due to floods, the residents we interviewed now express interest to instead farm in the highlands but lack of water in these areas, particularly during field preparation, hampers this endeavor. Poor transport infrastructure burdens the farmers to transport enough clean water by foot to considerably distant highlands. Because most highlands are rarely settled owing primarily to this underlying lack of clean water, supplying these locations with boreholes seems quite sensible.

Long-term

- **Families who have lost loved ones as public servants, particularly in the military, deserve a special welfare consideration.** South Sudan does not currently disburse pensions and insurance compensations for these families. Those women who were made widows by the current war, for instance, deserve compensations; this is because such families are particularly more vulnerable to poverty, requiring government's immediate intervention.
- **South Sudan needs to adopt 'climate-smart agriculture' in order to mitigate climate-induced food shortage and improve food production.** Climate change affects quantity and quality of food produced. This requires measured resilience and adaptation³. The adaptive strategy should be innovative and “integrates climate and development goals together and explicitly targets the objectives and not the mechanisms to achieve them” (Rosenstock et al 2016). Ensuring resilience to climate change demands regularly collecting and analyzing quality data to inform agricultural activities.
- **Institute low cost direct loans for poor households to boost household-based enterprises.** Government subsidies for basic but few food items, high taxation rates, and the deregulation of markets supposedly permit wealthy traders to purchase and

³ Without adaptation, predicted changes in temperature, precipitation, seasonality and the frequency and severity of extreme events have the potential to decrease crop and livestock production significantly in the near future and disrupt supply chains.

monopolize the basic food commodities market, increasing prices at unprecedented rate during seasons of scarcity. The targeted loans are expected to minimize this exploitation, broaden the market, and promote economic independence for such households.

- **Achieving food security in South Sudan demands establishing a contextually grounded conceptual framework.** This framework should focus on increasing productivity, enhancing agricultural production as an engine to create employment, reduce poverty, and increase value-additions.
- **A proper use of livestock could alleviate food insecurity.** South Sudan's livestock population stands at 36,222,802, with 24 percent in Warrap and Northern Bahr el Ghazal alone (FAO, 2009). However, there is an under-use of these important resources. For example, South Sudan's urban dwellers depend largely on livestock products imported from East Africa. Commercializing aspects of this industry could increase incomes and improve people's standards of living. Livestock could be bred for both milk and meat. As a long-term development strategy, this may require specialized skills training programs across the nation.

1. Introduction

South Sudan has been going through an emergency level food crisis, with some parts in the Greater Upper Nile region hit by famine. The Integrated Food Security Phase Classification (IPC) classified the Food Security situation in the former states of Warrap and Northern Bahr el Ghazal as the worst, with populations facing possible catastrophe, emergency and crisis level food insecurity in NBEG since August 2016 (IPC, 2016⁴). In former Northern Bahr el Ghazal state alone, severe food and nutrition insecurity may affect well over 60 percent of the population by July this year (January 2017 IPC Report).

Despite several food security and nutrition assessments conducted in these areas, specific causal determinants of acute malnutrition and food insecurity are not yet understood. Furthermore, conflict between nutrition and food security indicators has consistently been observed, with areas having poor nutrition indicators not necessarily having matching food insecurity indicators. For instance, above emergency threshold malnutrition rates continue to be observed in the two former states, even during seasons of plenty, suggesting there could be contextual factors influencing food security and nutritional outcomes. Perhaps availability of enough food is not sufficient an assurance of food security; both physical and economic access to food, especially among market dependent populations, remains critically imperative. Moreover, a number of food security and nutrition interventions have been implemented in the former Warrap and Northern Bahr el Ghazal states, targeting the most vulnerable persons in the states. These interventions are expected to spur nutrition and food security improvements in these states. This does not seem to hold. All of these observations raise more questions than the prevailing literature establishes. They motivate a further study into causal factors associated with poor

⁴ The August 2016 IPC report was never officially released for public use but has been authorized for internal use.

nutritional and food security outcomes in the two states. Perhaps the influence of ecological and environmental factors on health needs paying attention to. This persistent malnutrition in the two states could partly be a function of a higher burden of disease there. According to ACF (not dated), “certain illnesses and infections, such as tuberculosis, measles, and diarrhoea are directly linked to acute malnutrition.” Similarly, poor sanitary conditions “increase vulnerability to infectious and water-borne diseases, which are direct causes of acute malnutrition.”

Similarly, that food insecurity is persistent in these states following a number of interventions raises a question of how to build stronger resilience in these communities. Enhanced health surveillance (epidemiological studies), infrastructural improvements, and improved access to health services may reduce a number of ecological and environmental causes of malnutrition.

The current study, therefore, investigates using an in-depth qualitative enquiry the casual factors associated with food insecurity and livelihood vulnerabilities in the former states of Warrap and Northern Bahr el Ghazal—a retrospective analysis of events that have shaped livelihood change and the political economy in recent history. As food insecurity becomes widespread, exemplified by a fear of famine referenced earlier, the livelihoods story is required, outlining significant changes and their resultant impact, to help plan appropriate response options over and above those of preventing death and total collapse of the livelihoods or saving lives through livelihoods provisioning and protecting livelihoods and reducing food consumption gaps. In doing so, the study:

- a) Assesses proximate socio-political factors.
- b) Maps changes in wealth over a time period.
- c) Clarifies how households managed to access their staple food commodities from markets between the time of the CPA and up until the collapse of the value of the SSP in 2016.
- d) Identifies other changes in incomes during the period of prosperity, i.e., emergence of government jobs paid through oil rents.
- e) Stratifies food security vulnerability.
- f) Clarifies local awareness regarding the key factors contributing to the loss of value of the currency (SSP).
- g) Clarifies the role of migration as a livelihood strategy.
- h) Above all, notes and reports on the proximal factors that undermine the resilience of communities in the studied areas.

This study was commissioned as part of an Integrated Food & Nutrition Security Causal Analysis (IFANSCA) exercise. A joint research endeavor among FAO, WFP, and UNICEF, IFANSCA aims to provide an understanding of the factors underlying persistent GAM rates and food insecurity in the selected areas.

Partly because of the preoccupation with the war of liberation (1955-1972 and 1983-2005) and later with internal conflicts after attaining statehood in 2011, South Sudan has been a landmass known for various spates of food insecurity and resultant vulnerabilities, including hunger (SCF, 1998; WFP, 2007). A number of famines that caused immeasurable affliction and occasioned massive vulnerabilities, for example, have been documented in Sudan and South Sudan from 1970's through late 1990's (Deng, 1996; de Waal, 1993; Keen, 1994; Malwal, 1998; Eibner, 1999; Taylor-Robinson, 2002; Rhodes, 2002; Duwel, 2002). Even when the civil war was

concluded through the signing of the CPA between Sudan and South Sudan in 2005, food insecurity or better yet vulnerabilities to external shocks still prevailed because of perpetual insecurity, displacement by war, poor harvests, and perilous migration patterns between the north and south (HAC, 2016; WPF, 2016b). The country now faces emergency level humanitarian crisis, punctuated by an acute lack of food. In February 2017, the Government of South Sudan accordingly declared famine in parts of former Unity state. While other wings of the government were reluctant in accepting such biting and looming famine in the country, it later grudgingly acknowledged it. The Transitional Government of National Unity (TGoNU), through the leadership of the Ministry of Humanitarian Affairs and Disaster Management (MHADM) working alongside the UN agencies and NGOs, came up with a Humanitarian Response Plan, 2017. This enabled the whole world to talk about and brace for action to fight famine in South Sudan (Leach, 2017).

As illustrated above and by other scholars elsewhere, it could be argued that factors such as effects of war, decline in exchange entitlements (Devereux, 2001; Baro & Deubel, 2006; Falltrick, 2012) and unfavorable climatic conditions have been responsible for much of food insecurity and vulnerabilities through pre- and post-independent South Sudan. In emphasizing such factors, WFP (2007, p. 20) argues that “Food security status is determined by the combination of aggregate food availability, household food access and utilization.” Hence, even without choosing to starve as Amartya Sen alluded to in other contexts about a decade ago, entitlement approach could fail in a number of ways, including disruption of trade routes, dissipation of social capital, and hindrances to efficient markets. These examples make it extremely difficult for households to simultaneously protect their socio-economic resources and trade own asset so as to acquire enough food, command a specified consumption basket or make inter-temporal choices in multi-period settings (Devereux, 2001; De Waal, 1993; Falltrick, 2012).

On the aggregate, acute hunger or famine is unacceptable to many people during this day and age of superior technology and better tools for communications or in an age of globalization. That the famine has visited South Sudan in 2017 is a shock to many people as vividly exemplified in the following passage:

Earlier this week, famine was declared across parts of South Sudan, where nearly 100,000 people are facing starvation. At a time when the technology and tools to fight global hunger have never been stronger, such mass starvation is a paradox—and it is an obscenity and entirely preventable.

In search for answers to this problem, the current analysis tests six key hypotheses as presented in the sections that follow.

