

Moving Towards Markets: Cash, Commodification and Conflict in South Sudan

Edward Thomas



Rift Valley Institute
Taasisi ya Bonde Kuu
معهد الأبحاث
Machadka Dooxada Rift
የሰላም ስልጠና የተከናወነ ተቋም
Instituto do Vale do Rift
奈非大裂谷研究院
Institut de la Vallée du Rift



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Cover image: Joseph, a trader at Kiir Adem, South Sudan. © Nicki Kindersley

This report was written by Eddie Thomas for the Rift Valley Institute (RVI).

The report is a product of the X-Border Local Research Network, a component of DFID's Cross-border Conflict—Evidence, Policy and Trends (XCEPT) programme. The programme carries out research work to better understand the causes and impacts of conflict in border areas and their international dimensions. It supports more effective policymaking and development programming and builds the skills of local partners.

The Rift Valley Institute works in eastern and central Africa to bring local knowledge to bear on social, political and economic development.



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Summary

South Sudan's transition from subsistence systems to market economy

Fifty years ago, most households in South Sudan produced the grain they ate, organizing agricultural labour and distributing small surpluses mostly through kinship and other social networks. Now, the majority of households buy most of their food. This transition from self-sufficiency to market dependence took place during long wars, which transformed or distorted almost every aspect of everyday life. It is a transition that now seems to be irreversible. This report therefore looks at how South Sudan's subsistence system, which organized the production and distribution of wealth around kinship and social networks, is being replaced by a market economy, and what the consequences of this are for the country and its people.

South Sudanese people depend on food markets, not food aid

South Sudan is routinely portrayed both as a society dependent on food aid and a 'subsistence economy'. These two claims are contradictory, and all the literature reviewed in this report suggests both are incorrect.

Food aid has contributed relatively little to South Sudan's aggregate supply and aggregate consumption over the past five decades. In the current crisis, some areas of South Sudan at risk of famine have received large quantities of food aid, most of it grain. Outside the famine zone, however, household consumption of food aid is limited. South Sudan imports grain commercially and receives food aid. but most of the grain consumed in the country is produced within its own borders.

Most of this grain circulates through markets, with people growing grain to sell in markets and consuming grain bought from markets. Different surveys conducted by the National Bureau of Statistics and UN bodies since 2009 suggest that, on average, South Sudanese households purchase more than half the grain they consume, while themselves producing only about a third.

Survey methods and results raise many questions, and there is a great deal of seasonal and regional variation in the survey averages. Taken together, however, these surveys suggest there may be a correlation between market dependence and hunger. They also suggest that people who depend on markets do not have regular access to cash. This mix of market dependence and cash scarcity is most apparent in states where conflict is most intense.

Subsistence systems are diverse and dynamic, and resistant to change

South Sudan has many subsistence systems, all of which organize the production and distribution of wealth around social or kinship networks, are regulated by custom, and are oriented towards social objectives rather than private profit. For some people, the terms ‘subsistence’ or ‘bare subsistence’ mean living on the edge of survival, but that is not how subsistence systems have worked historically in South Sudan. Here, dynamic and diverse subsistence systems have created surpluses, but rather than distributing these through wages, profits, rents and interest—the ‘returns to capital’ of classical economics—they are distributed through institutions such as bride-wealth or ritual.

Changing subsistence systems therefore requires a reconsideration of all these social networks, and, for that reason, are resistant to change. When money and markets arrived in South Sudan, most people ignored or resisted them. Although some South Sudanese people today use money and markets for convenience or as a safety net, historical evidence suggests it has taken a great deal of violence to dislodge subsistence systems. For several decades, armed actors have targeted subsistence systems through looting, displacement and dispossession. Extreme acts of sexual violence may well be part of this assault on kinship-ordered production systems, led by commanders pursuing new strategies of accumulation.

Subsistence systems are not part of the informal economy

Subsistence systems are often confused with the ‘informal economy’, which is another problematically broad term. In reality, subsistence systems operate in accordance with social rules and necessity, whereas informal economies operate in accordance with the ‘laws’ of supply and demand, and economic necessity. Until quite recently, the subsistence system was able to produce enough to subsidize the costs of social reproduction (feeding and caring for children and adults) for those in the money economy. The pressing need to acquire and spend money, however, is dissolving this social fabric, and subsistence systems are being subsumed into South Sudan’s informal market economy.

In this transition, kinship-ordered subsistence systems are not abolished entirely. Instead, they shape the way the informal economy works and how societies understand entitlements. People with wages and capital support large numbers of dependents, often young male relatives. In a subsistence system, these dependents would contribute labour and production, but in an informal economy, the dependents might have nothing but political loyalty to offer. Military commanders acquire cattle and use it to control bride-wealth payments. Present and future conditions of everyday life are therefore shaped by pre-existing systems.

Food becomes a commodity

Money and markets arrived in South Sudan during the nineteenth-century slave trade. Money, though, was not socially recognized in the country until the twentieth century. People were drawn to markets because they offered commodities not produced in the subsistence system, such as clothing, utensils or guns. The evidence reviewed here suggests that the South Sudanese seldom used money to pay for food or shelter until the second half of the twentieth century, when a combination of military attacks on the subsistence system and natural disasters changed conditions in the countryside. As well as result, people were pushed towards towns or displacement camps, many of them in present-day Sudan, where food was a commodity.

The markets selling this food did not conform to the ideal of a competitive, free market, but rather reflected the militarized inequality of their surroundings. Markets were controlled by military commanders, and the people dispossessed by their operations turned towards waged agricultural labour or commodified forest goods to survive. At the time, dependence on grain markets was regarded as a sign of extreme poverty, but at the end of the 1983–2005 civil war a new autonomous government in Juba financed from oil rents set up a huge payroll giving many households access to cash, particularly those from social groups linked to the military. The cash from this payroll likely encouraged people to purchase food from markets, particularly those who had already been separated from the land.

The social implications of producing grain for markets

The switch to markets involves more than just buying grain, or other foods. Grain needs either to be produced for markets or imported from areas or countries of food surplus. Not much locally produced grain reaches markets in the capital Juba, which mostly deals in imported grain. Many household producers, however, appear to be selling their grain at harvest, as they are now deeply embedded in the money system and have numerous debts to pay.

The switch to markets has many social implications. Labour, land and gender orders are changing to accommodate it, and higher-yielding crops are being grown. Whereas labour for agricultural tasks used to be mobilized by networks of social obligation, or by work-and-beer parties, now agricultural workers till land they do not own in return for payment. The harvested area appears to have increased significantly, but the labour cost for this is high, with the bringing of one hectare into cultivation estimated as taking up to 20 days of labour. This labour demand has arisen at a time when many people of working age are in education or work in towns. Labour migrants from neighbouring countries, and from remote areas, are producing food near towns with big markets.

The commodification of food is tied up with the commodification of labour, of livestock, of forest goods and of land. Land competition is framed around a complicated politics of ethnicity, which pushes people into conflict over land that is not even being cultivated.

In areas under the sway of the market, however, competition for cultivable land is beginning to emerge. New financial arrangements, such as debt, land leasing and cash-based humanitarian programming, are broadening the scope of cash.

Age and gender roles are also affected by the shift away from subsistence. As young men and young women seek cash incomes and education, the share of agricultural work borne by older women appears to be increasing in some areas of South Sudan. This deepens their time-poverty and raises questions about the future of production.

Importing grain from neighbours

The shift to food purchase has international implications too, with agriculture in most neighbouring countries more commercialized than it is in South Sudan. Uganda and Sudan both have grain surpluses, some of which they export to South Sudan, while other neighbouring countries export very little. Although South Sudan's official, long-term development policy is based on investment in smallholder farms to increase cereal production, its unofficial policy is to import food from its most complicated and interfering neighbours.

Though estimating grain imports is not straightforward, it is clear Ugandan maize and Sudanese sorghum are changing society in South Sudan. The shift towards Ugandan grain happened after South Sudan's independence in 2011, when relations with Sudan deteriorated and relations with Uganda deepened. This shift affected urban consumption patterns as well as regional relationships. The revitalized peace agreement signed by warring parties in South Sudan in 2018 was in part the result of a Ugandan–Sudanese rapprochement, potentially meaning South Sudan's cereal deficit will be linked to the cereal surpluses of two neighbours. This makes for a complicated situation.

Though Uganda and Sudan followed different paths away from subsistence, commercialization in both countries was implicated in violence in the countryside, as well as the emergence of a class of traders who profited from commercialization without enhancing the efficiency of production. Their experience may help to explain South Sudan's current transition.

Accumulation and aspiration

South Sudan's shift away from a subsistence system to a market system has reframed vulnerability, but it has also reframed aspiration. Better-off farmers who hire workers to cultivate their plots and sell their harvests in order to pay school fees or hospital bills, or to buy phones or handbags, are all experimenting with a new kind of life. Many South Sudanese people do not want to sentimentalize the kinship-based subsistence systems of the past, which, while having social and moral resonance, do not reflect contemporary aspirations and the desire to accumulate wealth through the market.

Idealizing the market, however, is also a mistake. While markets can produce prosperous smallholders whose aspirations and wealth 'feels' legitimate, in South Sudan markets are overshadowed by the military. Being a commander is a much better route to the accumulation of wealth than being an enterprising smallholder. Thus, understanding aspirations and patterns of accumulation in South Sudan can help understand how the shift from subsistence to markets will unfold, and what new vulnerabilities may emerge in the course of the transition. To this end, the report concludes with a research agenda, arguing that new analytical frameworks, the close involvement of South Sudanese researchers, as well as a multi-disciplinary approach, are needed to fully understand changes currently being undergone by the country. It is only by pursuing this path of greater insight that relevant policy-making suggestions, as well as useful topics for future research, may be arrived at.

Acknowledgements

Many thanks to the people who reviewed this report: Abullahi Khilaf, Alex de Waal, Brendan Tuttle, Cedric Barnes, Charles E. Wani, Cherry Leonardi, Chris Newton, Dan Maxwell, Ken Barlow, Lual A. Deng, Magnus Taylor, Malcolm Smart, Mark Duffield, Nicki Kindersley, Loes Lijnders, Nisar Majid, Pio Kur Deng, Philip Wani Marchelo and Venansio T. Muludiang. Their comments, clarifications and criticisms greatly enhanced the quality of the work, though any mistakes in the work are the sole responsibility of the author. Thanks also to research colleagues at the Catholic University of South Sudan: Elizabeth Malou, Emmanuel Luga, Kuol Deng, Jimmy Pitya, Jovensia Ochalla, Loes Lijnders and Stephen Amosa. And thanks to RVI colleagues who made it happen: Anna Rowett, Jande Lasu, Joseph Diing, Machot Amoum, Mimi Bior and Musa Mawa.

Glossary of Key Terms

Subsistence systems: Systems for producing and distributing wealth that are ordered around social relations, which in South Sudan are usually kinship relations. In this report, subsistence does *not* mean ‘bare subsistence’, that is, living on the edge of survival.

Markets: Systems, institutions, infrastructures and social rules required for people to exchange goods for money, rather than through social networks. In South Sudan, markets are organized through an often violent alliance of political and commercial interests, property relations are in flux, commercial information does not flow freely, and transaction costs are high.

Commodity/commodification: A commodity is something produced to be exchanged for money in a market in order to make profits. Commodification is the process whereby a production system ordered around social relations is reoriented towards profit.

Trade: The exchange of goods and services for money through a market. It is a different kind of reciprocity from the exchange of goods and services for social objectives.

South Sudan: In this report, ‘South Sudan’ is used throughout to describe the territory of the current republic, which came into being in 2011.

Introduction

South Sudan's transition to markets in food

Fifty years ago, most households in South Sudan produced the grain they ate, organizing agricultural labour and distributing small surpluses mostly through kinship and other social networks. Today, these subsistence systems are in retreat, with most households buying the majority of the grain and cereals they eat. Such is the conclusion reached by dozens of in-depth crop and food security studies over the past decade, and supported by less rigorous studies dating back to the civil wars of the second half of the twentieth century. South Sudanese people are undergoing a long, slow transition away from subsistence systems (relatively self-contained and self-sufficient kinship-ordered systems of food production, distribution and consumption) to food markets.

South Sudan is ecologically and socially diverse, and market dependence varies considerably by region and season. The transition towards markets has, however, wide and deep effects everywhere. Just a few generations ago, many in South Sudan used very little money, and never to meet basic needs. Instead, they had grain surpluses, kept huge herds of livestock in reserve, and even grew crops such as tobacco for exchange. The wealth they produced circulated within social networks, with, for example, bride-wealth transferring wealth from older to younger generations. At no point was that wealth turned into money.

Today, though, most households need money to buy basic foods (which accounts for nearly all their spending) and for other goods and services. The need for money is changing everyday life, with many households using their land to produce food for sale, rather than home consumption. Other households sell agricultural labour, lease land to cultivate, migrate to towns to find paid work, or juggle a combination of all these strategies. This 'juggling' upsets gender and generational relationships, as well as relationships with the land. In South Sudan, basic food is becoming a commodity, and land and labour are becoming commodities too.

Armed conflict often plays an important role in bringing about this shift towards markets. Households which have lost land or livestock as a result of displacement move towards paid agricultural labour. South Sudan's harvested area appears to have declined as a result of the conflict beginning in 2013, and this has probably deepened its reliance on imported grain from Sudan and Uganda. Markets reshape aspiration, pushing people towards towns and schools. Markets also reshape patterns of accumulation, often in favour of military entrepreneurs.

The transition from self-sufficiency to market dependence took place during long wars, which transformed or distorted almost every aspect of everyday life. It is a transition that now seems to be irreversible. This report looks at how South Sudan's subsistence system, which organized the production and distribution of wealth around kinship and social networks, is being replaced by a market economy, and what the consequences of this are for the country and its people.

The importance of studying this transition

Studying this transition towards markets, and the commodification of food, land and labour, is important for several reasons. First, there are surprisingly widespread misunderstandings about food security in South Sudan. Despite a considerable body of evidence indicating market dependence, many observers claim that South Sudanese people are, in the jargon of the aid world, 'relief dependent'. That is, they depend on food aid. While it is true that many people living near the frontlines of the current conflict, or in the Protection of Civilians sites clustered around UN bases, now depend heavily on rations from the World Food Programme (WFP), most people consume almost no WFP food. Other observers claim that most rural-dwelling South Sudanese people are 'subsistence farmers', despite available evidence suggesting they sell a lot of the food they produce, rather than consuming it themselves or distributing it through social networks. These processes of commodification of basic foods, land and labour have reshaped vulnerability and resilience across South Sudan. At the same time, the way humanitarian workers assess vulnerability and resilience has changed surprisingly little over the past few years. This may be linked to misunderstandings about the scope and scale of change.

A second reason for undertaking this study is that policy-makers need more information about how people organize their economic life in order to plan interventions in livelihoods and understand the impacts of humanitarian aid. There is also a need to understand how the national economy, based around oil revenues, the import bill and the national budget, affects ordinary people. The government's reliance on oil rents has made it economically autonomous from the productive efforts of society (which is perhaps one reason why government forces sometimes attack livelihoods). New efforts to tax incomes, trade and consumption may shift the government away from a reliance on rents, but those involved require a better understanding of the economics of everyday life. At the moment, figures for South Sudan's gross domestic product vary significantly, as the economists who put them together cannot work out the value of agricultural production and livestock. This is because the livelihoods of most South Sudanese people are not easy to quantify. Studying the shift to markets in grain, and linked processes of commodification of land and labour, can help provide policy-relevant data.

A third reason for undertaking this study is that it sheds light on South Sudan's international relations. Available data indicates that while South Sudan still produces most of the grain it consumes, a significant amount of grain is imported from Sudan and Uganda.

Food aid also contributes to consumption in specific locales and among specific social groups. The result is that South Sudan relies on the grain surpluses generated by two neighbours with powerful and sometimes conflicting interests in the country.

A fourth reason for studying the transition to food markets is that it likely implicated in South Sudan's long history of violence. Relationships between economic change and conflict are not always easy to decipher, but there appears to be some correlation between market dependence, hunger and cash-poverty. In areas where this correlation is strong, many young men have left agricultural production and livestock-keeping to join armed forces and armed groups. Armed men, and their commanders, shape new patterns of accumulation in rural Sudan, and this accumulated wealth may be reworking traditional systems of production and influencing the development of markets. People sometimes use the social networks underpinning the subsistence system to manage the hunger and dislocation of conflict. Perhaps in response, commanders target subsistence systems through looting, sexual violence and displacement from lands. Indeed, for several decades, 'systematic destruction of livelihoods' has been a phrase found in much of the human rights reporting, and in the century before human rights reporting began, observers described the same processes. Preventing people from cultivating their own food seems to be part of the logic of violence.