1.1. Hypotheses

Hypothesis 1: There are Socio-Economic Group Differences in Vulnerability to Different Shocks

It is obvious that the livelihoods of households adapting to the more urban or periphery-urban way of life needs to be better understood. The two groups, obviously, are vulnerable to different shocks for different reasons. Stated differently, different groups in former Northern Bahr el

Ghazal and Warrap States face different vulnerabilities. First, the degree to the shock among populations between the people in former Warrap and Northern Bahr el Ghazal differs (see WFP, 2007). An Assessment by WFP in 2007 argued that there are more food insecure residents in Northern Bahr el Ghazal and Warrap than in other eight states. WFP (2007) had this to say:

Jonglei, Warrap, and North Bahr el Ghazal were determined to have the largest percentage of food insecure households. Overall, 40-41 percent of households in these three states had either poor or borderline consumption patterns. Central and Western Equatoria had the lowest percentage of food insecure households, with 15 and 22 percent of households being food insecure.

These conditions worsened following the outbreak of the civil war, as well as a result of the subsequent macro-economic deterioration in the country. While 21 percent of the households were severely food insecure nationwide in 2016, the estimates stood at 46 percent in NBG and 38 in Warrap (WFP 2016). Overall, well over 80 percent of the households in both states were food insecure in 2016: 86 in NBG and 85 in Warrap.

Secondly, some households could have remittances or other forms of assistance coming from relatives in towns than others. This also means differences in coping strategies to vulnerabilities within and between states.

Thirdly, farming seasons play a role in these vulnerabilities as well. Good rainy season is likely to bring a good harvest and that means some households could be well-placed and shielded against future shocks. Poor consecutive harvests over the years in the two states under discussion could have been responsible for much of the reported vulnerabilities.

Fourthly, entitlement approach could be a contributing factor towards explaining differences to vulnerabilities in these states (Devereux, 2006). Even within the same state, it has been reported that IDPs, asset poor, and recently resettled households experience one or more shocks and are likely to fall in the category of food insecure (WFP, 2007). It is also possible that those who have migrated to towns or to Khartoum face similar threats such as inability to secure decent jobs and shelter. Aside from the aggregated impact of the conflict, Juba experiences today these settler predicaments.

In addition to the above differences in vulnerabilities and associated risks, gender differentials are also evident in such instances. In most cases, women are likely to face more acute food insecurity or risks than men (WFP, 2015). This is partially due to cultural norms. A female-headed household, for example, is likely to face acute shock than male-headed one (see UNICEF, 2015). The recent reports coming from former Unity State where women, girls, and children face the brunt of the conflict and food insecurity, confirm such gender differentials. Another possible explanation is a relatively low human capital (limited educational attainment) in the South Sudanese female population. Human capital is a proxy for economic capability.

Hypothesis 2: The Emergence of New Income Sources must have caused Market Dependence

South Sudan is not yet a fully integrated modern economy since agriculture still dominates as the main economic activity for households (SSCCSE, 2010). However, there has been a move

toward market-based transactions in recent years, especially after the signing of CPA. In other words, the reported increase in dependency on the market is, therefore, a relatively new convention in the two states. The new income sources that enable this level of purchases by households need a clarification. Such attempt is in order. In the united Sudan, much of the economy in the periphery (including South Sudan) was not integrated with the center. While the southern Sudan economy was traditional (farming, and animal husbandry), Northern Sudan was semi-modern. Use of the cash and the markets in general were limited in South Sudan. But after the war concluded with the CPA, Southern Sudan (2005-2011) or South Sudan (2011-present) entered a new age. Oil money (a lot of it and close to \$20 billion in oil revenue flowed in from 2005 through 2014 according to the MoFE's records) changed much of South Sudan by making it more of an exchange economy. More government jobs were created, especially in the security sector, attracting labor out of the ordinary economy (agriculture).

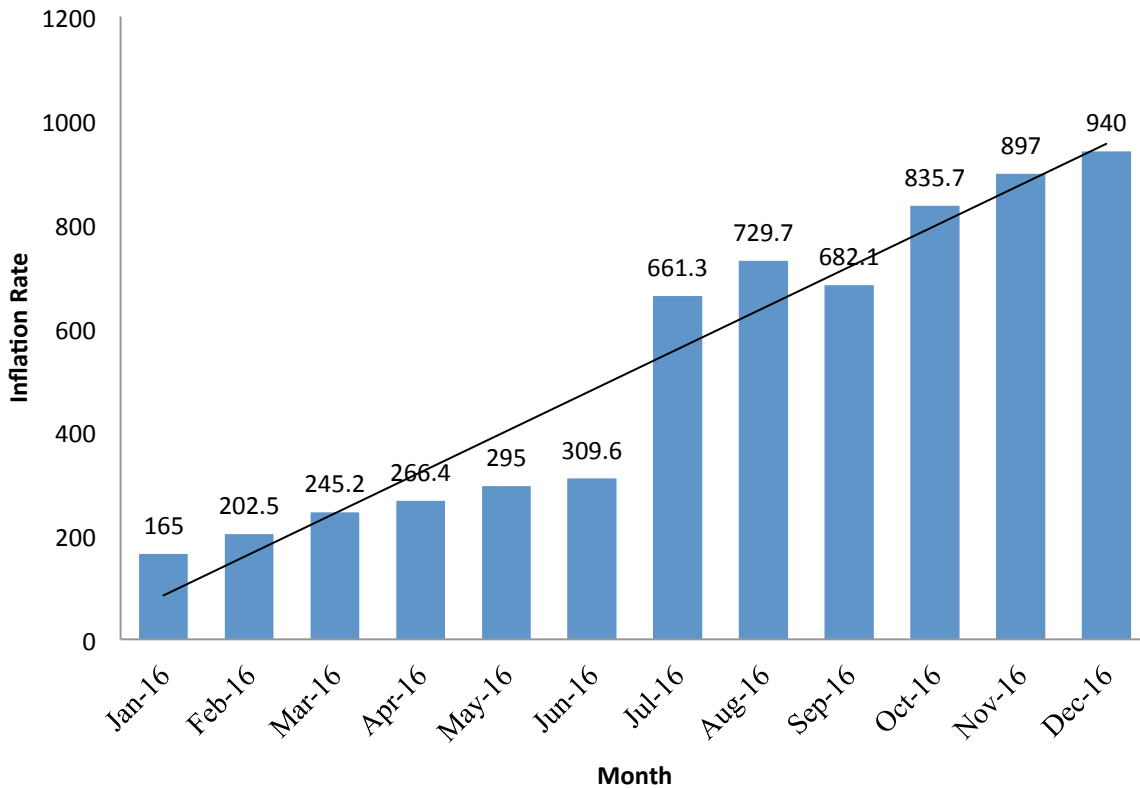
Furthermore, former states of Warrap and Northern Bahr el Ghazal are slightly distinguishable in their exposure to market exchange. For the case of Northern Bahr el Ghazal and Warrap, most of the people have been exposed to northern Sudan, Egypt and East Africa during the war and they came back with market exchange mindset, leading to less or aberrant view of farming as a means of livelihoods, particularly among urban settlers. Secondly, many town-folks with families in the villages became salaried and that means parts of their income is remitted to their families in the village. Thirdly, exposure to northern Sudan practices has also meant that some households are at ease today in selling livelihood assets such as livestock (cattle) than a decade ago. Hence, a combination of exposure to northern economy, changed attitude to dispose movable or immovable assets, including land sales and upsurge of salaried bread-earners in South Sudan have also meant that people in the rural villages have acquired new sources of income. We, therefore, submit that these facilitate household dependence on markets for exchange and by extension, developed negative perspectives towards tilling the land as an important source of livelihood.

As by way of illustration, counties of Northern Bahr el Ghazal that border Sudan exhibit trading ties such as Dinka-Bagara or Reizegat-Dinka trading centers at Warawar and Gok Machar (see Garang, 2014).

Hypothesis 3: New Food Consumption Gaps are caused by New Macro-economic Conditions

Given the current context of high inflation (840 percent by October 2016; see Figure 1) and devaluation of the local currency (from SSP2.96/\$1 to SSP18.5/\$1 in December 2015), this would partly explain the food consumption gaps, levels of migration and above emergency threshold Global Acute Malnutrition (GAM) rates. While the political conditions are not necessarily new, the economic distress—inflation, devaluation, decline in global oil prices and depressed foreign reserves—have curtailed access to food commodities primarily due to a drastically diminished purchasing power for a vast majority of households.