Understanding this transition towards markets can be challenging. A fifth reason for studying the transition towards markets, however, is that this transition is *studiable*. South Sudan is changing rapidly and violently, and although this violence presents a gripping spectacle, it is difficult to study and explain. Analysts often choose unstable categories such as culture, ethnicity, identity, or political pathology to explain it, and the instability of these categories sometimes undermines their analysis. In contrast, studying the material realities of how grain is produced, exchanged and consumed may allow for clearer conclusions. In addition, there are regular surveys of crops and food security in South Sudan which, despite their many limitations, offer a starting point for analysis.

Organization of the study

The study is divided into eight sections. Section 1 looks at the history of food aid in South Sudan, a country routinely portrayed as 'relief dependent'. This section reviews evidence from colonial and humanitarian reports to assess this relief-dependency claim, concluding that, while relief food has contributed decisively to food security in specific times and places, and among specific groups, the majority of the population depend on purchased food.

Section 2 looks in more detail at South Sudan's dependence on food markets, and presents evidence from a decade's worth of household surveys, crop assessments and food security monitoring systems. These show that market dependence varies significantly by region and season, and that this dependence may have reached an irreversible point. Additionally, the data reviewed shows correlations between market dependence and

hunger. In some market-dependent, hungry areas, people have infrequent access to cash and are very exposed to price shocks. This combination of market dependence, hunger and cash-poverty is evident in areas that have seen high levels of military recruitment since 2012.

Sections 3 and 4 aim to clarify ‘subsistence’ and the ‘informal economy’, two problematically broad terms often the subject of misunderstandings. Section 3 provides a definition of ‘subsistence’ thorough a historical overview of South Sudan’s subsistence systems, drawn from historical and ethnographic literature. These systems are dynamic and diverse, organizing production and distributing surpluses through social and kinship networks. These socially-networked systems, regulated by custom and oriented towards social objectives rather than private profit, are difficult to dislodge. In South Sudan, armed actors have targeted subsistence systems through looting, displacement and sexual violence.

Subsistence systems are often classified as part of the ‘informal economy,’ and Section 4 sets out some key differences between subsistence systems and the profit-oriented informal economy, drawn from development economics literature. Subsistence systems operate according to social rules and necessities, while informal economies operate according to the laws of supply and demand, and economic necessity. In the past, subsistence systems provided enough food and social connections to meet the social reproduction costs (the costs of feeding and caring for family members) of workers in the informal economy. The pressing need to obtain and spend money, however, is dissolving the subsistence system. It has not been abolished entirely, though. Instead, it shapes how the informal economy works and the way societies understand entitlements. People with wages, capital or subordinates still support dependents from their social networks. In the past, these dependents would have contributed to production, but now they may have nothing but political loyalty or military service to offer.

Section 5 looks at how markets developed in South Sudan, where the social recognition of money is a relatively recent development. Evidence from historical and humanitarian literature suggests that South Sudanese people seldom used money to pay for basic food or shelter before the second half of the twentieth century, when a combination of military attacks on the subsistence system and natural disasters changed conditions in the countryside. This pushed people towards towns and displacement camps, where food was a commodity. These markets did not conform to the ideal of a competitive, free market, but rather reflected the militarized inequality of their surroundings. Initially, the people purchasing food from these markets were those impoverished by conflict. After 2005, however, a new autonomous government in Juba, financed by oil rents, set up a huge payroll, giving many households access to cash, particularly those from social groups linked to the military. This cash created new demand for food markets to supply.

Section 6 looks at how South Sudan’s farmers are orienting production towards markets. Evidence from crop and food security reporting suggests many household producers sell grain at harvest in order to pay debts and buy services. Some buy or

sell their labour, and some lease land to cultivate. Production for markets has many social implications that arise from this commodification of food, land and labour. People cultivate food and collect forest goods for sale. In some areas, the need to produce has led to competition over land, which is often framed around the militarized politics of ethnicity. The commodification of agricultural labour is bringing new social stratification to the countryside, and labour migration from Uganda and the Democratic Republic of Congo. Households' need for cash affects age and gender roles, with young men and women seeking cash incomes and education, which in turn may be increasing the share of agricultural work borne by older women. New financial arrangements, such as household loans, land leasing and cash-based humanitarian programming, are broadening the scope of cash use.

Section 7 reflects on the way that markets are changing both aspirations and patterns of accumulation in South Sudan. Better-off farmers are experimenting with a new kind of life, hiring workers to cultivate their plots and sell their harvests in order to pay school fees or hospital bills, or to buy phones or handbags. Many of these experimenters refuse to sentimentalize the kinship-based, inward-looking subsistence systems of the past, despite the continuing social and moral relevance of kinship networks. At the same time, it is rash to idealize South Sudan's markets. While they allow for the emergence of prosperous smallholders whose aspiration and wealth 'feels' legitimate, markets are overshadowed by the military. Being a commander is a much better route to the accumulation of wealth than being an enterprising smallholder who employs his poorer cousins. Understanding aspirations and patterns of accumulation in South Sudan can help understand how the shift from subsistence to markets will unfold, and what new vulnerabilities may emerge in the course of the transition.

Section 8 discusses the international implications of South Sudan's dependence on purchased food. Uganda and Sudan both have commercialized agricultural sectors, which export part of their surplus to South Sudan. While a review of export data from these neighbouring countries does not yield clear estimates of the value or volume of grain exports to South Sudan, it is clear that Ugandan maize and Sudanese sorghum are changing South Sudanese society. Uganda and Sudan have long vied for influence in South Sudan, and a 2018 rapprochement between the two gave momentum to peace negotiations, creating a situation where South Sudan's political processes and food requirements are tied up in relations with its most complicated and interfering neighbours. This section also reviews literature on the development of commercial agriculture in neighbouring countries. Uganda's prosperous smallholders and Sudan's well-connected sorghum landlords provide two different templates for South Sudan's agricultural development.

The report concludes with a research agenda. South Sudan's shift from the subsistence systems of the past to market dependence appears to have wrought widespread and irreversible changes in many areas of life, and is entangled with the country's history of armed conflict. Studying this shift requires new analytical frameworks, the close involvement of South Sudanese researchers, and multi-disciplinary approaches.

Study methodology and limitations

Food has become a commodity in South Sudan, and the process of commodifying food is linked to the commodification of labour, land and forest goods, new international trading relationships, and new patterns of accumulation. This report addresses these topics by focusing primarily on changing systems for producing and distributing grain (and to a lesser extent, tubers). There are two reasons for this focus on grain. First, grain provides most South Sudanese households with the majority of their calories. Second, there is much more evidence about grain production and consumption than for other important food groups, such as meat, dairy, fish, cultivated vegetables and wild foods.

This report is based on a review of existing literature. The main sources reviewed are crop assessments, food security monitoring reports, household economy analysis studies and market studies published since the early 1990s by the United Nations (UN) Food and Agriculture Organization (FAO) and World Food Programme (WFP), the Famine Early Warning Systems Network (FEWS NET) and Save the Children. In addition, reports and books on agriculture published by the Anglo-Egyptian colonial administration, post-independence Sudanese governments, the World Bank, and a report on South Sudan relief operations of the 1970s written by Tristram Betts, were reviewed. Finally, books and articles from academic disciplines such as ethnography, social history, development studies, economic history and agrarian studies were taken into account. A detailed account of the limitations of different quantitative data sources is given in the Annex.

1. A History of Food Aid in South Sudan

Despite South Sudan being routinely portrayed as an aid-dependent society, the literature reviewed in this report points to a rather different conclusion, that food aid has in fact never made a significant contribution to South Sudan's aggregate supply of cereals. Although food aid has made some impact on consumption, production and exchange of cereals in specific localities, periods and sectors, it makes up a very small proportion of the diet of most South Sudanese people, who laboriously produce most of the food consumed in the country. An examination of the history of food aid in South Sudan reveals the extent of the misconception about 'relief dependency' held by many foreign and South Sudanese decision-makers, and how this has often been implicated in decisions to reduce food aid.

Food aid from the mid-nineteenth to mid-twentieth century

Food aid is a relatively recent arrival in South Sudan. From the mid-nineteenth to the mid-twentieth century, South Sudan's cereal production fed its entire population, as well as its many foreign invaders. During the late nineteenth-century famines, South Sudan even fed the population of Omdurman, then the Sudanese capital.¹ In the twentieth century, South Sudan sometimes imported or exported a few thousand tonnes of grain in the space of a year, but was self-sufficient in staple foods. Despite this, colonial officials sometimes witnessed or created politically-organized famines, one of the worst being that of 1941/42, when Equatorial grain was exported to feed soldiers in African theatres of the Second World War.² When famines and shortages occurred, colonial administrators bought grain from merchants who imported commercial grain from northern producers, distributing the grain through what would today be called food-for-work schemes.³

Food aid contributed little to the supply of cereals during South Sudan's first post-independence civil war (late 1950s–1972), with the conflict disrupting the agricultural

1 David Keen, *The Benefits of Famine: A Political Economy of Famine and Relief in Southwestern Sudan, 1983–1989*, Oxford: James Currey, 2008, 20–31; F. R. Wingate, *Ten Years' Captivity in the Mahdi's Camp, 1882–1892, From the original manuscripts of Father Joseph Ohrwalder, late priest of the Austrian mission station at Delen in Kordofan*, London: Sampson, Low, Marston, 1892, 285; SDIT, 'Natural Resources and Development Potential in the Southern Provinces of the Sudan: A Preliminary Report by the Southern Development Investigation Team, 1954', London: Sudan Government, 1955, 135–7.

2 M. W. Daly, *Imperial Sudan: The Anglo-Egyptian Condominium 1934–1956*, Cambridge: Cambridge University Press, 1991, 184.

3 Foreign Office, 'Report on the Administration, Finances and Condition of the Sudan in 1937. Presented by the Secretary of State for Foreign Affairs to Parliament. Cmd. 5895 Sudan. No. 1 (1938)', London: H.M.S.O., 1938, 117.

systems that had produced modest surpluses for much of the twentieth century. Some people were forced into ‘the bush’, that is, shifted from more settled or complex production systems into foraging and mobile cultivation production systems, away from the roads and towns controlled by government forces.⁴ A small amount of food aid was organized by the Khartoum government. In Equatoria, thousands of people were forced into high-surveillance peace villages, where they were given rations only until the first harvest, when they were expected to feed themselves.⁵

The first major foreign humanitarian operation in South Sudan was organized after 1972, when the Addis Ababa Agreement brought an end to the civil war. By December 1973, over a million refugees and displaced persons had returned home. The food aid they received was short-lived and relative to today’s quantities was limited. In the year to September 1973, in one of the largest aid operations of the time, 22,552 tonnes of grain and other food was procured to feed a target population estimated at between 300,000 to 700,000 people. In 1973, actually procured food aid provided somewhere between 75 and 30 kg of food per targeted person over one year.⁶

4 Øystein H. Rolandsen and M. W. Daly, *A History of South Sudan from Slavery to Independence*, Cambridge: Cambridge University Press, 2016, 86.

5 Scopus Poggo, *The First South Sudanese Civil War: Africans, Arabs and Israelis in the Southern Sudan, 1955–1972*, New York: Palgrave Macmillan, 2009, 87–89; Edward Thomas, ‘The Kafia Kingi Enclave: People, politics and history in the north-south boundary zone of western Sudan’, London: Rift Valley Institute, 2010, 103.

6 Tristram Betts, *The Southern Sudan, the Ceasefire and After*, London: Africa Publication Trust, 1974, 28.

Box 1. Estimating actual deliveries of food aid per capita over time

Most humanitarian literature looks to the present and future, talking about assessed food requirements and target populations rather than populations that have actually been reached with food aid. It was therefore possible to obtain figures on actual deliveries of food aid from only a few of the sources surveyed for this report.⁷ Data on target populations is problematic, as targets seldom reflect reality, and in South Sudan food aid is generally shared and sometimes exchanged. This section looks at overall trends in food aid, using the somewhat inexact comparison of comparing actually delivered food aid (or, in one case, actually procured food aid) with targeted populations. The figures given here are for all food delivered, not just grain, though this makes up the overwhelming majority of food aid, and so give a rough average of kilograms of grain per capita. This can in turn be compared with assessed average per capita consumption requirements, which are a set of conflicting guesstimates from different institutions which change over time. *The Pink Book*, a 1972 Sudan Government publication setting out food aid needs for returnees, assessed the ‘average monthly ration’ at 16.05 kg a month, which is equivalent to 192.6 kg a year. In 1995, an FAO report on South Sudan said that the ‘regional historic per caput cereal consumption norm’ was 90 kg a year,⁸ while in 2017, the FAO assessed average annual per capita cereal consumption at 110 kg.⁹ Thus, the FAO’s cereal consumption assessment has risen gradually over the years. Other organizations provide much higher average annual assessments.¹⁰

7 FAO/GIEWS, ‘Special Report: FAO/WFP Crop and Food Supply Assessment Mission to Sudan, 22 December 1997’, Rome: Food and Agriculture Organization/Global Information and Early Warning System, 1997b, 3.3.2. Accessed 21 March 2019, <http://www.fao.org/3/w7589e/w7589e00.htm>; FAO/GIEWS, ‘Special Report: Crop and Food Supply Situation in Sudan, 14 June 2000’, Rome: Food and Agriculture Organization/Global Information and Early Warning System, 2000b. Accessed 21 March 2019, <https://reliefweb.int/report/sudan/faogiews-special-report-crop-and-food-supply-situation-sudan-1>; Mark Duffield et al., ‘Sudan: Unintended Consequences of Humanitarian Assistance: Field Evaluation Study’, report to the European Community Humanitarian Office, Dublin: University of Dublin, Trinity College, 2000, 195–197; WFP, ‘Country Portfolio Evaluation. South Sudan: An evaluation of WFP’s Portfolio (2011–2016) Evaluation Report’, WFP Office of Evaluation, Report number: OEV/2016/013. Rome: World Food Programme, 2017, vol. 1, 15.

8 FAO/GIEWS, ‘Special Report: Crop Assessment Mission to Southern Sudan, 10 November 1995’, Rome: Food and Agriculture Organization/Global Information and Early Warning System, 1995a. Accessed 21 March 2019, <http://www.fao.org/3/v9624e/v9624e00.htm>.

9 FAO/WFP, ‘Crop and Food Security Assessment Mission to South Sudan, 26 May 2017’, Rome: Food and Agriculture Organization/World Food Programme, 2017, 31.

10 Paul A. Dorosh et al., ‘Enhancing Food Security in South Sudan The Role of Public Food Stocks and Cereal Imports’, FPRI Discussion Paper 01482, Washington, DC: IPFRI, 2015, 9–10.

Food aid during the second civil war

Though humanitarian organizations did not provide significant quantities of food during the second civil war (1983–2005), the protracted conflict led to a protracted humanitarian operation, fostering the belief among well-fed foreign and South Sudanese observers that South Sudanese people were ‘relief dependent’. This belief was at odds with the data produced by humanitarian organizations themselves. Between 1992 and 1998, Operation Lifeline Sudan (the main humanitarian operation) targeted 4.7 million people in the whole of Sudan, delivering about 50,000 tonnes of food annually to feed them: about 11 kg of food per targeted beneficiary per year, or about ten per cent of calorific needs of a target population that was spread out across South Sudan and the conflict areas of Sudan.¹¹

Figures for actual deliveries of food aid to South Sudan are infrequent, and suggest significant variation (See Table 1). For example, in 1997, WFP delivered 26,300 tonnes of food through Operation Lifeline Sudan, for a targeted population of 2.6 million (about 10 kg per targeted person).¹² In 2000, WFP reported that it had delivered 50,000 tonnes of food to the Southern Sector of Operation Lifeline Sudan—that is, to areas controlled by the Sudan People’s Liberation Army (SPLA), roughly corresponding to today’s South Sudan—but did not give a figure for targeted beneficiaries.¹³ A 2006 WFP survey found that food aid was ‘not a common source of food for households in any state’.¹⁴

Table 1. Targeted beneficiaries and quantities of food aid in different years

Year	Operation	Area covered	Tonnes of food delivered annually	Target population	Kg of food per beneficiary per year
1972–1973	UNCHR-led relief operation	Southern Sudan	22,552	300,000–700,000	75–30
1992–1998	Operation Lifeline Sudan	Sudan	50,000	4.7 million	11
1997	Operation Lifeline Sudan	Sudan	26,300	2.6 million	10
2016	WFP	South Sudan	226,540	3.05 million	74

¹¹ Duffield et al., ‘Sudan: Unintended Consequences’, 195–7.

¹² FAO/GIEWS, ‘Special Report, 22 December 1997’, 3.3.2.

¹³ FAO/GIEWS, ‘Special Report, 14 June 2000’.

¹⁴ WFP, ‘Sudan: Southern Sudan province, Comprehensive Food Security and Vulnerability Analysis (CFSVA) Vulnerability Analysis and Mapping Branch (ODAV)’, Rome: World Food Programme, 2007, 25.

The notion of ‘relief dependency’ nonetheless took root in the minds of many foreign and South Sudanese decision-makers, and was often implicated in decisions to reduce food aid.¹⁵ The belief in ‘relief dependency’ survived into the peace after 2005. Between 2011 and the outbreak of conflict in 2013, studies from WFP and its sister agency, FAO, found that food aid contributed about 3 per cent of household grain supply (see Figure 3 in Section 2).¹⁶ There may have been an increase in the availability of food aid, which was used to help manage the return of millions of people who had been displaced to Sudan during the civil war. These food transfers typically lasted only a few weeks or months.

Food aid since December 2013

After the current armed conflict began in December 2013, large quantities of food aid were supplied to conflict areas and Protection of Civilian sites following the 2014 harvest. This dramatically increased the contribution of food aid to household sorghum supplies, with WFP, in 2016, distributing 226,540 tonnes of food¹⁷ to a target population of 3.05 million people,¹⁸ translating to an average annual per capita consumption by beneficiaries of about 74 kg. These beneficiaries, however, probably made up less than a third of the population. Across the whole population, food aid contributed about 13 per cent of household cereal supplies before harvest, and 6 per cent after harvest.¹⁹

The contribution of food aid to consumption has increased during the course of the current conflict, due mainly to two overriding reasons. The first is famine. Almost 2 million of the 3.05 million beneficiaries targeted in 2016 were in the three conflict-affected states of Jonglei, Unity and Upper Nile.²⁰ Surveys in these states showed mortality rates higher than the widely-accepted famine threshold of 2 per 10,000 persons per day,²¹ and, according to some observers, the deaths may have been directly caused by violence, rather than conflict-related hunger.²² This raised the prospect of a resur-

¹⁵ Sarah Bailey and Simon Harragin, ‘Food assistance, reintegration and dependency in Southern Sudan: A report commissioned by the World Food Programme’, Humanitarian Policy Group, London: Overseas Development Institute, 2009; Susanne Jaspars, *Food Aid in Sudan: A History of Power, Politics and Profit*, London: Zed, 2018, 191.

¹⁶ FAO/WFP, ‘Crop and Food Security Assessment Mission to South Sudan, 5 April 2016’, Rome: Food and Agriculture Organization/World Food Programme, 2016, 41.

¹⁷ WFP, ‘Country Portfolio Evaluation’, vol. 1, 15.

¹⁸ FAO/WFP, ‘Crop and Food Security, 5 April 2016’, 29.

¹⁹ Authors calculation based on FAO/WFP, ‘Crop and Food Security, 5 April 2016’, 41; FAO/WFP, ‘Crop and Food Security, 26 May 2017’, 39; FAO/WFP, ‘Crop and Food Security Assessment Mission to South Sudan, 28 March 2018’, Rome: Food and Agriculture Organization/World Food Programme, 2018, 44.

²⁰ FAO/WFP, ‘Crop and Food Security, 5 April 2016’, 44.

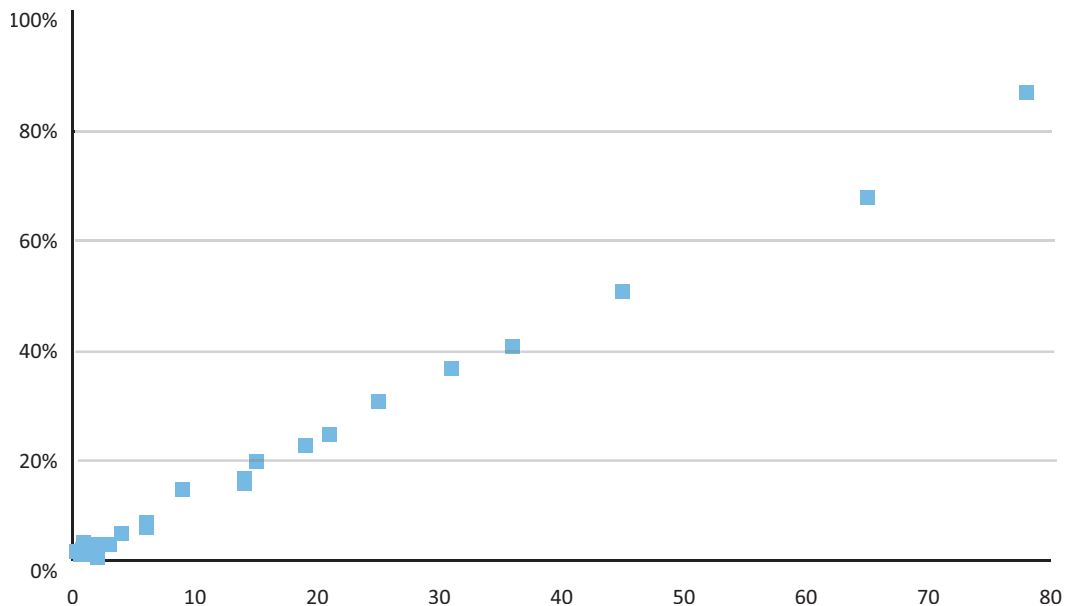
²¹ Alex de Waal, *Mass Starvation: The History and Future of Famine*, Cambridge: Polity, 2018, 194.

²² Thanks to Dan Maxwell for this point.

gence of the politically-organized famines that devastated the nineteenth and twentieth centuries, and blanket food distribution in conflict areas was deemed an appropriate response.²³

The consumption of food aid is, however, still highly localized. Figure 1 shows the contribution of food aid to total household grain consumption across 79 counties in South Sudan. In 33 of those counties, food aid makes no contribution to household grain consumption, while in 45 counties, food aid makes up less than 2 per cent. Only 16 counties depended on food aid for more than 20 per cent of their household grain consumption, and all of these were in conflict areas.

Figure 1. Contribution of food aid to total household grain consumption across 79 counties, each dot represents a county. Data from December 2018 FSNMS.



The second reason for the increase in food aid is the emergence of Protection of Civilians sites. Since the conflict began in 2013, these sites have been set up around UN bases as refuges for people fearing for their safety. In early 2019, these sites housed almost 200,000 people,²⁴ with residents entirely dependent on food aid.

Reviewing WFP’s operations between 2012 and 2016, WFP evaluators found ‘the entrenching of an existing dependency syndrome’.²⁵ They did not offer evidence for this assessment, and like previous generations of aid workers, chose to characterize a

²³ de Waal, *Mass Starvation*.

²⁴ UNSG, ‘Report of the Secretary-General on South Sudan (covering the period from 1 December to 26 February 2019)’, 28 February 2019, S/2019/191, New York: Security Council, 2019, 8.

²⁵ WFP, ‘Country Portfolio Evaluation’, vol. 2, 212.

complicated situation with a term that lacked precision while having a moralizing edge. Food aid is a symptom, not a cause, of distorted behaviours and incentives in South Sudan. These distortions have arisen from wide-ranging social changes that have taken place in the course of a long conflict,²⁶ during which South Sudan has turned from a country primarily reliant on household food production to one primarily reliant on food markets.

²⁶ Christopher B. Barrett and Dan Maxwell, *Food Aid After Fifty Years: Recasting Its Role*, London: Routledge, 2005, 180.

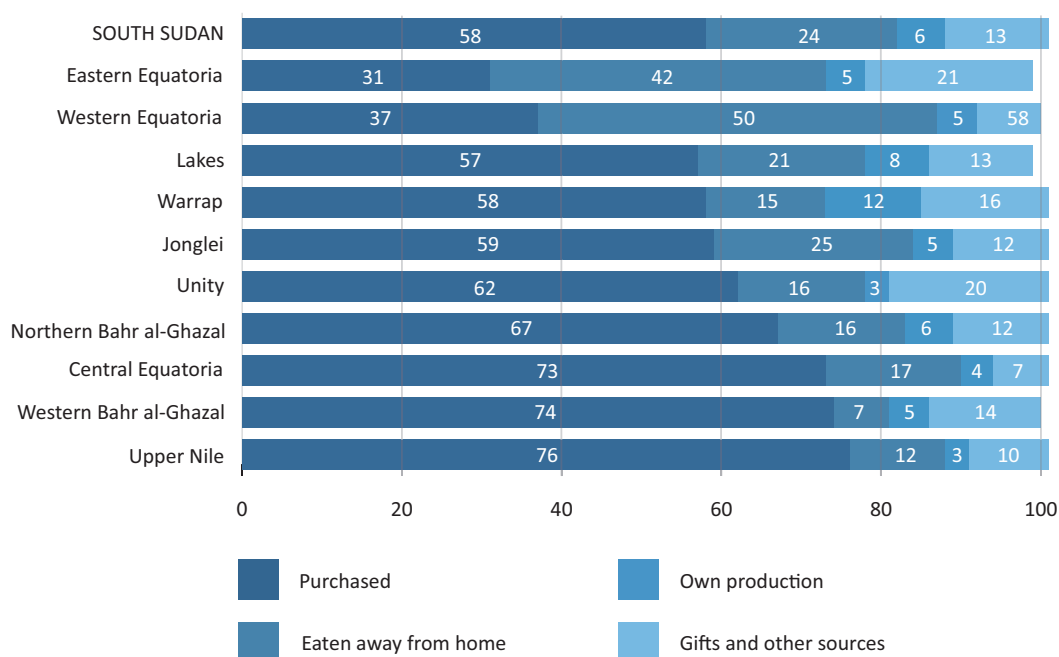
2. Hunger, Market Dependence and Lack of Access to Cash

South Sudanese households depend on markets for most of the grains they consume. There is widespread regional and seasonal variation in market dependence, and the current conflict appears to have pushed some people towards greater dependence on food aid, or, in some cases, greater dependence on household production. This section reviews the evidence for market dependence, as well as exploring correlations between market dependence, hunger and vulnerability to price inflation.

Market dependence

Since 2008, a number of food security surveys have been conducted across the whole of South Sudan that have a breadth of coverage and techniques of sampling that were not previously possible during its long conflict. While survey methods raise a number of questions, discussed in the Annex, these surveys do shed new light on how people in South Sudan survive. Since 2008, these surveys have suggested that most South Sudanese households depend on markets as their primary source of food, with household production being the secondary source, and food aid coming third, except in the worst of times and places. The National Baseline Household Survey (NBHS), in a survey conducted at the start of the 2009 lean season, revealed the extent of South Sudanese households' market dependence: Averaged out across the country, 58 per cent of all food was purchased (see Figure 2). As Sections 3 and 5 explain, markets in basic food were insignificant in South Sudan before the wars of the second half of the twentieth century.

Figure 2. Sources of dietary energy as a percentage of total food consumption in April/May 2009²⁷

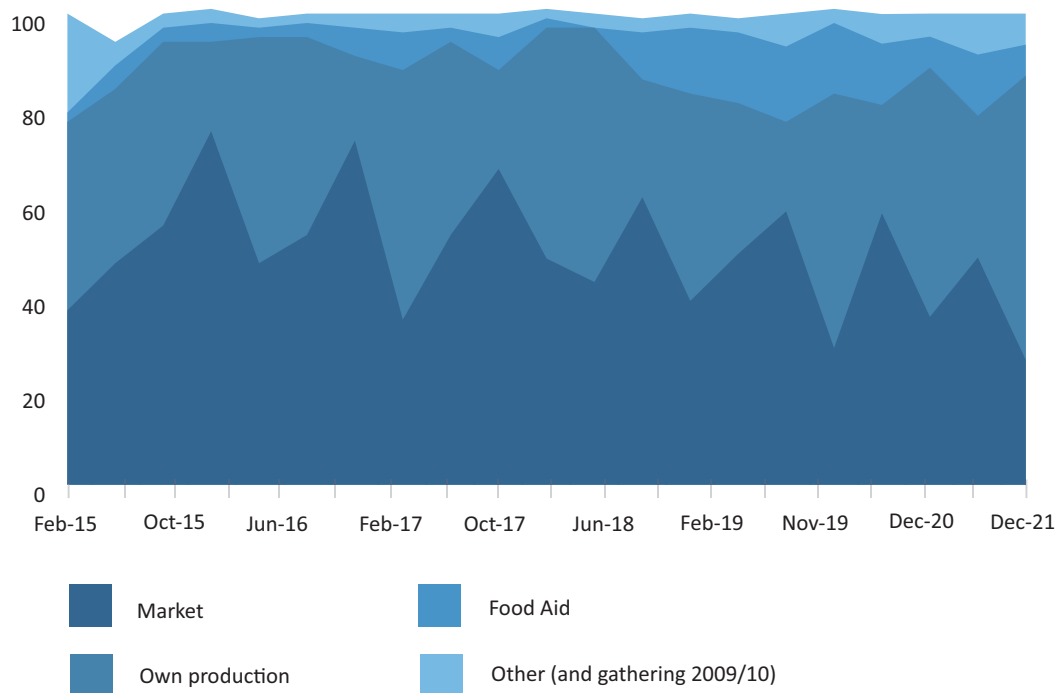


The survey identified significant regional variation, with the northern states of Upper Nile, Western Bahr al-Ghazal and Unity being very dependent on markets, while the agrarian states of Eastern and Western Equatoria were not. It was, however, a one-off survey conducted a few months before harvest, so did not show seasonal variation of dependence on markets.

From 2011, the National Bureau of Statistics, in conjunction with WFP and its partners, set up a Food Security and Nutrition Monitoring System, which conducts regular food security surveys across most states, including questions about food sources. Some of these survey results are published in the FAO/WFP Crop and Food Security Assessment Mission reports, the source used in this report. These surveys suggested that, in addition to regional variation, there was significant seasonal dependence in market dependence. Surveys conducted in June and July—in the lean prelude to harvest—suggested rates of market dependence of up to 75 per cent, with dependence on own production dwindling to 18 per cent.

²⁷ NBS, 'National Baseline Household Survey 2009: Report for South Sudan', Juba: National Bureau of Statistics, 2012, 64.

Figure 3. Sources of sorghum consumed by households changing over time, 2011–2017²⁸

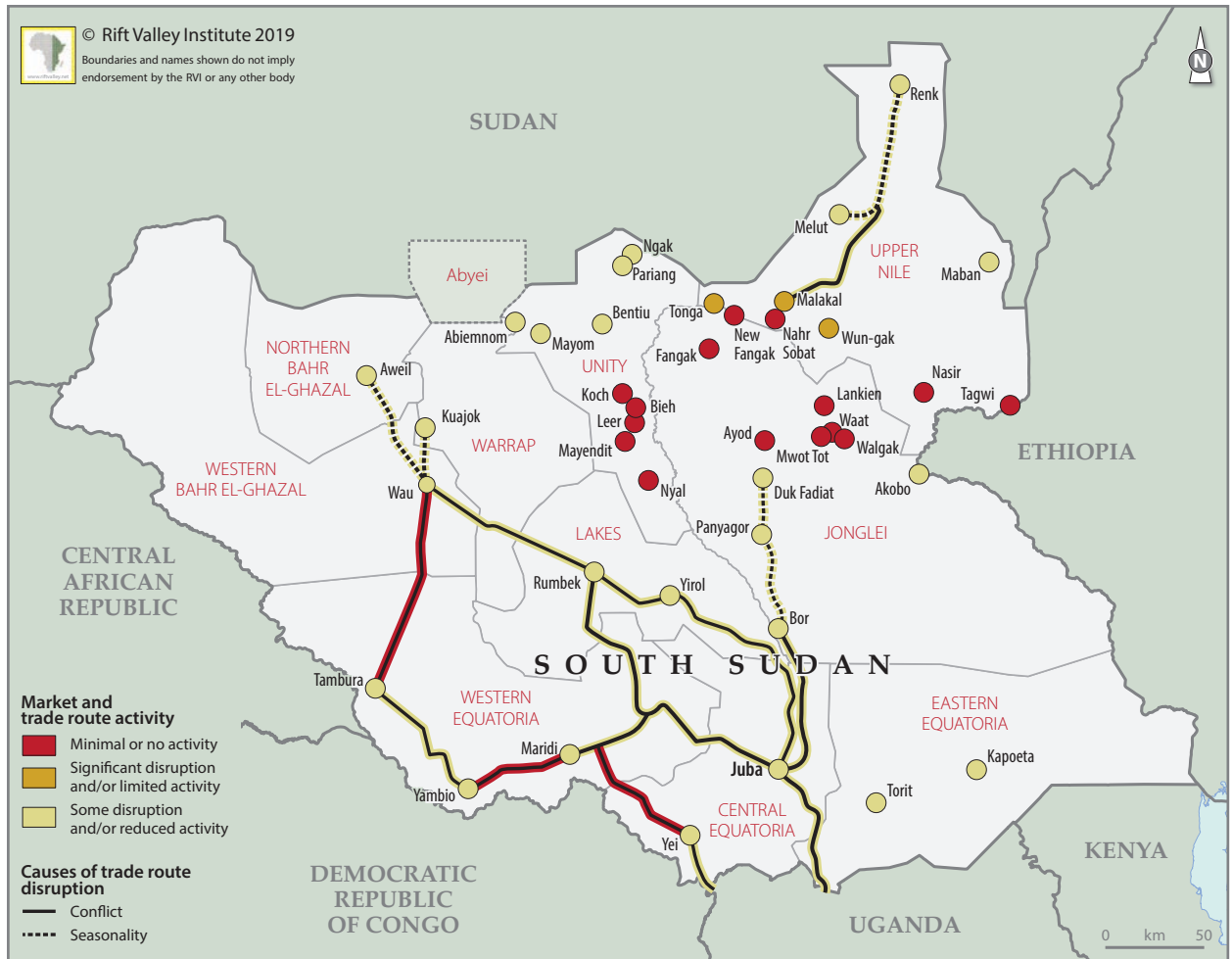


Note: from Feb 2011 to Nov 2015, FSNMS surveys measured the relative importance of different sources of sorghum consumed by households. From Feb 2016 onwards, the surveys measured different sources of all cereals and tubers. The increase in dependence on household production in 2016 and 2017 may partly be due to the inclusion of tubers and other cereals.