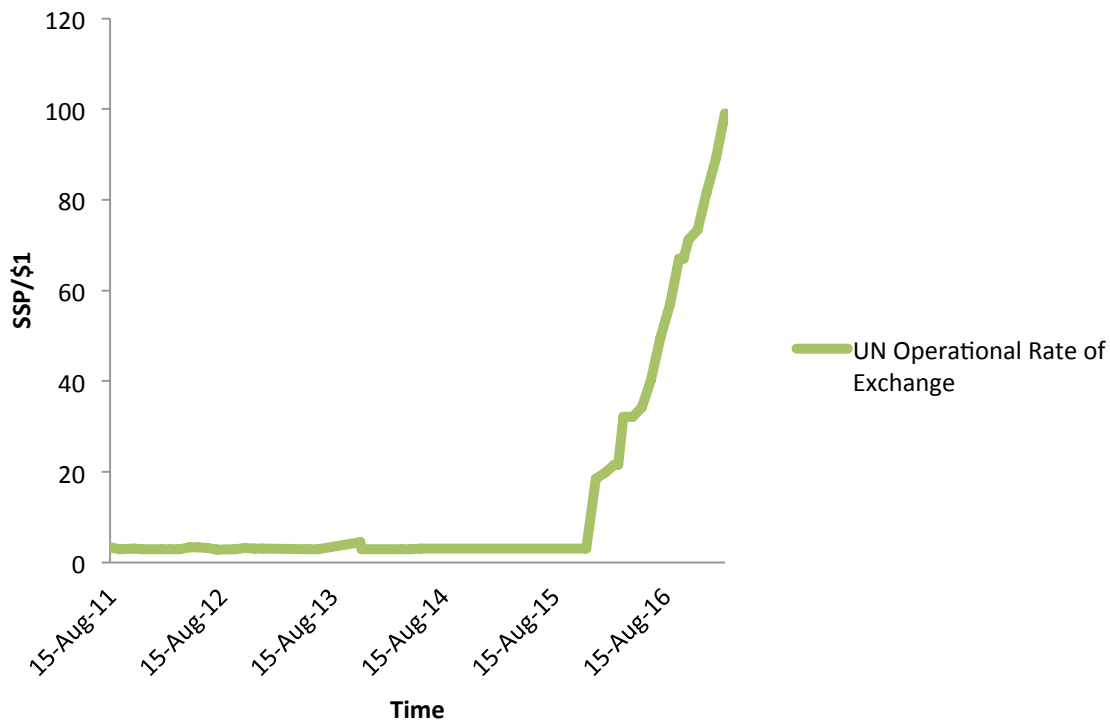
Figure 1: South Sudan Inflation Rate, Annual Percent Changes



Source: Garang, 2017; South Sudan National Bureau of Statistics, 2016; *November and December figures are forecasts by Trending Economics.*

That the inflation was growing at the rate as depicted above is alarming. It wiped out household savings and immeasurably affected purchasing power. In other words, this inflation did not appear from the thin air but rather a number of factors that are related and with increased multiplier effects. The economic crisis in South Sudan is traced to three sources—oil shut down in 2012, continued conflicts, which affect oil and agricultural production and the fall in the global oil prices. In particular, oil constitutes a mainstay of South Sudan’s economy, accounting for a vast proportion of exports, roughly 60 percent of GDP, and well over 95 percent of the government’s budget (AEO, 2016). The three have preordained a decrease in revenue flowing to the government in Juba and the resultant lack of hard currency. All these factors have gone a great length to further weaken local currency against the dollar (see Figure 2). These initial and cascading economic events have and continue to exert pressure on the households in the states.

Figure 2: Spike in South Sudan Exchange Rate, 2011-2017



Source: UN Operational Exchange Rate

Take for example, the recent July 2016 incident, which partly compelled more residents to migrate to Khartoum from Northern Bahr el Ghazal. It is reported that President Omar Hassan Al-Bashir of Sudan has resorted to ridiculing these South Sudanese refugees with pejoratives such as “*malec ya Bashir*” to denote that South Sudanese are sorry for seceding from Sudan (to South Sudanese, this assertion is far from truth). A number of such refugees in Khartoum are reported to be living in squalid conditions. Yet the paradox is unmatched: famine declared in South Sudan, many flee starvation and end up facing harsh reality in Khartoum.

Secondly, and most importantly, conflicts have disrupted trade supply routes. This situation is more pronounced in the northern states where the border with Sudan is closed and so these states now partly depend on supplies from the East Africa Community (EAC) and the informal market (smuggled goods) along the Sudanese border. This has had implications for basic commodities supply and demand (Frontier Economics, 2015). Owing to distance, a proxy for the extent of an informal taxation, prices are on average higher in Aweil and Kuajok than the other state capitals. These higher prices suggest that most households have been priced out of the market and in those states far away like Northern Bahr el Ghazal and Warrap, consumption gaps as a result of such crisis could be higher. Furthermore, floating the currency—in addition to political developments since 2013—has made things worse by limiting supply and leading to price increase of basic commodities (WFP, 2016a).

Hypothesis 4: High GAM Increases Mortality

High GAM rates, which increase mortality, are related to food insecurity. While the Sudd Institute researchers cannot definitely quantify mortality owing to lack of relatively large quantitative data, there are still reasons to support this hypothesis. GAM (Global Acute Malnutrition) is a reflection of acute malnutrition in a population. As by way of example, an interaction of poverty, poor access to water and sanitation and as well as high disease prevalence is blamed for the incidence of high wasting or GAM (WFP, 2007) in South Sudan. For sure, previous assessments have established that GAM is greater than 15 percent Emergency threshold for Warrap and Northern Bahr el Ghazal states as per WHO's standard (WFP, 2015). Others have argued that GAM can increase mortality rates depending on the duration of exposure and age; children or younger people are more likely to face higher mortality rates than others (Action against Hunger, 2005). There is also a high interaction between severe malnutrition and morbidity, which could result in deaths, as bodies of nutritionally weak children are unable to fend off diseases.

Hypothesis 5: There are unique factors that make the situation so much worse in former NBEG and Warrap states

While the rest of the country is in a dire economic crisis, former states of Warrap and Northern Bahr el Ghazal stand out for three main reasons. First, during the current war, the borders with Sudan have been numerous closed, with the local population depending on an informal market and EAC. But because EAC is far from these two states and road conditions are terrible, so goods take long and when they arrive, the added transport cost on basic items renders them expensive. This process through which market goods pass through sets the northern states apart from the rest of the country. This is in addition to the fact that productive capacity is already weak in the country (Basnett & Garang, 2015) and the trade supply with the north is officially closed. Although there is some trade with the Sudan, it is largely illegal and the goods that are successfully smuggled into South Sudan are heavily taxed and become extremely expensive as well.

Secondly, the two states are closer to North Sudan, and whenever there is an inter-state conflict, these states suffer as well. Of recent, the two states have been faced with the burden of hosting the IDPs, as they are seen as safe havens relative to other states. Nevertheless, in most cases, Dinka Malual and Reizegat or Baggara try to collaborate and enable trade to flourish most parts of the year but sometimes, these border relations are severed and the situation gets awful for the locals (Garang, 2015). Hence, whenever the trade route to Khartoum closes down while trade route to EAC is far away, the economic situation in these states remains adverse compared to national average. Thirdly, the unimodal rainfall patterns in the two states differ from the bimodal rainfall pattern in the green belt in Greater Equatoria region. It is possible for states in Equatoria to enjoy harvest twice a year while Warrap and Northern Bahr el Ghazal expect one harvest per a year if they are lucky at all (AfDB, 2014). On the other hand, Warrap was in recent years affected by floods and poor harvest (WFP, 2015). This also explains differences in severity or resilience to national shocks. Nonetheless, with the famine declared in some parts of South Sudan (Leach, 2017), former Unity state and those in Upper Nile are among those facing starvation. Such vulnerabilities are no longer confined to former Warrap and Northern Bahr el Ghazal states even though mass migration/exodus to north is sadly reported in the media.

Hypothesis 6: Efforts of Moving back to Sudan have Proved Prohibitive and Highly Risky for those with Limited Resources and Kin Connections

Finally, efforts of moving back to the Sudan appear risky for those with limited resources and kin connections. Unlike the days of assisted return, some sources are reporting that the expense of moving back to Sudan has proved prohibitive and highly risky for those with limited resources and close connections in Sudan. According to UNHCR, about 263,245 South Sudanese were refugees residing in Khartoum by December 2015. Since then, this number has sharply increased. But the migration patterns and living conditions of the South Sudanese migrants in Khartoum are far from comfortable. Firstly, bandits or highway robbers have attacked returnees on their way to Khartoum. It is reported that a number of them have lost lives in these endeavors for better life outside South Sudan. Secondly, distance has also taken toll on the refugees. Because of long distance, some people occasionally starve on their way to the Sudan. Thirdly, those who have made it to Khartoum and who happened to have no relatives on the ground face difficulties in terms of shelter, basic needs or public ridicule.

In summary, the emergence of political and economic conditions, and development of new market, has, among others, complicated matters for households. Cross border issues have presented both threats (highway robberies) and opportunities (securing work or protection in another country such as Sudan or EAC). On the labor market front, war has affected workers in varied ways, including job forfeiture, and loss of purchasing power. Yet though access to basic services remains poor in South Sudan (Mayai, 2016), some have argued that progress has been made between 2005 and 2012. Ultimately, social services have considerably faltered with the onset of conflict in 2013. Hence, South Sudan, one of the six countries with Level 3 emergencies should do its utmost to tap into UN global appeal that stands at \$22 billion, the largest ever-global humanitarian appeal.

2. Methods and Materials

Late January and early February 2017, we conducted a field study on the causes of food insecurity in the former states of Northern Bahr el Ghazal and Warrap.

The team used the famous Participatory Rural Appraisal (PRA) methodology to gather the current data. The technique allows the studied elements to present issues as they see fit, unlike a structured questionnaire, which limits responses to a particular analytical universe. Key research questions include the kinds of shocks the respondents have experienced since 2005; who is most affected; during what season is food scarce; in which way have the shocks affected individuals, households, and communities; whether or not the effect differs across places or individuals; changes in wealth and market dependence; how the households are meeting the prohibitively increasing food prices; levels of malnutrition over the years; migration from and back to North Sudan.

The respondents included a number of focus group discussions with chiefs, youth, women, farmers, business, community based organizations (CBOs), and faith-based leaders. Supplementary key informant interviews with state and local government officials bridged the gaps so as to establish a comprehensive understanding of key explanatory factors of food security

vulnerability. Altogether, 70 groups were interviewed, including focus group discussions and key informants with participants drawn from three locations in NBeG (Aweil West, Aweil Center, & Aweil East) and two locations in Warrap (Gogrial West & Tonj South and parts of North), and from twenty different sub-locations.

Secondary sources, including nutritional cluster (ACF, UNICEF and MoH) and the National Bureau of Statistics, provided repeated cross-sectional malnutrition and market data.

3. Results

3.1. The Shocks

This section highlights the study's main results, according to the groups we interviewed in 5 different states (Tonj, Lol, Aweil East, Aweil, and Gogrial), all from former Warrap and Northern Bahr el Ghazal states. All the discussion groups that participated presented a number of shocks that have either caused or exacerbated food security vulnerability in those locations since 2005. For many households, food insecurity was experienced as early as 2011, right after the nation's independence. We discuss several of these shocks in the sections that follow, as well as their livelihood consequences.

Of recent, food prices have more than tripled (exceptionally high), widening food insecurity burden in the studied locations. In Wanyjok, Aweil East, for example, a 30-kg sack of flour now costs SSP 4,500, from 300 SSP just over a year ago. The situation, which is now proving obstinate, is a manifestation of both local and international economic distresses, as well as the recent civil war in the country. Declines in oil production and prices (beginning 2014) and the devaluation of the local currency (2015), as highlighted later, are assuredly blamed for such an adverse turn of things in the South Sudanese commodity market. However, the decline in state revenue dates back to 2012, when South Sudan temporarily discontinued the oil production and introduced tough austerity measures in response to political disagreements with the Sudan. All of these, in various ways, jointly led to a pronounced loss of financial resources, with public servants at subnational level paid irregularly, and the public sector economy drastically plummeting. A police officer in Madhol village, for example, regularly experiences salary delays, sometimes for up to 10 months.

Lastly, the violent conflict that erupted toward the end of 2013, longstanding communal violence, and border disputes with the Sudan have all contributed significantly to food security vulnerability in ways that Section 3.4 explores in more detail.

3.2. Poverty

Abject poverty, which is not essentially a newly emerging phenomenon in the two states, seems to impact massively on food production. The World Bank's study, conducted before South Sudan's

independence, indicates high levels of poverty for both Warrap and Northern Bahr el Ghazal states. Sixty-four percent of Warrap and seventy-six percent of Northern Bahr el Ghazal's populations lived below the poverty line, compared to 47 percent for the nation as a whole during this period (World Bank, 2011). In 2009, average spending rates per person in the two states were relatively lower compared to the rest of the country (NBS, 2010). Due to the current economic shocks, the rate of poverty has dramatically increased nationwide, with as many as 66 out of 100 people living below the poverty line in 2015 (World Bank, 2015).

Thus, this study's respondents claim that they have not been able to produce sufficient food as a result of being perpetually poor. Those who are poor are physically weak to adequately cultivate land, hire complementary labor, and lack resources to invest in alternative, more productive livelihoods. Furthermore, poverty leads to: an increase in theft and violent crimes, inter-communal conflicts due to competition over resources, mass displacements/migration, overcrowding in towns, domestic violence, and school dropout. A focus group discussion in Northern Bahr el Ghazal observed:

“Poverty makes it difficult to farm, even when there are rains; it weakens one's physical ability to function effectively. This has increased food insecurity in our area. So, we have to be decently fed to cultivate or produce enough food.”

This quote goes to emphasize the fact that poverty moves in a cycle, starting with a physical weakness that makes it nearly impossible to work on the farm, consequently leading to one producing little food. Obviously little food is likely to lead to physical weakness and the cycle continues, which is hard to break. But more generally, the direction of relationship between poverty and food insecurity is not readily identifiable; it is reversed. This means addressing one arguably fixes the other.

3.3. Market Dependence and Wealth

The growth in the cash economy during the CPA era is alleged to have changed young people's attitude and mindsets, leading to a parsimonious engagement in the traditional economy. Instead, the youth, especially the educated, have tended to demand white collar jobs, which the rural economy rarely supplies. This leaves many young people jobless, ultimately perpetuating poverty in their immediate families. Similarly, the youth seem to be less present in the households, as more either enroll in the school or enlist in the military. Involvement in crimes, games, and drinking are increasingly impeding young people's economic contributions. As young people's labor gets diverted from productive industries, the older adults and children who are often frail to produce enough food are rendered more vulnerable to a host of the nagging elements of destitution.

Cattle serve as mainstay of the two state's economies. They provide animal products such as milk, are traded with money to purchase food, are used for bride price, help maintain land fertility, with dung used as manure. But for many households, this wealth has been lost. One chief in Wedweil stated: “Only a few people now own cattle and that if those who do not own cows want to farm, you can be sure of low yield”. This statement implies that thousands of cattle-less households who try to farm get low yield. In Aweil East, purchasing animal manure by

requesting a cattle camp to settle one's farm costs two or more cows. It is worth noting that people in this part of the world have no access to modern or artificial fertilizers.

The traditional wealth system is either declining or changing fast in many parts of the country. In places like Tonj, where part of this study was conducted, wealth seems to have decreased by roughly 70-90% now, compared to the periods preceding the CPA era. More generally, the communities we studied majorly depend for their livelihood on cattle and crops. These have always been a source of wealth and pride there. However, the wealth source has changed following the Sudanese second civil war. Some of the households we interviewed charge the SPLM/A of depleting their animal resources, especially cows, during the war, rendering these communities vulnerable to persistent food security risks. Raids by the North Sudanese nomads have also contributed to this loss of animal wealth. What raises more concern now, however, is the increase in market dependence for many households, an element our respondents identified as an important source of food security vulnerability. While most people reported that crops and animal wealth were and continue to be their main sources of livelihood/income before and after the CPA periods, the emergence of new sources of income such as salaries from the government, NGOs, and businesses, has created an impetus for youth (who were traditionally a source of labor and wealth) to migrate to the urban centers where they seem to only focus on individual needs, neglecting the welfare of their parents and other vulnerable relatives. Lack of adequate regulation of prices compounds the impact of market dependence. This has engendered new lifestyles that are rather costly, including education fees, cloths, shoes, and mobile telephones, consequently forcing many rural families to subsist on very little.

Low and stagnant salaries are not keeping up with high inflation rates. Weak institutions, corruption and lack of strategic direction as to how the government can provide services to citizens have led to a market failure. This lack of strong institutions and resultant economic failure make it extraordinarily difficult for ordinary people to maintain sustainable livelihood for their households.

As communities steadily become less self-sufficient, the humanitarian food assistance has become an essential recourse for livelihood in the studied communities and beyond. This economic system allows many parts of the country to depend on food assistance, creating dependency on international support. The Greater Aweil area, given example, last received UN food supplies in September 2016. Unfortunately, the delivery of international relief support suffers significant distortions, especially corruption and unconditional allocation. The local relief officers, under South Sudan's Relief and Rehabilitation Commission (RRC), allegedly divert the UN food from registered potential recipients and sell it to the traders. Likewise, the UN food distribution does not follow equity frameworks. Population size, distance to the nearest market, and a multitude of other local dynamics are allegedly ignored. Indeed, the combination of desperate needs, cash shortage, and supply scarcity puts an excessive pressure on the humanitarian system that has become the largest source of livelihood, despite being merely complementary to the local economic system.

What do these systemic changes imply for the distribution of wealth in the rural South Sudan? As the traditional economic system considerably declines, there is a pronounced shift of wealth towards business people and public employees. Other things considered, traders and government employees, a negligible fraction of the entire population, find an appreciable advantage in the

gradually modernizing economy, with money increasingly gaining prominence as a medium of exchange in many parts of the country. This is supposedly crowding out the barter system, as the demand for a monetized economy heightens, lending leverage for those with cash. As a result, money, cattle, and other resources now become more concentrated in the hands of this new class. However, other observations seem to point to a potentially increasing barter trade system in South Sudan, the explanation of which might be a plummeting local currency. In the informal market, Sudanese traders are spotted exchanging cereals for livestock as opposed to the SSP.