Looking at Figure 3, it can be seen that, since the conflict began in 2013, market dependence seems to have decreased, while food aid, household production and ‘other’ sources (such as wild food collection) seem to have increased. These are, however, aggregate figures for the whole country, and state-by-state data on food sources from Crop and Food Security Assessment Mission reports (see Figures 4 and 5 below) suggest that market dependence has been reshaped by the geography of conflict. Map 1 shows South Sudan’s market-dependent food economy in 2018. The hungriest and most food-aid dependent areas of the country correlate with the places where markets and trade routes ceased to function.

²⁸ FAO/WFP, ‘Crop and Food Security, 5 April 2016’, 41; FAO/WFP, ‘Crop and Food Security, 26 May 2017’, 39; FAO/WFP, ‘Crop and Food Security, 28 March 2018’, 44.

Map 1. Trade routes and market function in 2018²⁹



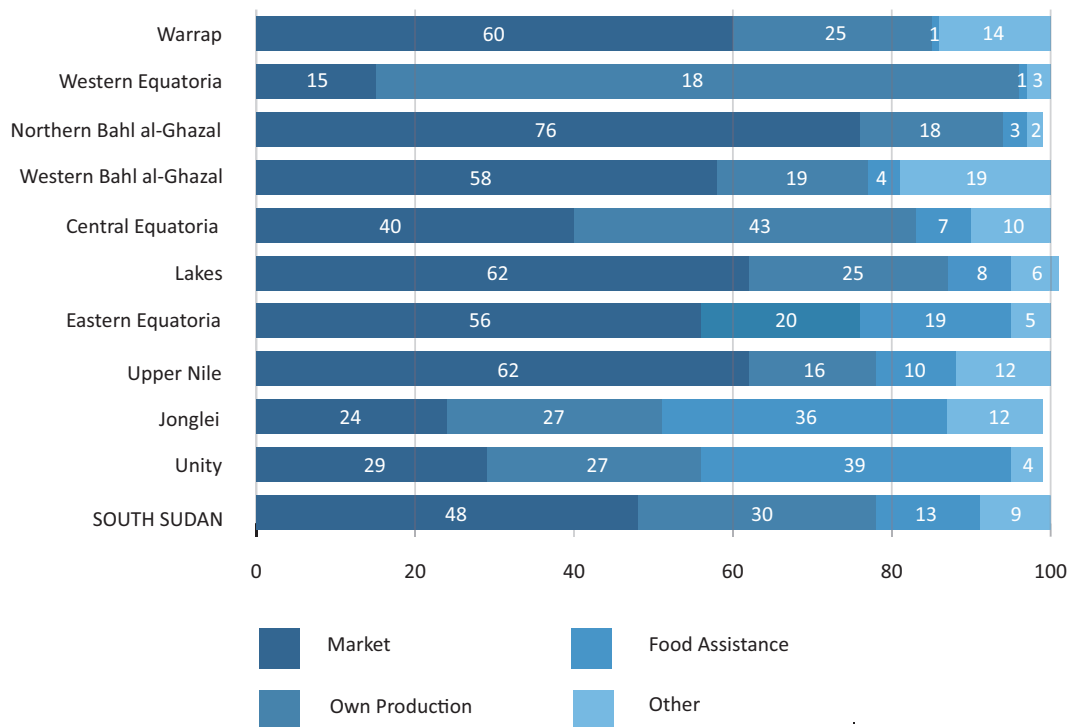
State-level data on grain sources shown in Figures 4 and 5 bears this out. Western Equatoria—a fertile state in the maize-and-cassava zone that has two rainy seasons per year and has historically been the least reliant on markets—almost all the food is home-grown. Though by 2017 the conflict had spread there, it does not seem to have undermined household production.

Meanwhile, in Northern Bahr al-Ghazal and Warrap—two states in the sorghum-and-cattle zone of the western flood plains that both have high levels of household production—household production is a major food source after harvest. In the lean pre-harvest season, however, these two states are the most market-dependent states of all, suggesting that local crops may be circulating in local markets, deepening market relations in the process. These areas faced high levels of displacement during

²⁹ FAO/WFP, 'Crop and Food Security Assessment Mission to South Sudan, 15 March 2019', Rome: Food and Agriculture Organization/World Food Programme, 2019, 41, 43.

the 1983–2005 conflict, then, after the 2005 peace agreement and independence in 2011, high levels of returnees, many of them coming from urban areas of Sudan. These returnees likely have high levels of dependency on food markets.³⁰ Climate change may be intensifying the shift towards markets. Darfur, a northern neighbour of Northern Bahr al-Ghazal, has witnessed the most rapid rates of desertification anywhere, while evidence from South Sudan indicates that temperatures have risen significantly over the last three or four decades, and that rainfall has become more variable, declining by between 10 and 20 per cent.³¹

Figure 4. Sources of cereals and roots consumed by households, July 2017³²

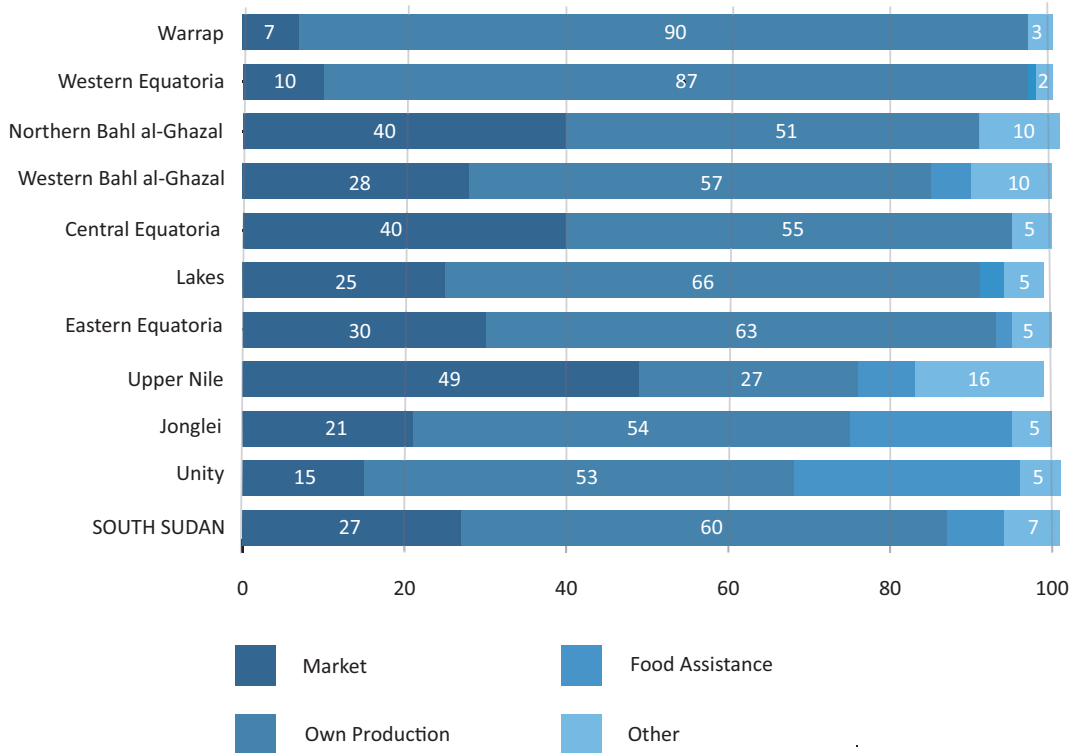


³⁰ Martina Santschi, 'Encountering and "Capturing" Hakuma: Negotiating Statehood and Authority in Northern Bahr El-Ghazal State, South Sudan', PhD dissertation, Bern University, 2016, 11.

³¹ USAID, 'Fact sheet: Climate change risk profile, South Sudan', Washington, DC: USAID, 2016.

³² FAO/WFP, 'Crop and Food Security, 28 March 2018', 44.

Figure 5. Sources of cereals and roots consumed by households, December 2017³³



Elsewhere, Jonglei and Unity—two states on the frontlines of armed conflict, and home to over 40 per cent of South Sudan’s internally displaced population in 2018—have a predominantly livestock economy, which covers a wide range of ecological zones: semi-deserts and fertile highlands in the south-east, sorghum and maize areas in the flood plains. FAO/WFP reports indicate that both were heavily dependent on food markets before the 2013 conflict, but since then market institutions and infrastructures appear to have been undermined or destroyed, meaning these two states have become heavily dependent on food aid. Other sources suggest that market dependence has increased in southern Unity state.³⁴

Finally, Upper Nile—a conflict-affected state with a high number of displaced persons—has a livestock and grain (mainly maize in the east and sorghum in the west) economy. It has the least reliance on household production of all states, and has long been highly dependent on markets, with its cereal economy partially integrated into the cereal

³³ FAO/WFP, ‘Crop and Food Security, 28 March 2018’, 45.

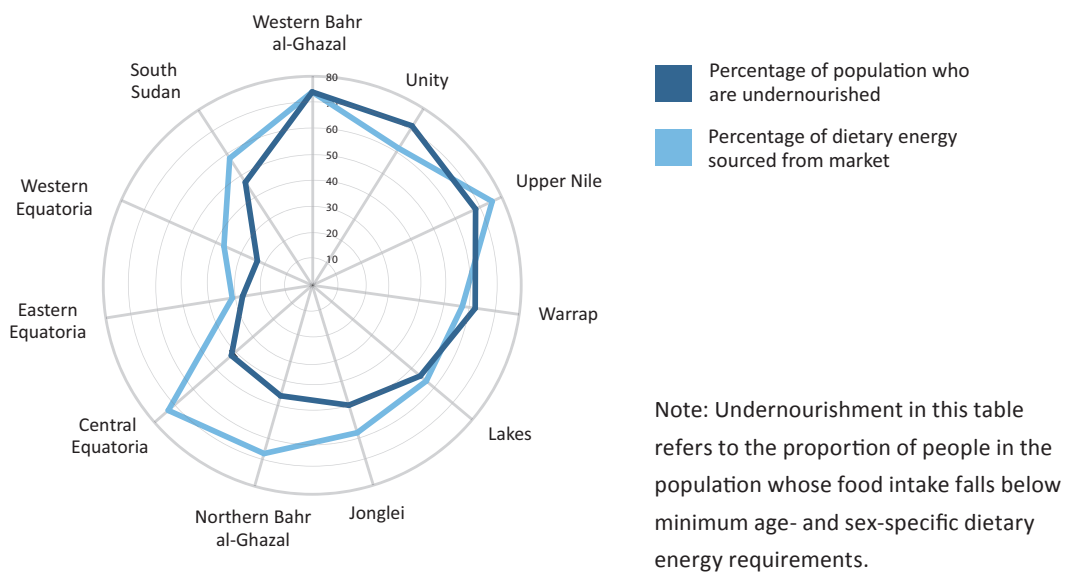
³⁴ Alex Humphrey, Vaidehi Krishnan and Roxani Krystalli, ‘The Currency of Connections: Why local support systems are integral to helping people recover in South Sudan’, Washington, DC: Mercy Corps, 2019, 28; FEWS NET, ‘Livelihoods Zone Map and Descriptions for the Republic of South Sudan (Updated)’, Washington, DC: FEWS NET, 2018, 6.

markets of Sudan. Like Warrap and Northern Bahr al-Ghazal, it is connected to Sudanese markets and market relations may have deepened there.³⁵

Historical evidence on the development of food purchase (discussed in Section 5) suggests that the shift to market dependence that has emerged since 2005 is widespread and probably irreversible. Before going on to discuss this shift, it is worth looking at what the available food security data has to say about its social implications, one of which is that hunger is spreading.

Is there a link between market dependence and hunger? Before the end of the 1983–2005 armed conflict in South Sudan, few of the sources surveyed for this report addressed links between market dependence and hunger, although some twentieth-century ethnographers identified correlations between hunger and the markets that had begun to displace household production at the outskirts of small provincial towns. For example, Conradin Perner’s study of Anyuak livelihoods, conducted in the late 1970s, found that people living near the market of Akobo were indebted, and their children were in worse physical condition than children in the rural hinterland.³⁶ More recently, the 2009 NBHS identified high levels of pre-harvest market dependence, suggesting a correlation between levels of market dependence and undernourishment (see Figure 6).

Figure 6. Correlation between market dependence and undernourishment in April/May 2009³⁷



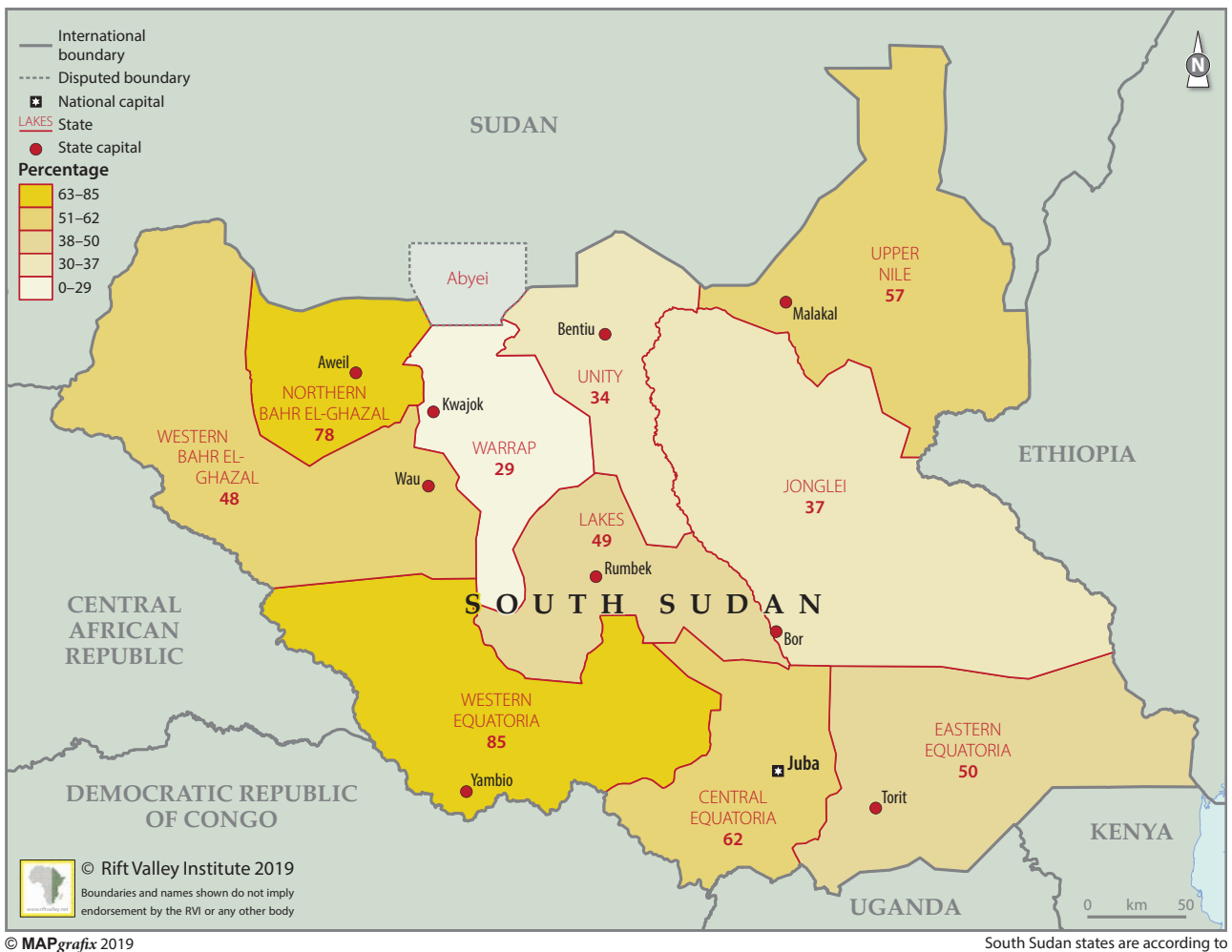
³⁵ FAO/WFP, ‘Crop and Food Security, 26 May 2017’, 40; FAO/WFP, ‘Crop and Food Security, 28 March 2018’, 44–45.

³⁶ Conradin Perner, *The Anyuak – Living on Earth in the Sky, Vol VII: Spheres of Action*, Basel: Schwabe, 2016, 53.

³⁷ NBS, ‘Household Survey 2009’, 63–4.

Access to cash affects access to food in market-dependent food economies. The 2009 NBHS asked respondents how often they had used cash in the past seven days and found that, across the country, only 53 per cent of households had done so. There was wide variance between states (see Map 2). In market-dependent Northern Bahr al-Ghazal, 78 per cent of households had used cash in the past week; in urbanized Central Equatoria, the figure was 62 per cent; while fertile, self-sufficient Western Equatoria had the highest level of cash use, at 85 per cent. The three states of Warrap, Unity and Jonglei had the lowest rates, with only about a third of households having used cash in the previous week.³⁸

Map 2: Proportion of people living in household that used cash in the last seven days by state, per cent³⁹



38 NBS, 'Household Survey 2009', 47.

39 NBS, 'Household Survey 2009', 47.

While this report has not been able to identify any survey data about the increase or decrease of cash use since 2009, a 2018 report on livelihoods across South Sudan's different agro-ecological zones by FEWS NET suggests that cash use is widening, and is concentrated among poorer groups. In the highland zone of Central and Eastern Equatoria, the western plains of Western Bahr al-Ghazal, and the flood plains of Warrap and Northern Bahr al-Ghazal, better-off producers are more likely to consume their own production and sell some surplus, while poorer producers are more likely to sell their labour.⁴⁰ In some areas, such as the semi-arid pastoralist zone around Pibor and Kapoeta, grain is exchanged directly for livestock.⁴¹

Increased food insecurity

Again, this report has been able to identify data allowing for direct comparisons between market dependence and nutrition since 2009. The FAO/WFP Crop and Food Security Assessment Mission reports, however, use FSNMS food security data to estimate household food security by assessing the quality and frequency of food consumption, the share of food in household expenditures, the reliability of income-generation activities, and the coping strategies households use. While the increase in food insecurity is startling, correlations with market dependence have changed as food aid has overtaken the market in conflict-affected, market-dependent states (see Figure 7)

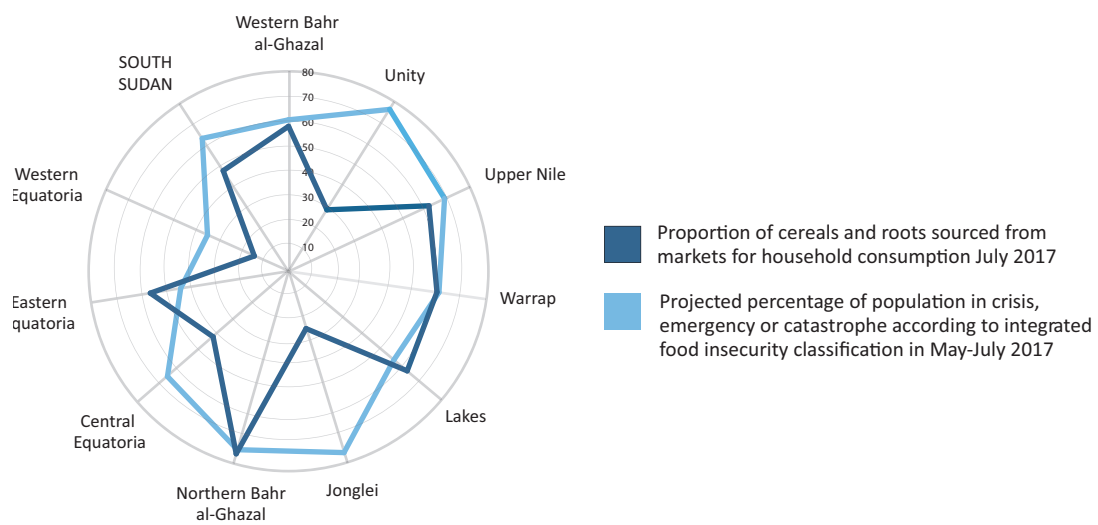
In 2011, food security data suggested that about one-third of the population was food insecure. In 2018, the same data suggested that over two-thirds were food insecure. In July 2018, states that had a high levels of market dependence, such as Northern Bahr al-Ghazal (76 per cent) and Upper Nile (62 per cent), also had high levels of food insecurity, while in conflict-affected, highly food-insecure states, such as Jonglei and Unity, food aid had become the most important food source.⁴²

⁴⁰ FEWS NET, 'Livelihoods Zone Map', 19, 23, 31.

⁴¹ FEWS NET, 'Livelihoods Zone Map', 25, 26.

⁴² FAO/WFP, 'Crop and Food Security, 15 March 2019, 45.

Figure 7. Correlation between market dependence and food insecurity, May–July 2017⁴³



Food price inflation

Food security data published in the FAO/WFP Crop and Food Security Assessment Mission reports also suggests that South Sudanese households find food price inflation the biggest shock they face. Even after the start of armed conflict in 2013, food prices scored much higher than insecurity.⁴⁴ This surprising finding may reflect the difficulty of using surveys to understand the impacts of conflict, as respondents may not attribute things such as decreased access to land or labour directly to conflict. Food security data does, however, capture an overwhelming experience of precarity in the face of price inflation, which is very often one of the costs of the transition from household production to purchased food.⁴⁵

Food price shock probably got worse after 2015, when South Sudan’s reserves ran out and the value of its currency collapsed. In December 2016, inflation peaked at 549 per cent, a rate at which prices double every fortnight.⁴⁶ Although inflation slowed and the currency recovered some of its value in 2018, South Sudan’s population is still highly exposed to food price shocks.

⁴³ FAO/WFP, ‘Crop and Food Security, 28 March 2018’, 41, 44.

⁴⁴ WFP, ‘Annual Needs and Livelihood Analysis 2014–2015’, Juba: World Food Programme, 2015, 21.

⁴⁵ Thanks to Dan Maxwell and Mark Duffield for these points.

⁴⁶ FAO/WFP, ‘Crop and Food Security, 26 May 2017’, 11.

Hunger, market dependence and lack of access to cash: A complex relationship

One possible explanation for the correlation between hunger and markets is displacement. When people are displaced, they lose many of their assets, and are pushed towards markets to survive. Another possible explanation is that markets have developed in areas with a historical grain gap, such as Jonglei, to complement local production.

While there is no simple cause-and-effect relationship between hunger, market dependence and lack of access to cash, most households in South Sudan live out the contradiction of increasing market dependence and inadequate access to cash.⁴⁷ This paradox may even be implicated in the armed conflict, as in 2009 the NBHS found that Warrap, Unity and Jonglei were hungry states with a high dependence on food markets and limited cash use. The young men of these states provided many of the informal fighting forces recruited to fight in South Sudan's brief war with Sudan in 2012, and then again in the internal armed conflict that broke out in 2013.⁴⁸ Thus, understanding how subsistence systems change to market systems potentially sheds light on wider questions about vulnerability and violence in South Sudan.

⁴⁷ Edward Thomas, *South Sudan: A Slow Liberation*, London: Zed, 2015a, 243–59.

⁴⁸ John Young, 'Popular Struggles and Elite Co-optation: The Nuer White Army in South Sudan's Civil War', Geneva: Small Arms Survey, Graduate Institute of International and Development Studies, 2016; Naomi Pendle, '"They Are Now Community Police": Negotiating the Boundaries and Nature of the Government in South Sudan through the Identity of Militarised Cattle-keepers', *International Journal on Minority and Group Rights* 22/3 (2015): 410–34.

3. (Mis)understanding Subsistence

‘At present, production is mainly subsistence-oriented’

– World Bank mission to Southern Sudan, 1973⁴⁹

‘The economy is centred on oil production and subsistence agriculture, with almost all intermediate and consumer goods imported’

– IMF mission to South Sudan, 2014⁵⁰

Reading the above two quotations from 1973 and 2014, the reader might be led to believe that a subsistence system has endured in South Sudan through four decades’ of wars and economic changes, and that, despite the violent arrival of an oil-export, commodity-import war economy, things are still the same down at the farm. Many people hold misconceptions about subsistence systems, the social networks underpinning them, and the way markets reshape them. This section seeks to explore some of these misunderstandings.

Misunderstanding subsistence

Part of the reason people find it hard to understand how subsistence systems change is that these kinship-ordered production and distribution systems are hard to study. For those observing from the perspective of market economies, subsistence systems present unfamiliar landscapes and ecologies, all of which are tangled up in social relationships legible only to insiders (or to a handful of contrary anthropologists).

Subsistence systems are often defined negatively—no private property, no industry, no money, no surplus, no trade—such that their institutions and systems for the production and distribution of wealth are concealed. Instead of studying how they work, policy-makers and social scientists often seek to fit subsistence systems into evolutionary

⁴⁹ IBRD, ‘Report of a special mission on the economic development of Southern Sudan’, Report No 119a-SU, Washington, DC: International Bank for Reconstruction and Development, 1973, 7.

⁵⁰ IMF, ‘Republic of South Sudan 2014: Article IV Consultation—Staff Report; Staff Statement; and Press Release’, IMF Country Report No. 14/345, Washington, DC: International Monetary Fund, 2014, 4.

models of history and society, which progress from hunter-gathering to agriculture to commerce.⁵¹

These evolutionary models emerged in eighteenth-century Europe, with ‘Subsistence’ a term invented to describe the kind of agriculture that preceded the new, privatized, commercial farming. For Mark Pluciennik, an archaeologist of subsistence, it has always functioned as ‘an intellectual and cultural resource for classifying others’.⁵² European theorists tidily classified different societies into fixed states defined by their food systems (food collectors/hunter-gatherers, food producers/farmers and food traders), with their theories still influential in understandings of economic history today. They were, however, programmatic rather than descriptive, setting out progressive steps to the future rather than relying on evidence from the past. Progress, they argued, would come from taking land from ‘unproductive’ subsistence farmers and giving it to hyper-productive agricultural enterprises. Their theories were used to justify the expropriation of colonial land from ‘unproductive’ subsistence farmers.⁵³

Subsistence systems are diverse and dynamic

In contrast to such theories, historical evidence from Africa, and South Sudan specifically, suggests that subsistence systems are dynamic and diverse rather than being fixed, immemorial states from the past. Ordering society’s production and distribution around kinship or social networks requires energy and improvisation.

Subsistence systems are diverse, and this diversity works at many levels. In South Sudan, different subsistence systems function in different agro-ecological zones, with social or kinship networks utilizing a repertoire of organizational techniques built around institutions such as marriage or ritual. The diversity of subsistence systems is also reflected in the range of techniques employed for acquiring food, whether it be hunted, herded, collected, cultivated or exchanged. This diversity is further reflected in soils and seeds, with cultivators using a wide variety of drought- and flood-resistant seeds, or short- and long-maturing seeds, to manage environmental risks.

Food collection, production and exchange, rather than representing progressive stages of development, are part of a complicated repertoire of responses to different ecologies, processes of economic change, and violence. When South Sudanese societies were organized around kinship, they used various techniques to acquire food in response to the seasons and environmental conditions. Today, they have to improvise from a more complicated range of sources, including household production, wild foods, imported

⁵¹ Mark Pluciennik, ‘The invention of hunter-gatherers in seventeenth-century Europe’, *Archaeological Dialogues* 9/2 (2002): 98–118.

⁵² Mark Pluciennik, ‘Archaeology, Anthropology and Subsistence’, *Journal of the Royal Anthropological Institute* 7/4 (2001): 741.

⁵³ Ellen Meiksins Wood, *Empire of Capital*, London: Verso, 2003, 97; Kathryn M. de Luna, *Collecting Food, Cultivating People: Subsistence and Society in Central Africa*, New Haven: Yale University Press, 2016, 6.

food commodities, and food aid. The subsistence repertoire is now being repurposed for a society organized around markets.

That repurposing of subsistence can be seen today. Violence and other processes of social change mean that people lose access to land and natural resources, and are instead pulled towards markets. Initially, the shift away from self-reliance may make people less productive and hungrier. Their social networks, formerly embedded in the subsistence system, have to be reworked for market society and urban environments. Instead of using the kinship order to organize production, individuals have to persuade their kin to provide for them. This can be seen in the junior relatives who crowded the homes of wage-earning bureaucrats in South Sudan's provincial towns during the oil-boom years, when government salaries gave middle-ranking workers the means to provide for dependents.⁵⁴

In cattle-owning social groups, young men, in order to marry, have traditionally had to acquire cattle from parents, aunties and hard-luck uncles, distributing it among their bride's kin through a long process of negotiation, and thus solidifying kinship relations. Today, many young men circumvent this process by acquiring cattle through wage labour or looting,⁵⁵ while military commanders sometimes acquire huge herds of cattle and use them to control marriages of subordinates and consolidate their class position.⁵⁶ Markets are configured around non-market systems in which people from one ecological niche exchange scarce goods with in-laws from another niche.⁵⁷

One of the reasons people in South Sudan survived many years of war and hunger is that the subsistence system gave them techniques of improvisation. 'Repurposing' is not new, and evidence for the dynamism of South Sudan's subsistence systems comes from several sources. The dynamism of pre-colonial subsistence systems is revealed through the history of language, while travel literature from the nineteenth century and ethnographic literature from the twentieth century points to continuing dynamism of subsistence systems.

Regarding the history of language, Dinka and Nuer people are often associated with a cattle economy oriented towards prestige as much as production or exchange.⁵⁸ Other livelihoods and food sources are downplayed, even though sorghum and fish are more

⁵⁴ James Ferguson, *Give a Man a Fish: Reflections on the New Politics of Distribution*, Durham, NC: Duke University Press, 2015, 94ff.

⁵⁵ Thomas, *Slow Liberation*, 57.

⁵⁶ Clémence Pinaud, 'Military Kinship, Inc.: patronage, inter-ethnic marriages and social classes in South Sudan', *Review of African Political Economy* 43/148 (2016): 243–59.

⁵⁷ Edward Thomas, Ranga Gworo and Kiden Grace Wani, 'Cash-based Programmes and Conflict: Key areas of interaction and options for conflict-sensitive programming in South Sudan', Juba: Conflict Sensitive Research Facility, 2018, 9.

⁵⁸ E. E. Evans-Pritchard, *The Nuer: A Description of the Modes of Livelihood and Political Institutions of a Nilotic People*, Oxford: Clarendon, 1940, 27; Godfrey Lienhardt, *Divinity and Experience: The Religion of the Dinka*, Oxford: Clarendon Press, 1961, 27.

important sources of nutrition for most rural Nuer and Dinka people, and much of the milk produced by their low-yielding cows is consumed by children.

Both groups share many cultural references to fishing, and the fishing spear (*biith* in both Nuer and Dinka languages) acts as a symbol of spiritual authority for both groups. John Burton, an anthropologist who conducted research in South Sudan in the 1970s, says that Nuer and Dinka languages share many words related to fishing and water, but that the words used for cattle are different (see Table 2). This in turn suggests that, before Nuer and Dinka had cattle, they practiced the same fishing livelihoods, and that these fisherfolk separated into different groups, acquiring different languages once they adopted cattle pastoralism and a ‘pastoral ideology’ that associates food collection and cultivation with women’s work.⁵⁹

Table 2. Linguistic history suggests that Nuer and Dinka people share a common past as fisherfolk⁶⁰

English	Atuot/Nuer	Dinka
River vocabulary		
Nile	<i>Cier/Kier</i>	<i>Kier</i>
water	<i>pii</i>	<i>piu</i>
riverine pasture	<i>toic</i>	<i>toic</i>
crocodile	<i>nyang</i>	<i>nyang</i>
fish	<i>rec</i>	<i>rec</i>
fishing spear	<i>biith</i>	<i>biith</i>
dry season	<i>mai</i>	<i>mai</i>
to fish	<i>mai</i>	<i>mai</i>
Pastoral vocabulary		
cow	<i>yang</i>	<i>weng</i>
bull	<i>tut</i>	<i>thon</i>
ox	<i>thek</i>	<i>mior</i>
war spear	<i>mut</i>	<i>tong</i>

⁵⁹ John Burton, ‘The Wave is my Mother’s Husband: A Piscatorial Theme in Pastoral Nilotic Ethnology’, *Journal of Asian and African Studies*, 14/3-4 (1979).

⁶⁰ Burton, ‘The Wave’.