3.4. Security

Security plays an important role on livelihood sustainability. Since South Sudan's independence, border insecurity, much of it attributable to longstanding north-south disputes and which the CPA failed to adequately resolve, has significantly impeded trade with the Sudan. People of Lol State, formerly Aweil West, particularly those at the periphery, Achana and Nyinboli, have been affected by the current civil conflict and sporadic border insecurity with Sudan. The nomadic Arab tribes are accused of looting and killing residents of these areas. In addition, a number of rebel groups have been operating in parts of Aweil since 2013. Although there has not been active fighting taking place, the rebels are alleged to be a source of adversarial food security outcome by constantly looting and inflicting fear in the civilians.

These actions cut the food supply levels and amplified demand, leading to significant hikes in staple food costs. The consequence is a depressed availability of food supplies, low purchasing power for majority of the households, subsequently exacerbating poverty, especially among those who depend mainly on wages and the poor. The 2013 political violence in South Sudan is partly responsible for a worsening food security situation in the area. As a result, widows who lost their husbands in the crisis, this study found, are particularly more vulnerable to food insecurity. This violence affects the economy and household's livelihoods in a variety of paths. It destabilizes the livelihoods systems, undermines local food production, hampers trade and market access, and uproots the prevailing social systems, with grave consequences for psychosocial support structures. The war has not only contributed to deteriorating economic conditions across the country but also affected trade routes between states. This is because the roads have become impassable as a result of insecurity or because of missed opportunity to invest in the roads as the meager resources are spent on war efforts, leaving roads dilapidated.

During the civil war, Sudan government armed tribal elements as a measure to counter the insurgency in the South. In response, the Sudan People's Liberation Army (SPLA) gave arms to the civil population allied to it for self-defense. These actions led to proliferation of small arms in the hands of civil population and the militarization of communities. The recent political violence might have strengthened the militarization of the cattle-keepers. Local conflicts, which were traditionally fought with sticks and spears, have started to be fought with firearms as big as machine-guns, increasing the scale of deaths and displacements. Theft and other organized crimes have increased as a result, all of this influencing under-production of food, contributing to the cycle of poverty faced in these areas. The case in point is the nagging conflict between Aguok and Apuk of former Warrap State, which has led to deaths, displacement, and crop failure in the

last few years. A similar situation was observed in another Warrap district, Tonj, between Lou Paher and Apuk Padoc, which were embroiled in conflict last year, currently facing grave food security conditions as a result of disrupted farming activities in 2016.

3.5. Devaluation and the Oil Shutdown

The devaluation of the local currency in 2015 has exacerbated meager livelihood conditions in the country. In an economy that is heavily imports dependent, the prevailing exchange rate reflects enormously on the ability of the citizens to acquire basic food items. Since the introduction of the floated exchange rate policy, the South Sudanese Pound has considerably weakened/plummeted against the USD, with the prices of food items dramatically skyrocketing. The dwindling foreign currency reserves worsened this situation, directly influencing the amount of food the country is able to import. These fewer supplies are bought using dollars from East Africa, with traders passing the alarmingly rising cost of consumable goods to the citizenry whose income has not correspondingly changed with the introduction of the new exchange rate policy. Before the 2015 devaluation, for instance, a bag of maize flour used to cost between 150 and 300 SSP, but it is now between 6000 and 7000 SSP (an increase of about 20 times), particularly in Tonj.

The oil shut down in 2012 led to the closure of North and South Sudan border. This has affected the area in two important ways: first, the Government of South Sudan lost significant amount of revenues and had to introduce austerity measures, affecting incomes for individuals who depended on remittances from relatives employed in the public sector. More importantly, the oil shutdown led to closure of Northern border where locals used to get access to affordable food and other commercial goods. As the economy declines, the transaction cost has dramatically high-rocketed in the last 2 years, with traders paying heavy taxes on many checkpoints. Such cost of doing business gets readily reflected on the retail prices.

3.6. Climate Change

Ubiquitously referenced in our field assessment is climate change or climate variability, which results in either late or heavy rains, leading to drought or flood. Unusual changes in the climate are reported to have emerged following the Sudanese second civil war (1983-2005), with its deleterious impacts on livelihoods widely sparking concern in the rural communities. Sudd Institute's preliminary analysis of South Sudan's meteorological data indicates evidence of climate change. There has been a 0.5 percent rise in temperature in the last 46 years (in Sudd's forthcoming publication). Insufficient or heavy rains prompt either drought or flood, none of which is good for yield's health, ultimately triggering food security risks. Both conditions, this research shows, are reported to be increasingly frequent in the studied areas. Accordingly, several places we visited were flooded in 2016, consequently losing crops and rendering many households food insecure. While floods negatively affect crop performance and increase human morbidity, they can also be positive, as they can be a source of increased fish supplies.

The rainfall patterns, absent of forecasting technology and sufficiently equipped agricultural extension programs, are often unpredictable. These patterns have forced people to choose to plant early—at the onset of rains—and risk their crops getting destroyed by drought during the

dry spell, or wait to plant late and risk their crops getting destroyed by floods. Such unpredictable changes in the climate had our respondents talking about how other risk factors such as insecurity as a result of the current civil war make it difficult for people who would otherwise relocate to more suitable land. Relocating to more fertile land away from areas prone to floods is nearly impossible because of widespread insecurity. Due to lack of appropriate technology, responding to drought through irrigation is certainly infeasible. Expectedly, food production capacity has dwindled over recent times due partly to these noticeable changes or variations in the climate, particularly as concerns the onset of rains.

3.7. Other Contributing Factors

There are other factors that significantly influence the current food security situation in the two former states. Youth unemployment, return migration, and government taxes are some of those elements. Jobs are essential to socioeconomic mobility, especially for young graduates who have just entered the labor market with limited or no savings. Hence, lack of jobs adversely affects their present and future economic sustainability. Secondly, those who returned from N. Sudan without a proper economic integration add stress on the available yet limited resources, with mounting competition. The consequence is that return migration intensifies poverty by enlarging the number of poor people in the area.

The influx of returnees from Sudan and East Africa, inadequate service delivery, and rampant corruption were identified as contributing factors to food insecurity and poverty. One of the chiefs, in decrying corruption and poor service delivery, said: “the elites in the government and rich business people are like drunkards who live in their own little worlds with no regard to their surroundings.” Finally, the local government continues to withhold the hut taxes across the country. These taxes are imposed on all households, even among those who are unable to afford food. Households whose economic circumstances do not meet this obligation are jailed and fined for not making a payment.

3.8. Returnees’ Perspectives

Most of the former returnees we have interviewed live in virtual ‘isolation’ from the rest of the citizens and arrived from North Sudan between 2011 and 2012. The resettlement program was designed so that the returnees formed their own communities, with the hope of creating new urban centers and economic communities this way. The locations we visited housed thousands of returnees in 2012. According to the local representatives, about 30 percent of these have left the area in response to an increasing food scarcity, with most of these residents reportedly returning to the Sudan. Largely prompted by this situation, migration to the Sudan, is not just among the former returnees but also among those who never left the country during the war, heightened in 2016. Although this migratory pattern commenced in late 2016, it strengthened earlier in the first quarter of 2017, suggesting a potential surge in the number of South Sudanese going to Sudan. To date, Sudan houses 351,048 South Sudanese as refugees (UNHCR, 2017).

Our research questions to the returnees largely centered upon transitional support, labor conditions in their new home, shocks (both economic and political) experienced since arriving, major consequences, and opportunities possible of exploiting to enhance their livelihood conditions. We assessed the kinds of shocks the group has experienced since returning from

Sudan primarily to evaluate their unique livelihood circumstances compared to their counterparts, those who remained during the war. Expectedly, migration has pronounced penalties, including a loss of social support and difficulties associated with navigating and integrating into a relatively new environment. Finding decent housing, food, and employment proved difficult for majority of the returnees. Although the consequences of the various shocks the respondents presented appear to have had a widespread manifestation, the returnees have particularly faced an increased disadvantage, partly due to an inadequate transitional support afforded them upon arrival in 5 to 6 years ago. This situation is compounded by what is now considered systemic corruption, which impedes internationally backed food assistance.

Like in numerous other quarters in the country, poverty is a chronic condition for returnees, as many of them were not necessarily well off before arriving in their new home.

We are suffering, since we came empty handed from N. Sudan. There was never a sufficient resettlement package when we arrived.

This makes increased vulnerability to food insecurity in such group undoubtedly predictable. Although there have been state and humanitarian stabilization efforts in the early days of resettlement, these have either been marginal or defective in delivery. The former returnees, many of whom returned in 2011, for instance, received food assistance for the first three months of arrival, after which they were weaned from this support without further proper transitional livelihood arrangements. Similarly, food assistance suffers diversion, with state authorities readily blamed. For some of the returnees the labor conditions in South Sudan have not been favorable. This is particularly significant for those who were technicians in the Sudan and who have not found fitting jobs in their new home. Understandably, modernized professions as plumbing, electrical engineering, or machine operation are not exactly marketable in rural South Sudan, as the country struggles to establish relevant industries and diversify income sources. Unemployment, to this effect, contributes to food insecurity among returnees.