Nineteenth-century travel literature, meanwhile, points to dynamic shifts in subsistence systems. When foreign invaders, markets and money arrived in violent fashion in South Sudan, its subsistence systems responded dynamically. Many groups in Equatoria are now conventionally characterized as agrarian, but their turn to agriculture is relatively recent. They once kept cattle and may have had what Burton terms ‘pastoral ideologies’, privileging cattle keeping over other livelihoods. In the nineteenth century, their herds were decimated both by a rinderpest epidemic and the cattle raiding of a succession of colonial states headquartered in Equatoria. These states needed cattle for provisions, as well as to manipulate local exchange systems, which preferred cattle to money.⁶¹

Twentieth-century ethnographic literature also points to these dynamic shifts. In Western Bahr al-Ghazal, this dynamism played out in different ways. In the nineteenth century, many societies there practiced *swiddening* (mobile slash-and-burn agriculture), perhaps as a response to slave raiding. In the twentieth century, colonialists forcibly settled on roads, where they switched to sedentary agriculture and dependence on markets.⁶²

The capacity to switch between food sources helped people survive during the 1983–2005 war, when subsistence systems were deliberately targeted by armed actors simultaneously pursuing military objectives and profit. In the 1990s, in traditionally cattle-keeping Abyei, people turned to farming to deal with cattle loss. In neighbouring Gogrial (Warrap state), meanwhile, raiders attacked both livestock and agriculture, and people diversified into wild food collection.⁶³

During the 1983–2005 war, the outsiders managing food aid in South Sudan became more aware of the importance of wild foods as a source of nourishment. In the 1980s, famines in Rumbek, Yirol and Bor were even named after specific wild foods, as testament to their importance for survival.⁶⁴ Luka Biong Deng says that wild foods became less important to people in Greater Bahr al-Ghazal during the 1970s as markets penetrated the area, but during the Gogrial famine of 1998 they became the single most important food source, despite singers of the day lamenting the loss of knowledge about wild foods.⁶⁵ In the relatively peaceful years after 2005, food commodities from markets grew in importance. The current conflict, however, has seen many people revisit the

61 Simon Simonse, *Kings of Disaster: Dualism, Centralism and the Scapegoat King in Southeastern Sudan*, Kampala: Fountain, 2017, 74.

62 Thomas, ‘The Kafia Kingi’, 27–37

63 Luka Biong Deng, ‘Livelihood diversification and civil war: Dinka communities in Sudan’s civil war’, *Journal of Eastern African Studies* 4/3 (2010): 381–99.

64 Luka Biong Deng, ‘Famine in the Sudan: Causes, Preparedness and Response: A Political, Social and Economic Analysis of the 1988 Bahr el Ghazal Famine’, IDS Discussion Paper 369, Brighton: Institute of Development Studies, 1999, 37.

65 Biong Deng, ‘Famine in the Sudan’, 36; Duffield et al., ‘Sudan: Unintended Consequences’, 197.

subsistence repertoire. In 2015, in several locations across Jonglei, women identified wild plants as their communities' primary food source.⁶⁶

Subsistence systems are oriented towards social objectives, not profit

Another reason that people find subsistence systems difficult to understand is that they operate without economic incentives. Subsistence systems, rooted in kinship or social networks, have forms of ownership that differ from the institution of private property, and forms of exchange that operate outside the institution of markets. They generate surpluses, but the mechanisms for distributing them are unfamiliar to people who have internalized the rules of the market economy.

Historically, South Sudan's subsistence systems have exchanged and distributed wealth through the vehicle of marriage, creating open-ended reciprocities between social groups and generations, rather than reducing relationships to economic transactions experienced only in terms of monetary profit and loss.

Bride-wealth is one of the most significant mechanisms whereby socially-produced surpluses are assigned to promote social values. In South Sudan, different social groups use livestock, agricultural labour or tools for this purpose, ensuring wealth is redistributed between parents, children and in-laws at marriage rather than passing from one generation to the other at death. Zande, South Sudan's most powerful pre-colonial state, could function without money by intervening in bride-wealth and labour systems.⁶⁷

Most South Sudanese societies are exogamous, that is, individuals marry far outside their social group. Thus, bride-wealth systems allow for the formation of social ties with outsiders, and these social ties often structure systems of exchange. In the flood plains, when livestock owners ran out of grain, they would exchange livestock for grain, often exchanging it with in-laws living in a different ecological niche. Around Duk (Jonglei) and Ganyliel (Unity), Nuer and Dinka people inter-married, and would sometimes exchange grain and cattle in this way.⁶⁸ The 'crossline peace markets' of today's peace and reconciliation programming often use these older histories of interaction to bring people together.

Labour can be organized around social relationships too. Major agricultural tasks, such as weeding, are sometimes carried out by work parties, with the farmer recompensing participants with food and beer or tobacco. Sometimes, families will organize their work around reciprocal obligation. Ownership can also be organized around social relations, with household heads sometimes having the right to dispose of livestock, while other

⁶⁶ Michael Arensen, *Indigenous Solutions to Food Insecurity: Wild Food Plants of the Sudan*, Juba: Oxfam, 2017, 16.

⁶⁷ Thomas, *Slow Liberation*, 57.

⁶⁸ Douglas Johnson, *Nuer Prophets: A History of Prophecy from the Upper Nile in the Nineteenth and Twentieth Centuries*, Oxford: Clarendon, 1994, 347–8.

household members and their in-laws may have different claims on an individual animal or herd. They may also have different obligations to provide cattle-keeping labour.⁶⁹

Social incentives, rather than market incentives, organize subsistence societies. As such, these societies are durable and capable of resisting extreme pressures. It has taken over a century of violence to dislodge them.

The war against subsistence

Subsistence systems are tied up in social relationships, and for that reason, they are hard to dislodge. When money and markets appeared in South Sudan in the nineteenth century, people ignored, evaded and resisted them. The privateers or entrepreneurs who brought money and markets to Sudan had to use violence to get societies to recognize money and markets.

This violence is sometimes termed ‘extra-economic coercion.’ When producers all understand that they have to sell their produce because they need money to meet basic needs, or want money for some other reason, these producers have accepted or submitted to ‘economic necessity.’ But people producing their own food through their own social networks can choose to resist or evade money and markets, and the economic incentives and compulsions which money and markets bring. They have to be forced to take part in the game of buying and selling things.

That was the situation faced by South Sudan’s first foreign entrepreneurs, who wanted ivory. When they first arrived, in the mid-nineteenth century, ivory was turned into piano keys, pistol grips and billiards balls that were becoming part of European and American consumer culture. Markets in Europe and America signalled this new demand to Africa.⁷⁰ But in South Sudan and the rest of the African interior, people did not understand these signals.

They tried to buy ivory from South Sudanese people, but they could not get people to part with ivory for money. So they began looting cattle in order to trade it for ivory, because people recognized the utility of cattle even though they did not recognize the utility of money. The Ottoman-Egyptian official Romolo Gessi in the 1870s told a group of soldiers from a private, slave raiding army:

‘It seems to me that you have taken all their cattle from the natives.’

“‘Oh,’ they replied, ‘if we did not do so, with what could we pay our men, and how could we get the ivory?’⁷¹

⁶⁹ Thomas, *Slow Liberation*, 249.

⁷⁰ R. W. Beachey, ‘The East African Ivory Trade in the Nineteenth Century’, *Journal of African History*, 8/2 (1967): 269–290.

⁷¹ Romolo Gessi, *Seven Years in the Soudan*, London: Sampson, Low, Marston, 1892, 53.

In the nineteenth century, ivory traders could not just wander into an ivory shop and buy ivory. They had to mobilize and feed a small army of soldiers. The soldiers stimulated conflict, in order to stimulate cattle raiding, in order to stimulate the ivory supply. They needed to turn producers – farmers and livestock-keepers – into ivory porters and elephant hunters. They could not buy food to feed their soldiers and porters and hunters, so they had to loot grain instead. Alphonse de Malzac (d. 1860) was one of the first of these ivory entrepreneurs. His camp at Rumbek in present-day Lakes state was festooned with the skulls of his victims, and he had 500 porters to feed.⁷²

At the time, South Sudanese people collected ivory, produced grain surpluses, even grew crops like tobacco for exchange. But they did not engage in these activities with the aim of increasing private profit. Their subsistence systems were designed to organize social networks to meet material needs. Extra-economic coercion—the violence of the raid—was needed to get them to respond to the international demand for ivory.

Violence plays a role in turning a subsistence system into a market economy based around money. Recognizing the relationship between violence and the market economy does not require anyone to declare that subsistence system is sentimentally or morally better than the market economy. It is just a recognition that the profit motive is not a universal human characteristic, and that societies need to be oriented towards the unified objective of profit. People have to give up some aspects of their social networks to do so.

For example, social networks often have open-ended systems of reciprocity. People show hospitality or share goods within a network without quantifying the monetary value of hospitality or sharing, and without expecting an immediate return. A market economy is based on transactions, and people have to give up open-ended reciprocity to participate in it. People are attached to open-ended reciprocity, and even in advanced market economies may seek to practice it within a restricted domestic, private sphere. That is one of the reasons that violence is needed to dislodge subsistence systems based around social networks.

The violence continued through the twentieth century. British administrators repressed the development of markets. But they still used extra-economic coercion, rather than economic incentives, to set up their administration. They extracted taxes in money or agricultural products from South Sudanese societies, and they used the violence of the raid against non-compliant social groups.⁷³ During the wars of the late twentieth century, military commanders sometimes used violence to extract surplus from societies which would not trade food for money.

⁷² Richard Gray, *A History of the Southern Sudan*, Oxford: Oxford University Press, 1961, 47.

⁷³ C. A. Willis [compiler] and D. H. Johnson, ed., *The Upper Nile Province Handbook: A Report on Peoples and Government in the Southern Sudan, 1931*, Oxford: Oxford University Press for the British Academy, 1995, 9.

In the late twentieth century, the Khartoum government configured the development of the whole country around the exploitation of Southern oil enclaves. The government used violence, rather than economic incentives, to clear the way for oil development. Their policy was successful: it brought Sudan one of the highest growth rates on the African continent.⁷⁴

Two perceptive observers at the time noted that the government was not able to reach a sufficient intensity of violence by bringing in troops from Kordofan in present-day Sudan to clear the oil enclaves. Sharon Hutchinson argues that the government-sponsored militias from Kordofan attacked ‘the subsistence base’ of rural South Sudanese through the 1980s, but were not able to dislodge the population of the oil enclaves – who were predominantly Nuer and Dinka.⁷⁵ But after 1991, splits in the SPLA gave the Khartoum government an opportunity to recruit local, predominantly Nuer militias for the task. These militias effectively depopulated the oil areas.⁷⁶

Luka Biong Deng also argues that local militias can destroy subsistence systems more effectively than outsiders. Deng compared the experience of people in Abyei, under attack from Khartoum-backed militias from Kordofan, with that of people in Gogrial, under attack from Khartoum-backed local militias. People in Gogrial hid their food stocks in forests, in pretend-graves and under their houses and cattle byres. But the local militia that attacked them knew about all these strategies of food concealment and found the food. In contrast, the outsiders attacking Abyei had less local knowledge, and their ability to undermine local subsistence was inhibited as a result. Abyei people maintained farming, but those in Gogrial became almost entirely dependent on wild food collection to survive.⁷⁷

These insights may help to explain the high levels of cruelty in warfare in South Sudan – it may be linked to the intractability of the old system. Military commanders need to extract and exploit commodifiable resources rapidly, in order to generate the money for supplies. When the old system resists, they apply more cruelty. The cruelty appears to be getting worse. Casualty figures in the human rights reports from the 1990s appear much lower than they are today. In attacks on over 57 villages around Bentiu in the period from November 1992 to April 1993, Canadian human rights investigators counted 213 deaths and 1,300 people displaced.⁷⁸ In 2015, the human rights department of the UN Mission in South Sudan estimated that 100,000 people had been displaced in a govern-

74 James Ferguson, ‘Seeing Like an Oil Company: Space, Security and Global Capital in Neoliberal Africa’, *American Anthropologist*, 107/3 (2005): 378–9.

75 Sharon E. Hutchinson, ‘Nuer Ethnicity Militarized’, *Anthropology Today*, 16/3 (2000): 6–13.

76 HRW, *Sudan, Oil and Human Rights*, New York: HRW, 2003, 125, 153, 209.

77 Biong Deng, ‘Livelihood diversification’, 385, 391–2.

78 HRW, *Sudan, Oil*, 125.

ment offensive against people in southern Unity state between April and May 2015.⁷⁹ In the 1990s human rights investigators said that the attacks aimed at ‘destroying the local subsistence economy;’ in 2015, they said attacks ‘were intent on rendering communal life unviable.’⁸⁰

It is always difficult to interpret extreme violence. But observers over time appear to explain the logic of the violence as an attempt to make a kinship-ordered system of production impossible. The prevalence of conflict-related sexual violence may be linked to a wider campaign to destroy the subsistence systems that are structured around bride-wealth. Hutchinson’s work on the changing vulnerability of Nuer and Dinka women in the wars of the 1990s argues that women and children had previously been treated as ‘mobile assets:’ people who could fit in and around social and ethnic boundaries, and marry across them. Customary law thus protected them from attack, and the main risk that they faced during military operations was abduction and forced assimilation into another kinship group. But as subsistence systems were eroded by mass violence, women and children were routinely massacred during military operations, and subjected to extreme forms of sexual violence. These extreme forms of violence are a feature of present-day military operations in southern Unity.⁸¹

Radically changing the social experience of gender through extreme sexual violence may be a means to rupture a pre-existing social order. The two examples given here are from cattle areas of Sudan – the South Sudanese societies which are still resisting the monetization of their cattle wealth. Perhaps the rationale is to liquidate older systems whose surplus circulated through systems of bride-wealth, and allow cattle to be accumulated by a new class of military entrepreneurs. Clémence Pinaud argues that cattle accumulation has reworked the marriage market in favour of this new class.⁸² The violently competitive order in South Sudan may be targeting resistance to change, whatever the intention of young attackers who take cattle and destroy women and girls from kinship-ordered social groups, and turn them into their commanders’ big herds.

South Sudan’s transition away from subsistence is violent, untidy, unpredictable, improvised and frequently reversed. Under intense economic and military pressures, South Sudanese people have to use the dynamism and diversity of indigenous food systems to fit themselves into a new, very different informal market economy.

79 UNMISS, ‘Flash Human Rights Report on the Escalation of Fighting in Greater Upper Nile. April/May 2015’, 29 Jun 2015, UNMISS, 2015, 6. Accessed 15 Mar 2019, https://unmiss.unmissions.org/sites/default/files/final_version_flash_human_rights_report_on_the_escalation_of_fighting_in_greater_upper_nile.pdf.

80 HRW, *Sudan, Oil*, 313; POESS, ‘Interim report of the Panel of Experts on South Sudan established pursuant to Security Council resolution 2206 (2015)’, S/2015/656, 21 August 2015, New York: United Nations Security Council, 2015, 35.

81 Joshua Craze, Jérôme Tubiana and Claudio Gramizzi, ‘A State of Disunity: Conflict Dynamics in Unity State, South Sudan, 2013–15’, Geneva: Small Arms Survey, Graduate Institute of International and Development Studies, 2016, 60.

82 Pinaud, ‘Military Kinship’, 243.

4. The Subsistence System and the Informal Economy

Subsistence systems are often described as being part of the ‘informal economy’. Like subsistence, informality is often defined negatively, in terms of there being no regulation, no taxation, no social protection, and no labour benefits. Subsistence and informality, however, should not be seen as synonymous, as to do so risks muddying the waters in researching and understanding how subsistence systems work in South Sudan. Whereas informal economies operate in accordance with the ‘laws’ of supply and demand, as well as economic necessity, subsistence systems operate in accordance with social rules and necessity.

Part of the confusion lies in the fact that the ‘informal economy’ is a problematically broad term, used to describe everything from the government minister with a suitcase full of dollars to the child selling peanuts on the roadside; the health workers and teachers who work without wages for governments or NGOs, hoping these institutions which might one day provide them with some small benefit, to the pastoralist who has joined a militia and gains his income from a checkpoint. Confusingly, however, it is also used to describe the pastoralist’s little brother, who looks after his cows, as well as his mother, who grows food and keeps up relationships with her in-laws in case the food runs out.

It is confusing to mix up the two systems as, for much of the twentieth century, one system subsidized the other, with the cattle-herding little brother and chatty, cultivating mother feeding the unpaid health worker and the pay-as-you-go militiaman.⁸³ Rather than being part of the informal sector’s unregulated, for-profit system of production, the subsistence system is highly regulated by custom and does not aim at monetary profit.

Decay of the kinship-ordered system

The subsistence system is, however, no longer able to subsidize the informal economy. This is due both to the violence destroying the social rules of subsistence, and to the fact that economic necessity—the laws of supply and demand—are beginning to organize production (see Section 6). When the subsistence system was able to organize production under its social rules, it was able to subsidize the social reproduction costs of the new low-wage, informal economies emerging around it.⁸⁴ Once people’s productive efforts

⁸³ Thanks to Mark Duffield for this point.

⁸⁴ Mark Duffield, *Post-Humanitarianism: Governing Precarity in the Digital World*, Cambridge: Polity Press, 2019.

are directed towards profit, however, they are no longer able to invest their surplus in maintaining social networks. Paul Howell et al. in 1988 discussed how the kinship-ordered system was decaying:

The Nilotic kinship system, however, is not an abstraction existing as a set of unchanging rules of conduct, involving both obligations and expectations of assistance and help, divorced from people's actions. People have to invest in the system to maintain it. Thus any seasonal abundance of grain tends to be used, especially in the form of beer, at social events, dances and marriages, or collective activities such as building, as well as in generosity to less fortunate kin and neighbours. No household lives in economic isolation; grain and other food is frequently transferred between the members of different households, particularly in times of localised shortage.⁸⁵

According to Howell et al., the kinship-ordered production system began cracking in the 1960s, as floods and war pushed people away from cultivation and towards migrant labour. Previously, this system offered some measure of security, but now dependence on kinship has become an index of precarity, to be regarded as a last resort.

Turning the kinship-ordered system of producing and distributing wealth for social objectives into a last resort, kinship-invoking social-protection system for people who were once full members of society, but are now described as 'most vulnerable', is a shift with many implications. As production and distribution is reoriented towards the profit-making objectives of the informal economy, the subsistence system becomes vestigial.

Vestiges of kinship

It is nonetheless important to scrutinize the vestiges of the kinship-ordered production system in South Sudan, as they continue to shape entitlements for people who do not produce for the market. One example is the young men who take up residence in the homes of salary-earning relatives, invoking kinship as a reason for their stay while not contributing to the production of wealth. Another example is the military officers who use government payrolls to accumulate cattle wealth, then using it to intervene in the bride-wealth and marriage decisions of their subordinates, who may be relegated kin-folk.

The vestiges of the kinship-ordered production system also shapes notions of vulnerability. A revealing needs assessment from WFP in 2009 classified income sources into two groups: reliable and unreliable. Reliable sources included skilled labour, salaried work, sale of cereals and sale of livestock. Unreliable sources were all vestiges of the

⁸⁵ Paul Howell, Michael Lock and Stephen Cobb, eds., *The Jonglei Canal: Impact and Opportunity*. Cambridge: Cambridge University Press, 1988, 258.

subsistence system, and included 'sale of natural resources such as firewood, charcoal, grass; begging; and gifts from relatives and reliance on kinship assistance'.⁸⁶ Kinship, which once ordered production and distribution, has become, in the eyes of outsiders, an index of vulnerability.

Transitioning to the informal market

Comparative studies of transitions away from subsistence and towards markets emphasize that there is no single model for this transition.⁸⁷ Present and future conditions of everyday life are shaped by pre-existing systems.⁸⁸ Some of the key distinguishing features of South Sudan's transition are extreme violence, rapid immiseration and destitution, the reworking of kinship into counter-productive ethnic politics, and the emergence of an informal economy with no social protections. The vestiges of the subsistence system may get configured around the informal economy, with its social networks and obligations repurposed to help people survive the market system, but it is nevertheless important to remember that the informal economy is not based on these networks and obligations. It is based on the market.

⁸⁶ WFP, 'Annual Needs and Livelihood Analysis 2009–2010', Juba: World Food Programme, 2010,

29.

⁸⁷ Michael Watts, *Silent Violence: Food, Famine and Peasantry in Northern Nigeria*, Berkeley: University of California Press, 1983, 23.

⁸⁸ Maurice Godelier, 'The Object and Method of Economic Anthropology', in *Relations of Production: Marxist Approaches to Economic Anthropology*, ed. David Seddon, trans. Helen Lackner, London: Cass, 1978, 107.

5. Food Becomes a Commodity

For those living in societies where production and surplus is distributed through rent, interest, wages and profits (the ‘returns to capital’ of classical economics), it can be difficult to envisage a society in which production and surplus is distributed through social institutions such as bride-wealth. People living in fully monetized systems often believe in the existence of the ‘economy’, which consists of a money system which is apparently independent of ‘society’. For those living outside the money system, however, the distinction between economy and society does not have the same relevance. Thus, when people in such societies are reoriented towards a money system, it inevitably involves a great deal of re-thinking on their part to make the transition. Those already living within the money system have few theoretical resources with which to help them, and often hold unreflectingly to understandings of life outside the money system that were developed in the eighteenth century. In terms of South Sudan, this lack of historical understanding can obscure the fact that the country’s dependence on purchased food is the result of a long and painful reorientation towards a market economy. Examining the evidence for the development of markets in South Sudan, and the zig-zag shift from household production to market purchase, can therefore help shed light on today’s changes and future possibilities.

Becoming a market economy

Many processes have to unfold in order for a subsistence system to change into a market economy. For example, money has to be socially recognized. Markets and market infrastructures have to come into being. Traders from market economies have to migrate into the subsistence system, or subsistence producers have to become traders. Markets have to be supplied, meaning local producers have to orient themselves towards markets, or distant producers have to export goods to local markets. People have to be attracted or coerced into buying things, and need to find the financial resources to pay for them. People’s understanding of their own needs also has to change, as they have to believe they need the things that money can buy.

Economics textbooks often explain these processes in the following terms. The division of labour increases productivity, increased productivity leads to market exchange, and money then naturally evolves from markets or societies because it is more straightforward than barter. These explanations are mostly taken from eighteenth-century conjectural histories written by theorists such as Adam Smith.⁸⁹

⁸⁹ Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations*, New York: Modern Library, 1937, 22–9 (Book I, Chapter 4); Paul A. Samuelson and William D. Nordhaus, *Economics*, Nineteenth edition, Boston: McGraw-Hill, 2010, 458.

Conjectural histories are, however, at odds with available historical evidence, which suggests societies live by complex systems of reciprocity until states or military entrepreneurs impose money. This is often done by taxing producers in money or by forcing military commanders to take on money debts, which they repay by looting and selling agricultural products or natural resources. Most South Sudanese people historically used different traditional systems of exchange embedded in social relations, which could be competitive or cooperative, but functioned without money.⁹⁰

The introduction of money

While there is some evidence of external pre-colonial trade in Shilluk and Bari areas,⁹¹ money only began to change the way South Sudan works after 1850, when highly indebted armed entrepreneurs invaded the country. They looted natural resources and enslaved people, in the process making huge profits for their financiers in Khartoum. One of the reasons the invaders used such extreme violence was that South Sudanese people did not recognize money, nor did they give it the social meaning it needs to function. The armed entrepreneurs wanted to buy food for their personnel, but nobody wanted money for food, resulting in the invaders raiding cattle and grain from producers instead.⁹²

The twentieth-century colonial government faced the same problem,⁹³ and so initially also managed supply requirements by looting. Gradually, though, the government forced people to recognize money, using a repertoire of policies that colonialists had used elsewhere.⁹⁴ They taxed people in money, forcing people to work for wages or grow cotton for sale in order to pay their taxes.⁹⁵ Taxes also required administrative centres to be created, where a few workers were paid in money. The government also manufactured demand for what money can buy. For example, in pastoralist areas, courts imposed fines in cattle, which were then auctioned off. As a result, people began to get hold of money

⁹⁰ Patricia Mercer, 'Shilluk Trade and Politics from the Mid-Seventeenth Century to 1861', *Journal of African History* 12/3 (1971): 407–26; David Tyrrell Lloyd, 'The pre-colonial economic history of the Avongara-Azande c 1750–1916', PhD dissertation, University of California, Los Angeles, 1978, 278.

⁹¹ Thanks to Cherry Leonardi for this point. See Mercer, 'Shilluk Trade'; Bureng G. V. Nyombe, *Some Aspects of Bari History: A Comparative Linguistic and Oral Tradition Reconstruction*, Nairobi: University of Nairobi Press, 2007, 95ff; Simonse, *Kings of Disaster*, 252.

⁹² Thomas, *Slow Liberation*, 49–67.

⁹³ Conrad C. Reining, 'The Role of Money in the Zande Economy', *American Anthropologist* 61/1 (1959): 39–43.

⁹⁴ Thanks to Alex de Waal for this point.

⁹⁵ HCES, 'Report by His Majesty's Agent and Consul-General on the finances, administration, and condition of the Sudan', Cairo: Al-Mokattam Printing Office, 1913, 74; J. D. Tothill, ed., *Agriculture in the Sudan, Being a Handbook of Agriculture as Practised in the Anglo-Egyptian Sudan*, London: Oxford University Press, 1948, 201; SDIT, 'Natural Resources', 133.

in order to buy auctioned cattle.⁹⁶ In addition, bush shops sold commodities such as salt and tea.⁹⁷

The Second World War greatly increased the supply of money. The government brought supplies for the war in North Africa from Congo, which had to be transported through Western Ecuatoria to Juba and then up the Nile. Thousands of workers were hired and money and markets spread. Between 1939 and 1942, the amount of currency put annually into circulation in Ecuatoria increased nine-fold.⁹⁸ At the end of the war, the money supply contracted.⁹⁹ Stagnant wages and grain price increases linked to production shortfalls led to a short-lived general strike, which may have been influenced by wider labour mobilization across East Africa.¹⁰⁰ At the time, grain prices and wages affected only a small proportion of the population, but the government wanted to expand the influence of money, and after 1945 the government encouraged trade, opening South Sudan to traders from northern Sudan, and providing loans and commodities for bush shops.¹⁰¹

Although the circulation of money expanded dramatically in the first half of the twentieth century, the market that emerged in South Sudan was heavily controlled by the government. It used coercive mechanisms, such as compulsory wage labour, but was not able to supply waged workers with commodities to buy, which might have given wage labour some purpose.¹⁰² In reality, there were many contradictions between subsistence systems organized around kinship and the market organized by the colonial government. Most people resisted government attempts to market food, which meant the government was unable to create or manage a market in grain that would allow it to feed its towns and administrative centres. Rather than turning food into a commodity,

⁹⁶ Sharon E. Hutchinson, *Nuer Dilemmas: Coping with Money, War and the State*, Berkeley, CA: University of California Press, 1996, 65–6.

⁹⁷ G. M. Culwick, 'A Dietary Survey among the Zande of the South-Western Sudan', Khartoum: Agricultural Publications Committee, Ministry of Agriculture, Sudan Government, 1950, 18–25.

⁹⁸ A. C. Beaton, *Ecuatoria Province Handbook 1936–1948*, McC. 171. S.G. 1041. C.S. 300, Sudan Government Publication, 1949, 181.

⁹⁹ Foreign Office, 'Report by the Governor-General on the Administration, Finances and Condition of the Sudan in 1945. Presented by the Secretary of State for Foreign Affairs to Parliament. Cmd. 7316 Sudan. No. 1 (1948)', London: H.M.S.O., 1948, 204; Foreign Office, 'Report by the Governor-General on the Administration, Finances and Condition of the Sudan in 1947. Presented by the Secretary of State for Foreign Affairs to Parliament. Cmd. 7835 Sudan. No. 1 (1949)', London: H.M.S.O., 1949, 222.

¹⁰⁰ Foreign Office, 'Report by the Governor-General on the Administration, Finances and Condition of the Sudan in 1947. Presented by the Secretary of State for Foreign Affairs to Parliament. Cmd. 7835 Sudan. No. 1 (1949)', London: H.M.S.O., 1949, 213–14; Severino Fuli Boki Tombe Ga'le, *Shaping a Free Southern Sudan: Memoirs of our Struggle 1934–1985*, Loa: Diocese of Torit, 2002, 147–150; Mike Harman, 'The post-war strike wave in East, West, and Southern Africa', blog post, 2 Mar 2018. Accessed 5 Nov 2018, libcom.org/blog/post-war-strike-wave-sub-saharan-africa-02032018.

¹⁰¹ Ga'le, 'Shaping', 164.

¹⁰² Foreign Office 'Report by the Governor-General (1948)', 198.

people needing grain would access it through social networks, borrowing from kin or exchanging with in-laws and neighbours. Conrad Reining, who conducted research in Western Equatoria in the 1950s, said that people there ‘believed it commendable to convert subsistence goods into money, but they did not want to reverse the process’.¹⁰³

Turning food into a commodity

The sources reviewed for this report suggest that people started buying grain from markets during South Sudan’s first civil war. The war grew out of a short-lived mutiny in Torit in 1955, on the eve of Sudan’s independence. It took almost a decade for Southern rebels to control the countryside, and before the rebellion could take root, the new government in Khartoum expanded infrastructure and urban services in South Sudan. A new railway reached Wau in 1961, bringing access to the grain markets of northern Sudan, and in 1962 a famine in Torit was named *itular*, after a type of grain associated with northern merchants (famines in South Sudan are often given names). This gives an indication of the importance of northern traders and commercial grain to everyday life.¹⁰⁴

At the time, food was not a commodity, being mostly grown by people who were part of the kinship-ordered production system. Natural disasters and spreading conflict, however, undermined household grain production. From 1961, the Bahr al-Jebel system (the swampy reaches of the White Nile to south of Malakal) experienced severe flooding, which devastated herds and farms. Raids by government-allied militias in Warrap and Abyei caused new forms of displacement,¹⁰⁵ while grain production collapsed in Equatoria.¹⁰⁶ As a result, rural merchants retreated to towns, and many rural young men were pushed towards towns as migrant labour. In the decade from 1957, the number of third-class tickets on steamers going north of Juba trebled.¹⁰⁷ Towns grew and huge new numbers of soldiers needed food. In 1955, the Southern Corps had only 1,770 men, but by 1972 there were more than ten times as many on the rebel side alone.¹⁰⁸ While some people retreated to rural areas and kept themselves alive with new improvisations of the subsistence repertoire,¹⁰⁹ many needed grain, and used markets to source it. In 1966, a food shortage in Abyei was called *runrakieb* (year of wheat bread), with people turning to the main staple food commodity of northern towns to survive.¹¹⁰

¹⁰³ Conrad C. Reining, *The Zande Scheme: An Anthropological Case Study of Development in Africa*, Evanston, IL: Northwestern University Press, 1966, 93.

¹⁰⁴ Biong Deng, ‘Famine in the Sudan’, 33.

¹⁰⁵ Keen, *Benefits of Famine*, 51.

¹⁰⁶ IBRD, ‘Report of a special mission’, Table A-2.

¹⁰⁷ Howell, Lock and Cobb, *The Jonglei Canal*, 258, 267; IBRD, ‘Report of a special mission’, Table B-4.

¹⁰⁸ Thomas, *Slow Liberation*, 164.

¹⁰⁹ Hutchinson, *Nuer Dilemmas*, 70.

¹¹⁰ Biong Deng, ‘Famine in the Sudan’, 33.

After the 1972 peace deal, which ended South Sudan's first civil war, the transition to food markets accelerated. South Sudan's urban centres grew—Juba's population rose from 56,737 in 1973 to 83,787 in 1983, up to 372,000 in 2009¹¹¹—and both town and countryside faced sorghum shortages as a result of the influx of refugees.¹¹² South Sudan imported grain from present-day Sudan, where elites tied their fortunes to commercial grain production. New commercial sorghum farms centred on Renk, at the northern tip of Upper Nile, also supplied the cities, as did traditional farms in the fertile surplus-producing areas of Equatoria.¹¹³

The kinship-ordered production system was giving way to something more complicated, but progress was patchy, inconsistent and zig-zag. The renewal of armed conflict in 1983 paradoxically both sped up and slowed down the shift to markets. From the start of the war, the Sudanese army controlled grain supplies, much of it from northern grain markets, which were delivered to besieged garrison towns. The Sudanese army and the Sudan People's Liberation Army (SPLA) both followed a strategy of deliberately targeting livestock and cultivation in the kinship-ordered production system. Household-level grain production, as well as the traditional exchange of grain for livestock, was undermined. People were instead pushed towards markets, where grain prices were manipulated upwards by a coalition of merchants and security men.¹¹⁴

Food markets during the 1983–2005 war

After the 1983–2005 war broke out, the SPLA imposed restrictions on private trade, partly as a result of the influence of its main patron, the socialist government of Ethiopia. These restrictions were supposedly aimed at preventing the emergence of a 'bourgeois sector' (the SPLA had a somewhat rhetorical commitment to Marxism at the time).¹¹⁵ Though the trade restrictions were lifted in 1991, when the Cold War ended and Ethiopian policy shifted,¹¹⁶ SPLA commanders had by then been able to gain a trade monopoly, which was in turn linked to their control over food aid. SPLA commanders continued to maintain control over food markets through taxation and other means. The Sudan People's Liberation Movement's (the political wing of the SPLA) first convention in 1994 committed it to encouraging 'local border trade and regional and international

¹¹¹ Thomas, *Slow Liberation*, 145–6.

¹¹² Betts, *The Southern Sudan*, Table IIA.

¹¹³ Paul Wani Gore, 'Seasonal Labour Migration to the Renk Mechanised Scheme and its Effect on the Subsistence Economy', in *Perspectives on Development in the Sudan: Selected Papers from a Research Workshop in The Hague, July 1984*, eds. Paul van der Wel and Abdel Ghaffar Mohamed Ahmed, The Hague: Institute of Social Studies, 1986, 411.

¹¹⁴ Keen, *Benefits of Famine*, 112–19.

¹¹⁵ African Rights, *Food and Power in Sudan: A Critique of Humanitarianism*, London: African Rights, 1997, 79.

¹¹⁶ WFP/FAO/UNICEF, 'Report of the WFP/FAO/UNICEF Crop, Food and Emergency Needs Assessment Mission, Southern Sudan, 29 October–14 December, 1991', Rome: World Food Programme, Food and Agriculture Organization, United Nations Children's Fund, 1991, 4.

trade', and guaranteed the repatriation of profits.¹¹⁷ Although the SPLA abandoned trade restrictions, the military monopolies arising out those restrictions have had a long, powerful influence on the development of markets in South, and have turned many commanders into the 'bourgeoisie'—the owners of the means of production—that their movement once imprecisely denounced.