In this setting, access to food is increasingly strained partly because of the devaluation of the South Sudanese Pound and partly because of government's limited control over commodity prices. Consequently, new sources of income have surfaced, most particularly water distribution (mostly by women), charcoal, and timber businesses (mostly by men).

To the returnees, a number of remedial strategies are desired. First, activities that lead to sustainable food security need instituting. These include subsidized food during cultivation for increased energy to produce. This is because those who are food insecure tend to be weak, hence less productive. Secondly, as newcomers, the returnees' situation demands a special consideration. This includes extended state support to ensure a healthy economic transition or integration. Transitional economic assistance, such as housing funds, farm equipment, suitable piece of agricultural land, and small business loans, depending on the skills of the household members, could probably facilitate this integration. Lastly, high food prices are seen as a product of corruption in the market, with our respondents prompted to suggest the following: *"The government has no control over prices/market; it must regulate prices or the innocent/poor will continue to be vulnerable to traders' exploitation"*. While price regulation may retard the market, the absence of regularly enforced economic policies in South Sudan allows businesses to exploit the consumers. Overall, to make subsidies a priority in support of economic recovery, the government would

have to scale down on other expenditures, including defense spending. Understandably, improving the general security (attaining peace) ought to precondition appreciable reductions in security sector's spending.

4. Who Suffers the Most?

Who suffers the most from these economic stresses? Our respondents resoundingly suggest that the most vulnerable groups are women, children, cattle-less households, widows or single mothers, rural residents, returnees, and the elderly. The increased vulnerability of these groups to such a condition stems primarily from the nature in which wealth and household authority are distributed in the South Sudanese society. The elderly, women, and children depend for their basic needs on more productive, male members of the household. With increased migration of young people out of the rural areas and their enlistment in the army in large numbers and the remaining bogged down in cattle raising business, these dependent members of the society are left hanging or to fend for themselves. Social stratification, which often places most South Sudanese women at a disadvantage, also plays a fundamental role. Women who are burdened by childcare and homemaking are particularly vulnerable, as their ability to produce enough food for their families readily gets retarded by these other responsibilities. Women suffer the gravest consequences of poverty, including substantially strained access to a host of basic needs, such as clean water and health care services. Moreover, size and composition of families matter. Families with younger children, widows, the elderly, and disabled are increasingly vulnerable. Such finding invokes an alarm over the burden of extended families and economic responsibilities that come with them.

5. Migration to North Sudan

With a growing food security problem, migration to North Sudan has recently intensified. With food insecurity being a major factor for migration among many households, we equally sought the kinds of individuals who are migrating; whether these migrants lived in Sudan before; and whether they still have family connections in Sudan. These research questions and documented experience are particularly relevant for individuals and households who are unable to sustain the exponentially rising food prices. People of all backgrounds are migrating. A place called Riaang Awai in Aweil East, according to this analysis, lost about 200 or 56 percent of its 360 households to this northward human migration in the past two years. The new economic and political shocks have placed a great deal of stress on the local population, as confirmed by the story of someone who got stopped from going to N. Sudan by the South Sudan's security forces:

"I am weak and chose to go and die in N. Sudan. I am now contemplating another trip, avoiding the common road to N. Sudan."

Furthermore, the return to North Sudan seems to be a protest against a seemingly dishonored social contract between the citizens and their newly created state, as the following responses suggest. The respondents say the SPLM/A is indebted to them. Thus, statements, such as:

"We the public fed the SPLA, but it has not reciprocated; ok aa piath akol intakabat" (Dinka/Arabic for 'we are considered important during elections'); in parliaments, we are represented by individuals who

disappear the sooner they get elected; our leaders in Juba have failed us; I regret our separation from Sudan, for I thought this would deliver true freedoms; leaving Sudan was a mistake and it has worsened our situation; if we knew of this situation in South Sudan, we would have not returned from Sudan; I would endorse a return to a united Sudan”, were stressed.

While everyone is at risk of migrating, essentially in search of better economic opportunities, the propensity of doing so is relatively higher for younger people and former residents of the Sudan. Specifically, most of these migrants either lived and worked in Sudan before or have social connections there. For the returnees who had jobs under entirely different economic system, that of a modern industry, going to Sudan presents promising economic prospects. Those with prior experience living and working in N. Sudan now convince others to move. As the respondents stated, *“a cow goes back to where there is pasture.”* Those who made it to Khartoum safely and found jobs are now sending remittances to support the family they left behind.

Obviously, most people prefer moving to N. Sudan than to other parts of South Sudan. This is because food security vulnerability is widespread across the newest Republic. In addition, the respondents believe that *“juur angic fadhoh—the Arabs are more welcoming; they can feed us.”* Moving to the Sudan, however, is not without penalties. Migrants are reported to be drowning crossing deep streams or rivers on their way to the Sudan. Others get forcibly conscripted into the South Sudanese rebel armies, get jailed, or killed for not cooperating. The fate of some of those who returned to the Sudan remains unknown. AD, a returnee from N. Sudan, whose family survives on plants’ leaves and berries, still has not heard from her son who left for Sudan last year. *“My son left for Sudan, but have no idea where he is now.”*

The state authorities we met suggest that food insecurity is a national security threat that demands an immediate attention. This concern is complemented by the suspicion that Sudan is doing its best to keep the South destabilized through a proxy war, with its support for the South Sudanese rebels seen in this light. To this, the new migration dynamics between the two countries are viewed as posing significant security threats to South Sudan.

6. Season of Food Scarcity

When exactly is food most scarce in the locations just assessed? The purpose of this question is to understand the periods of the year the respondents experience food shortage or severity. There was a general consensus that food is most scarce between April and July each year. This seems to be a longstanding general trend. However, because of floods and internal conflicts, which affected most of the communities last year, food scarcity has kicked in as early as of January this year. Therefore, without a concerted effort and intervention from the government and humanitarian agencies, there is a risk of famine occurring between April and July this year. The worst months, with the overwhelming majority of the respondents agreeing, are July and August, supposedly the periods when food insecurity is most severe.

7. Why is Food Insecurity Worse in NBG and Warrap?

Prior research shows that food insecurity is a chronic problem in the former two states than has been observed in the rest of the country, as evidenced by alarming child acute malnutrition rates. According to the NBS (2010), Bahr el Ghazal, the region from which the two states come, presents the highest poverty levels. While the average consumption in Upper Nile and Equatoria was well above 100 SSP per month in 2010, in Bahr el Ghazal, it was only 80 SSP. While in the state of Central Equatoria, for instance, the average consumption rate stood at 128 SSP per month, in Warrap and Northern Bahr el Ghazal, it averaged at 60 and 69 SSP, respectively. The consumption rate in a neighboring Unity state, whose food security situation has recently flooded news headlines as famine, both locally and globally, averaged 71 Pounds per month.

This analysis commences with basic questions into what prompts this spatial disparity: (a) according to UN and government reports, your economic situation is worse than that of other areas, what do you think explains this difference? (b) compared to other areas, how have access to market, taxation, insecurity, and floods and droughts affected your economic situation? Consequently, the present assessment provides critically desired new insights into this inequality, pointing to a range of underlying determinants or correlates. Border conflicts, internal strife, and drastic declines in state revenue, this study shows, considerably impacted production and contracted the local economy. Accordingly, food supplies became relatively fewer in the market immediately following South Sudan's independence, subsequently resulting in exceedingly high prices of food. This is partly explained by the 2012 conflict with the Sudan, the result of which was a closure of borders and suspension of trade. All of the households we interviewed now struggle to raise enough income to meet this exponentially rising cost of food. Instead, they have adopted other livelihood strategies, as we further discuss later.

Poor infrastructure and long distance from Juba or East Africa where most of the food commodities are dispatched, lead to additional transportation costs, hence prohibitive food prices. In places like Tonj and Gogrial, lack of water points for cattle prompts seasonal migration that increases vulnerability to organized theft and rustling by other communities.

The new bout of political conflict between the two Sudans, dating as far back as 2008, retards cross-country trade, with the border regions severely troubled. To date, the supply lines from the Sudan are effectively cut off, attenuating the supply market and elevating demand. This exposes the extent to which some parts of South Sudan continue to be economically dependent on Sudan. Local violence between clans, which is obstinate in some parts of Warrap, limits food production for the exposed households.

Inter- and intra-communal conflicts are common in Tonj and Gogrial more than in many other parts of the country. Hostilities among neighboring communities of Nuer, Aguok, Apuk Giir, Gok, Lou, Apuk Padoc, and Agar lead to looting of animal resources and food harvests, as well as loss of lives of youth who are the main source of labor and wealth in these areas. These conflicts are equally destructive to property and cause mass displacements, rendering populations vulnerable to food insecurity. Finally, droughts and floods are becoming more frequent and impactful in the studied areas, the result of which has been incessantly failing crops.

8. Nutrition

Malnutrition partly measures food insecurity in a population. “Malnutrition contributes to between 35 and 55 percent of all childhood deaths. In acute emergency situations, malnutrition can account for even more” (Save the Children). More generally, there is a reversed causal relationship between malnutrition and food insecurity. That is, malnutrition is a cause of food insecurity (malnourished and weak people farm less, produce less income), as well as an outcome of food insecurity.

From secondary sources, this study uses global acute malnutrition (GAM) rate as a measure of lack of sufficient food intake among children. Poor diet is partly responsible for malnutrition, particularly among younger children, as well as among the elderly. While we were unable to generate primary data on nutritional conditions in the studied areas, the available evidence from other areas points to a generally high level of malnutrition in the region. For example, in Kacuat PHC, Tonj, 668 children out of an estimated 4,000 were admitted to the feeding center between May 2016 and January 2017. Similarly, in Malual-muok alone, Tonj, 808 children and 128 pregnant and lactating women were admitted to the feeding center for treatment of malnutrition conditions during the same period.

The situation is not any better in Aweil Center and Aweil West. There, GAM rates have remained consistently high over the years. Reports from various humanitarian actors cite numbers above WHO threshold, including $GAM \geq 15\%$ (WHO classifies nutrition situation as acceptable if $(GAM < 5\%)$, serious if $(GAM = 10-14.9\%)$, and emergency if $(GAM \geq 15\%)$)⁵. Accordingly to Famine Early Warning Systems Network (FEWS Net) there has been a ‘serious’ level of acute malnutrition in Aweil Center, with a GAM prevalence of 14.4 percent (95% C.I.: 11.2-18.2) and a ‘critical’ level in Aweil West with a GAM prevalence of 17.1 percent (95% C.I.: 11.2-18.2).⁶ These GAM rates are corroborated using site observations at Nyamlell Stabilization Center⁷. What is observed there paints a grim picture of the extent of malnutrition in that region. Lactating women who were admitted were as severely malnourished as their own children. Marital status and employment seem to play a role on child or mother’s nutritional status. Widows, wives of unemployed husbands and wives in polygamous marriages seem to experience highest levels of malnutrition. The Nyamlell Stabilization Center receives heavy caseloads between April and August annually, the period during which food is relatively scarce. Readmission is high at this center, meaning once the malnourished children are stabilized and discharged, they come back malnourished again.

With the observed and well-documented deteriorating food security in the country, children in former Gogrial West County face poor nutritional conditions this year. World Vision International’s recent study of children under the age of five years indicates a 32.5% global acute malnutrition (GAM) in Gogrial West. The rate is 26.1% in Gogrial East. Sudd’s researchers observed mildly malnourished children in Gogrial East. The nutritional status of children under five and lactating mothers is likely to deteriorate further during the lean season, if no immediate interventions are undertaken and targeted toward the most vulnerable. Lastly, the GAM rates

⁵ Integrated Food Security Phase Classification. (2014) Republic of South Sudan Updated IPC Report

⁶ FEWS Net report – December 2016.

⁷ Stabilization Center is a health facility based treatment center for severely malnourished children with disease complications.

have slightly hiked in Aweil East, from 23.5% in 2011 to 24.2% in 2013, for example. The 2013 rate was relatively lower compared to 28.7% in 2012, implying a modest recovery from economic shocks induced the previous year.

9. Offsetting Rising Food Costs

For those who have not reacted to the shocks by migrating to Sudan, we documented newly instituted livelihood strategies to offset the rising costs of food in the studied locations. Commonly referenced strategies include charcoal and firewood business, building materials distribution, carpentry, water distribution, and gathering of wild berries, fruits, and leaves. These strategies are practiced mostly among cattle-less households. Others have, especially those with formal education, sought jobs with international institutions, that way they are paid better and on time. Fishing is an alternative source of livelihood, particularly in Gogrial. However, the contribution of fish to the household food basket is projected to reduce by 30% this year due to the 2016 drought that affected parts of Apuk and Aguok communities, with ponds or rivers quickly drying up. Charcoal and firewood production has considerable ecological and environmental consequences, which essentially get transferred to livelihood outcomes (Tesot, 2014). This study, however, does not ascertain this connection in large part due to lack of relevant data.

10. Conclusion and Policy Response Strategies

In this analysis, we have explored using qualitative data what proximately explains the current food security phenomenon in South Sudan's former two states of Northern Bahr el Ghazal and Warrap. This is important in light of the growing concern that the current food insecurity situation could prove overwhelming if no strategic inventions are quickly devised and implemented. The results are not particularly surprising, as many man-made events have readily enabled such a state of affairs in the country, with causes of food insecurity ranging from insecurity to lack of jobs. South Sudan faces acute food shortage, with some parts of the country already experiencing famine. As expected, the situation has culminated in rising malnutrition rates and costly migration to North Sudan.

What ought to be done in the face of an emergency level food security situation in the two states in particular and in the country as a whole? Although the respondents made a sundry of suggestions to this effect, they share one thing in common; they call for an immediate response strategy to save millions of lives from what is now declared as famine in some parts of the country. The government and its international partners are, therefore, urged to enlist arrays of strategies, including:

Food relief is urgently needed and should be targeted appropriately. Scaling up internationally backed relief programming targeted to areas and households with an immediate need can save millions of lives. On March 10th a famine related fatality was reported in Marial Lou County, Tonj⁸. The new evidence demonstrates an elevating food insecurity level, which is likely to be widespread. Despite numerous calls for an immediate intervention, little has so far

⁸ This incident was anecdotally communicated to the Sudd's researchers by phone following their return from the field.

been achieved, as a modest portion of the needed aid has been thus far raised. All things considered (including a measured ceasefire and broadened access), a joint effort between the government and relief agencies toward mobilizing necessary resources could potentially prove potent in overturning this impending humanitarian disaster. Assessments that point to the particular needs of different communities are abundant; what the situation now demands is an immediate action to mobilize and deliver food supplies as earliest as March 2017.

The UN relief support already being delivered in these areas needs increased oversight, perhaps even hands off from the government. So far, corruption hampers access to UN food. Use of local chiefs backed by community structures to identify the needy and to ensure assistance is fairly distributed, is suggested. The local community structures are widely considered less corrupt, hence their preference over government's professional staff. Thus, the role of the government in this particular endeavor should be more of creating an enabling environment for these local authorities to execute their duties. Still, a concern of kinship inclination often arises, with chiefs likely to cater to their immediate families first, hence the need to ensure they are backed by local community structures. To allay this fear, special humanitarian assistance committees, comprising women, youth, and elders, could be instituted to serve alongside the chiefs. This engenders greater local participation and strengthens oversight, hence enhancing transparency in food distribution. The UN Food distribution needs to reflect equity elements, population size and needs.

Food subsidies could boost commodity supplies, assist low-income households, and alleviate the burden of high food prices. This compels the government or its partners to buy enough food and trading it at a relatively low cost to poor families or households. The idea is for the concerned parties to begin subsidizing food and pour enough into the market to enable hunger free farming season, starting April. Subsidies could be strategically targeted to meet acute food shortage often experienced during the planting season. This essentially enables the affected households to focus more attention on cultivation to produce enough food for their families for the following year.

Supplying seeds and farming equipment fosters an impetus for long-term food security improvement. As the hunger looms, an urgent relief response is essential, but such makes for a Band-Aid strategy towards food security stabilization. A long-term food security design demands enlisting plans that eventually wean the population from international humanitarian aid. Hence, increased farming support is recommended this coming rainy season. Of importance is the provision of seed varieties, depending on livelihood zone, to local farmers. Field evidence shows that many households have already consumed all the produce they had this past year. Secondly, farm equipment, such as tractors, can amplify food production in a number of ways. First, they mechanize the farming process. Secondly, tractors are more efficient in terms of time spent cultivating; it takes a relatively shorter period to cultivate using a tractor. This efficiency aspect, coupled with an instructive climate projection mechanism, assists in bypassing climate induced crop failure by planting on time. Thirdly, tractors deepen planting depth, especially in warm environments such as South Sudan. Tractors are suited for large-scale plantations, some of which can be state-run. When made available, the citizens can lease the equipment from the state at a reasonable cost. In addition, ox ploughs could be instituted to improve traditional farming techniques, essentially curbing food gaps in the long-term. All of these suggestions complement a longstanding call for an increased investment in agriculture

across the country, essentially to reduce dependency on imports and to enhance the nation's food security.

Making safe, drinking water more accessible in more fertile lands in the country fosters increased food production. There is little farming activity taking place in considerably distant areas considered fertile but lack safe, drinking water. In particular, limited access to safe, drinking water impedes women's economic contributions to the household. Given the experience of the last two years, where crops have not been doing well in the lowlands, the residents we interviewed now express willingness to farm in the highlands but lack of water in these areas, particularly during field preparation, is hampering this prospect. As part of addressing this situation, our respondents are asking for the provision of safe, drinking water to bolster farming activities. Indeed, access to water points (for humans and animals) and improved irrigation systems is expected to significantly advance food production and availability.

Families who have lost loved ones as public servants, particularly in the military, deserve a special attention. South Sudan does not currently provide pensions and insurance compensations for these families. Those women who were made widows by the current war, for instance, deserve compensations; this is because such families are particularly more vulnerable to poverty, requiring government's immediate interventions, with investing in social protection programs as a long-term strategy.

Ending the current violence creates an enabling environment for engaging in agriculture and improving food security in the country. There ought to be political stability for South Sudan to accomplish all these economic objectives. In order for the situation of food scarcity to change, respondents believe that ending the ongoing conflict in the country should be given a high priority, as some of the resources that are currently being dedicated to the war efforts could be used to stabilize the prevailing food security crisis. It is peace that will enable increased food production, hence gaining food security countrywide. The President's National Dialogue initiative is welcomed highly as many respondents believe it can aid in settling prevailing grievances and realizing long lasting peace. Empowering state authorities to maintain law and order by reigning in on internal conflicts, disarming civilians, and promoting justice and equality would go a long way towards engendering and maintaining political and economic stability.

South Sudan needs to adopt 'climate-smart agriculture' in order to mitigate climate-induced food shortage and improve food production. Climate change affects quantity and quality of food produced. This requires measured resilience and adaptation⁹. The adaptive strategy should be innovative and "integrates climate and development goals together and explicitly target the objectives and not the mechanisms to achieve them" (Rosenstock et al.,

⁹ Without adaptation, predicted changes in temperature, precipitation, seasonality and the frequency and severity of extreme events have the potential to decrease crop and livestock production significantly in the near future and disrupt supply chains.

2016). Ensuring resilience to climate change demands regularly collecting and analyzing quality data to inform agricultural activities. Temperature and rainfall data ought to be systematically captured and analyzed, with the results regularly fed to the farmers. The current meteorological centers are either ill-equipped or are too few to comprehensively capture climate events. FAO currently works in collaboration with national authorities on this, and in some cases, directly supports the purchase of rainfall and weather monitoring equipment, including automatic weather stations. We recommend this effort to continue, as more improved and comprehensive weather related data could enhance food security policies. Similarly, data that are generated from 4 different stations in the country are never analyzed to support climate change and agricultural policies. Empowering these centers and creating more, along with agriculture extensions, could improve the decisions of farmers, consequently mitigating climate impacts on food production.

Institute low cost loan programs for poor households. Government subsidies for basic but few food items, high taxation rates, and the deregulation of markets supposedly permit wealthy traders to purchase and monopolize the basic food commodities market. Key informants, especially retail traders, reported that in the last two years, wealthy business people have been buying basic food items at the times of harvest, storing and releasing them at the time of scarcity, and prohibitively hiking the prices. In fact, almost all the respondents said the wealthy traders increase prices at will, with the next several months expected to record high costs of food.

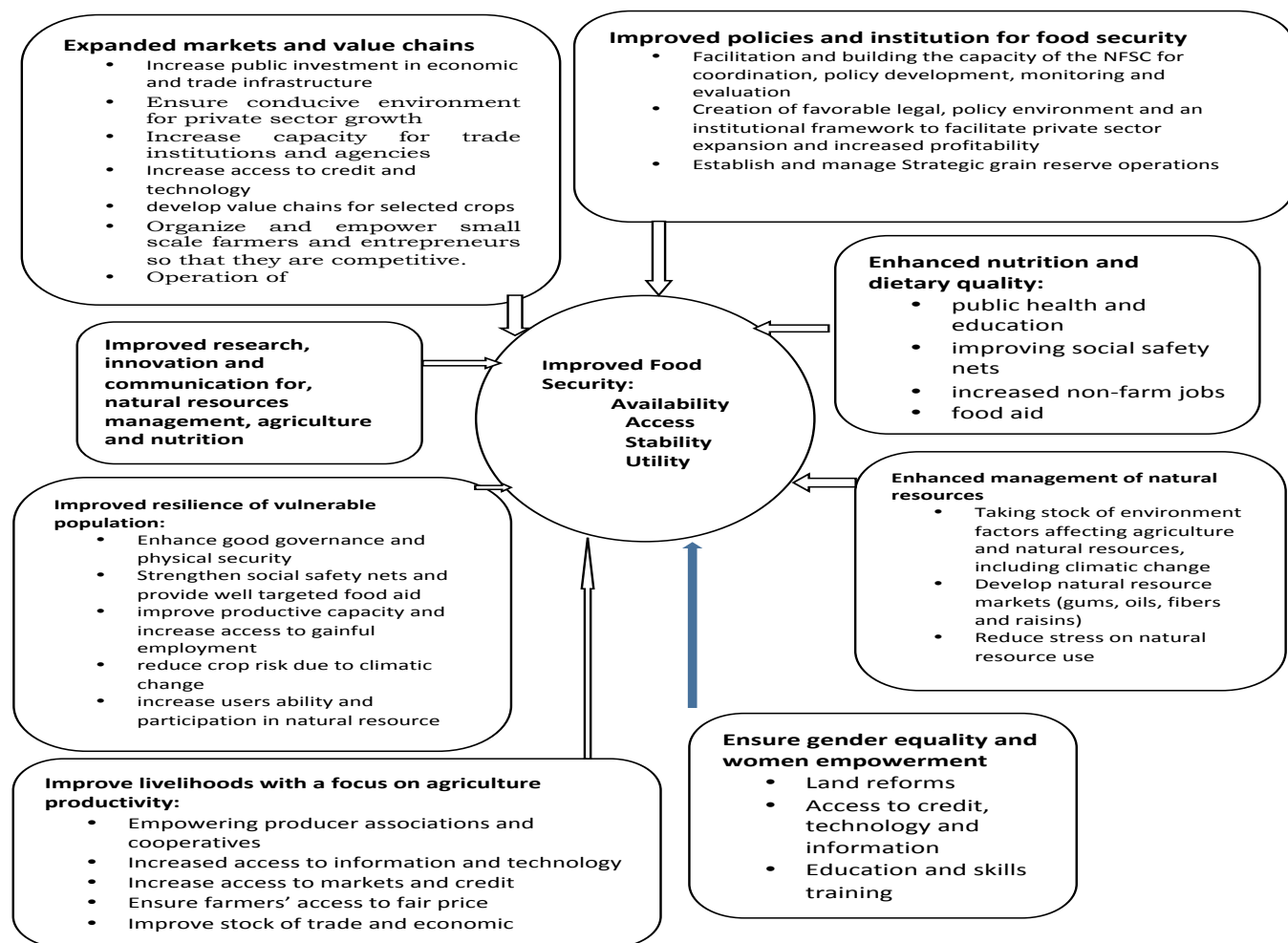
Other measures are also worth considering. To reduce transactions costs, basic food communities should be tax exempted. The Government of Aweil East, for example, does not impose taxes on sorghum supplies, keeping prices somewhat down. Food dropping as implemented by the UN is expensive—trucking might reduce the cost and increase food supply. This requires normalizing relations with the Sudan and ensuring security along trade routes, with food subsequently supplied by road from the Sudan. To realize this, the government of South Sudan needs to be more proactive in engaging the Sudanese government. As well, supply routes (roads) should be repaired or developed to allow timely delivery of food and other basic supplies to the northern states. Employment schemes, especially for the youth and the technocrats who returned from the diaspora, are required. More investment in agriculture could be one such way of generating more jobs in the rural South Sudan. This generates economic stability for a vast majority of the citizens. The parliamentarians, both at national and subnational levels, are urged to start engaging the political leaders to implement such programs.

A proper use of livestock could alleviate food insecurity. South Sudan's livestock population stands at 36,222,802, with 24 percent in Warrap and Northern Bahr el Ghazal alone (FAO, 2009). However, there is an under-use of these important resources. For example, South Sudan's urban dwellers depend largely on livestock products imported from East Africa. Commercializing aspects of this industry could increase incomes and improve people's standards of living. Livestock could be bred for both milk and meat. As a long-term development strategy, this may require specialized skills training programs across the nation.

Achieving food security in South Sudan demands establishing a contextually grounded conceptual framework. The conceptual framework presented below focuses on

increasing productivity, enhancing agricultural production as an engine to create employment, reduce poverty, and increase value-additions. The framework, if adequately implemented, can increase economic activities in the rural areas, which account for over 80 percent of the nation's population, increase incomes of especially smallholders, as well as building networks among investors in agriculture. The framework benefits from a situational analysis that utilizes baseline data and parameters that encompass social, environmental, structural and economic variables that directly/indirectly influence food production and food security in the country. Inherent in this framework is the importance of monitoring and evaluation in ascertaining progress and planning accordingly, both at the policy and farm levels.

Fig. 1. Conceptual framework for achieving food security in South Sudan



Source: Dr. Anne Itto, 2017.

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About Sudd Institute

The Sudd Institute is an independent research organization that conducts and facilitates policy relevant research and training to inform public policy and practice, to create opportunities for discussion and debate, and to improve analytical capacity in South Sudan. The Sudd Institute's intention is to significantly improve the quality, impact, and accountability of local, national, and international policy- and decision-making in South Sudan in order to promote a more peaceful,

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