In the 1990s, several studies addressing trade in SPLA-controlled areas appeared,¹¹⁸ all suggesting that the commodification and purchase of food was expanding. The markets that sprung up as a result of this drew in populations uprooted by the violence in the countryside.¹¹⁹ During the most extreme famines, such as those in Bahr al-Ghazal in 1988 and 1998, these markets witnessed massive price inflation, an indication of the way in which starving people were moving desperately towards markets to survive. In retrospect, it is an indication of the decisive importance of markets to survival.¹²⁰ Live-stock/grain exchange still existed in many areas, but many people lost livestock and other assets as a result of violence, and had to find alternative ways to get cash. An overview of food surveys conducted between 1994 and 2000 estimated that purchased foods accounted for 5–25 per cent of food intake, with wide variance between different ecological zones and wealth groups.¹²¹

Food markets post-2005

When peace came in 2005, food purchase spread widely across South Sudan. The 2009 NBHS found much higher levels of market dependency than those described in studies undertaken in wartime. Several factors led to the growth in food markets after 2005. Violence, land grabbing and urban sprawl put pressure on the subsistence system, driving many people away from their lands and towards new livelihoods, many of them based on the sale of labour and petty trade.¹²² As a result, many people moved to towns.¹²³

¹¹⁷ SPLM, 'A Major Watershed: SPLM/A First National Convention Resolutions, Appointments and Protocol', Chukudum: SPLM Secretariat of Information and Culture, 1994, 27.

¹¹⁸ Alastair Scott-Villiers and Acuil Malith Banggol, eds. 'An Investigation into Production Capability in the Rural Southern Sudan: A Report on Food Sources and Needs', Nairobi: United Nations Lifeline Sudan, 1990; William Fielding et al., 'An Introduction to the Food Economy Research in Southern Sudan 1994–2000', Nairobi: World Food Programme and Save the Children UK, 2000; Nyaba 2002; E. Muchomba and Buzz Sharp, 'Southern Sudan Livelihoods Profiles: A Guide for Humanitarian and Development Planning', Nairobi: Southern Sudan Centre for Census, Statistics and Evaluation, 2006.

¹¹⁹ Peter Adwok Nyaba, 'Report on the Trade Consultancy Conducted in Northern Bahr el Ghazal', London: Save the Children UK, 2002; Naomi Pendle, 'Wartime Trade and the Reshaping of Power in South Sudan', London: Rift Valley Institute, 2018.

¹²⁰ Biong Deng, 'Famine in the Sudan', 48.

¹²¹ Fielding et al., 'Introduction to the Food Economy'.

¹²² Thanks to Charles Wani for this point.

¹²³ Thomas, *Slow Liberation*, 146.

One of the most striking illustrations of the shift towards food purchase are the milk sales reported from milk-dependent areas, such as the semi-arid pastoralist zone of south-eastern Jonglei and the easternmost areas of Eastern Equatoria. Many pastoralist societies resist milk commodification, but a 2018 report from the FEWS NET suggests that poorer pastoralists buy milk from better-off pastoralists during seasonal shortages.¹²⁴

Another illustration of the shift to food commodities is the development of transportation systems. Grain markets require the transportation of large volumes of commodified grain, and post-war transportation systems were able to deliver these commodities in much higher volumes (in 2002, camels were an important transportation mechanism for Warawar market, one of the largest in Northern Bahr al-Ghazal).¹²⁵

South Sudan's dependence on purchased food is the outcome of a long, slow process accompanied by food insecurity and conflict. A central part of this process has been the reorientation of production away from community and household self-reliance, and towards markets. The next section reviews how subsistence systems have begun to supply markets.

¹²⁴ FEWS NET, 'Livelihoods Zone Map', 26. Thanks to Chris Newton and Alex de Waal for this point.

¹²⁵ Nyaba, 'Trade Consultancy', 57.

6. Producing Grain for Markets

Producing grain for markets before 1983

Over the course of the twentieth century, South Sudanese people became consumers of market grain, but changes in society were not restricted to the sphere of consumption alone. During the twentieth and twenty-first centuries, people began to produce for markets. These changes to production systems required more work, new ways of mobilizing labour, and a reworking of social and gender relations. The transition to a market economy caused profound changes in South Sudanese society, eroding the kinship ties inherent to subsistence systems. This section looks at the history of the transition towards food markets, and its contemporary impact.

The literature surveyed for this report indicates there was some social resistance to these changes. For example, Reining's study of Western Equatoria found that people in the 1950s would not use money to buy grain, but would sell grain to buy consumer goods.¹²⁶ Selling grain was a sign of changes to the kinship-ordered production system, and consumer goods were to play a key role in getting grain to market.

Local producers who wanted commodities but had no money to pay for them would sometimes engage in crop-mortgaging arrangements with local traders, borrowing grain at pre-harvest prices in the lean season before harvest, and then paying back their debts in grain weighed out at much lower post-harvest prices.¹²⁷ Traders reworked seasonal fluctuations in demand into a system that served the profit motive. In doing so, they acquired much of the local surplus, and money seeped into the production system.

In Abyei, during the first civil war, grain markets were linked to livestock markets, with both being controlled by northern merchants. Distress sales of cattle by pastoralists who needed grain brought merchants significant profits. Merchants also profited from seasonal price inflation, buying grain from Abyei producers at harvest, then selling it back when prices increased in the dry season. The pace of change was rapid enough to generate resistance to the growing food trade. Deng Majok, the Ngok (Abyei) Dinka chief, restricted grain sales and reduced trading days in an effort to prevent a drift to markets that was apparently undermining food security.¹²⁸

Crop mortgaging was not the only way South Sudan's grain reached markets. After the 1972 peace deal, the government and international NGOs (who first appeared in South Sudan at this time) encouraged maize production in Equatoria, and semi-mechanized

¹²⁶ Reining, *Zande Scheme*, 93.

¹²⁷ Perner, *Anyuak*, 53.

¹²⁸ Keen, *Benefits of Famine*, 48.

(meaning ploughed with tractors, with weeding and harvesting carried out by manual labour) sorghum production, which was centred on Renk district at the northern tip of Upper Nile. Semi-mechanized production there began in the 1960s, part of an expansion of rain-fed commercial grain production across Sudan (see Section 8). In the mid-1970s, the Southern Regional Government tried to expand production to meet the chronic sorghum shortages linked to the influx of returnees, developing cooperatives in nearby Dinka villages and leasing land to them. Although profits were high, village cooperatives found it difficult to pay land fees, and most sold their leases to northern traders, with South Sudanese becoming wage workers on the schemes.¹²⁹

Semi-mechanized schemes in Renk and northern Sudan encouraged young people to migrate away from subsistence systems—where people organize production around kinship—towards wage labour. The emergence of labour migration had widespread effects on the subsistence system, which has as the basis of its system of exchange dynamic social networks. These networks need constant, everyday commitment in order to maintain and reproduce themselves, meaning that when people turn instead to waged labour, or use cash to purchase cattle for bride-wealth rather than negotiating access to cattle through their elders, the whole system weakens. In the 1970s, while many social groups were able to live within these subsistence systems,¹³⁰ others were changing. In livestock-producing areas of Upper Nile, young men on the move eloped, or secured cattle for bride-wealth from wages, eroding the kinship order in the process.¹³¹

Producing grain for markets during the 1983–2005 war

Although subsistence systems were weakened by developments in the 1970s, they remained an important resource for South Sudanese people. They were further weakened, however, during the 1983–2005 war, with all parties to the conflict deliberately targeting the subsistence system by raiding livestock, expropriating grain and driving people away from their lands. Displaced people who had lost assets produced grain for markets, sometimes working their own plots and sometimes working for wages.

Operation Lifeline Sudan reports from the 1990s on grain markets suggest that people travelled to areas of good harvests in order to use money to buy small quantities of grain. Some women interviewed for a 1990 report walked over 60 km from Paliaw to Pok Tap in western Jonglei, in order to carry back small amounts of grain on their heads.¹³² The same report found that in Unity state, grain had not been seen in rural shops since 1984, and people were surviving on wild foods.¹³³ Grain production was inhibited by

¹²⁹ Gore, 'Seasonal Labour', 411–21.

¹³⁰ Perner, *Anyuak*.

¹³¹ Hutchinson, *Nuer Dilemmas*, 56–102.

¹³² Scott-Villiers and Banggol, 'An Investigation', 17.

¹³³ Scott-Villiers and Banggol, 'An Investigation', 37, 39.

floods, droughts and lower, shorter rains.¹³⁴ The extreme shortage of grain suggests that there was not much marketable surplus, and that production for markets was not taking place.

The FAO appear to have begun conducting crop assessment missions in Southern Sudan in 1995, though mission reports from the period to 2002 have relatively little to say about grain markets, repeatedly reporting that producers with grain surpluses cannot sell them due to a lack of market infrastructure.¹³⁵ This suggests such surpluses only reached local commercial circuits.

Peter Adwok Nyaba’s detailed 2002 study of markets in Bahr al-Ghazal bears this out. Nyaba found few examples of grain imports, but many cases where locally produced grain or food aid was traded in local markets.¹³⁶ He gives a detailed account of markets in Tonj county in 2002, which, after several years of extreme violence and famine, were trading relatively peacefully with markets in Northern Bahr al-Ghazal, linked to Sudanese markets.

Table 3. Trade in Tonj market in 2002¹³⁷

Item	Source	Market
Livestock	Households in Tonj county and IDPs from Western Upper Nile	Local market or driven to Equatoria or Uganda
Sorghum, sesame, tobacco, ground nuts	Households in Tonj county	Local markets and IDP camps, in exchange for livestock
Mats, firewood, charcoal, ropes, thatching grass, poles	Locally produced or collected from forests	Local market
Fish	Streams and swamps	Local market

¹³⁴ Scott-Villiers and Banggol, ‘An Investigation’, 61, 63.

¹³⁵ For example, FAO/GIEWS, ‘Special Report: Crop Assessment in South Sudan, 6 November 1996’, Rome: Food and Agriculture Organization/Global Information and Early Warning System, 1996a. Accessed 21 March 2019, <http://www.fao.org/3/w3350e/w3350e00.htm>; FAO/GIEWS, ‘Special Report: FAO/WFP Crop and Food Supply Assessment Mission to Southern Sudan, 16 November 1998’, Rome: Food and Agriculture Organization/Global Information and Early Warning System, 1998a. Accessed 21 March 2019, <http://www.fao.org/3/x0388e/x0388e00.htm>; FAO/GIEWS, ‘Special Report: FAO/WFP Crop and Food Supply Assessment Mission to Sudan, 23 December 1998’, Rome: Food and Agriculture Organization/Global Information and Early Warning System, 1998b. Accessed 21 March 2019, <http://www.fao.org/3/x0771e/x0771e00.htm>; FAO/GIEWS, ‘Special Report, 14 June 2000’.

¹³⁶ Nyaba, ‘Trade Consultancy’.

¹³⁷ Nyaba, ‘Trade Consultancy’, 90.

Clothes, soap, sugar, tea, salt, cooking utensils, oil	Markets in Northern Bahr al-Ghazal and Uganda, relief agencies	Local market or IDP camps or small markets in the county
Foreign currency	Relief agencies, Sudanese border	Used for purchase of manufactured goods from Ugandan markets

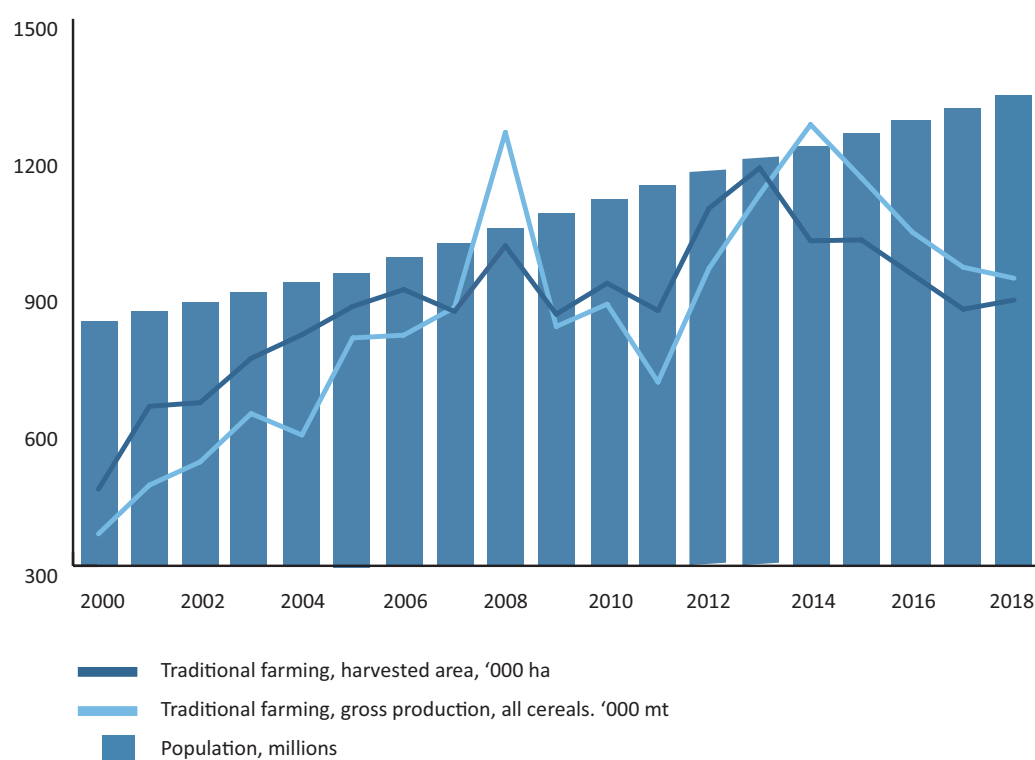
Table 3 illustrates how the subsistence system was breaking down. Internally displaced persons (IDPs) played a major role in the shift to the market, selling their livestock to buy grain as well as importing consumer goods (Nyaba says that most Tonj traders derived their capital from the livestock trade). IDPs, who were concentrated in the poorest section of society, reworked the subsistence system—bringing river and forest products such as fish or thatching grass to markets—and sold their labour. Some local households were able to supply grain to the market, possibly by using the labour of the poorer groups. Most humanitarian agencies had left Tonj by 2000, but some agencies introduced ox-ploughing and purchased grain locally for local distribution before 2000, and this may have changed production systems. Tonj market prices were in Sudanese dinars, but traders had access to different sources of foreign currency, such as remittances from Sudan, livestock sales in Northern Bahr al-Ghazal, and dollars from ‘slave redemption’ programmes implemented by some international NGOs at the time.¹³⁸

Producing grain for markets after 2005

After the end of the war and with the advent of independence in 2011, South Sudan saw large-scale movements of returnees and labour migrants from Sudan and neighbouring countries. Many of them had acquired experience of producing agricultural or other goods for markets in places such as Uganda or present-day Sudan, and many moved to towns, causing their populations to increase at record rates. The 2012 border shut-down with Sudan and the outbreak of civil war in 2013 created unprecedented levels of displacement and hunger. How, then, did South Sudan’s systems of production cope?

¹³⁸ Nyaba, ‘Trade Consultancy’, 90.

Figure 8. Harvested area/gross production of cereals in traditional farming (left axis) and population (right axis), South Sudan¹³⁹



In its reporting on production, the FAO/WFP Crop and Food Security Assessment Mission reports use the term ‘traditional sector’, rather than ‘subsistence system’ or ‘kinship-ordered production system’, which are used throughout this report. Production data

¹³⁹ Population estimates from <https://population.un.org/wpp/DataQuery/>, accessed 27 Oct 2018; harvested area and gross production from FAO/WFP, ‘Special Report: FAO/WFP Crop and Food Supply Assessment to Sudan, 24 December 2002’, Rome: Food and Agriculture Organization/World Food Programme, 2002b, 9. Accessed 21 March 2019, <http://www.fao.org/3/y8291e/y8291e00.htm>.; FAO/WFP, ‘Crop and Food Security Assessment Mission to Southern Sudan, 21 January 2008’, Rome: Food and Agriculture Organization/World Food Programme, 2008, 25; FAO/WFP, ‘Crop and Food Security Assessment Mission to South Sudan, 6 February 2009’, Rome: Food and Agriculture Organization/World Food Programme, 2009, 24; FAO 2010: 22; FAO/WFP, ‘Crop and Food Security Assessment Mission to Southern Sudan, 12 January 2011’, Rome: Food and Agriculture Organization/World Food Programme, 2011, 14; FAO/WFP, ‘Crop and Food Security Assessment Mission to South Sudan, 8 February 2012’, Rome: Food and Agriculture Organization/World Food Programme, 2012, 19; FAO/WFP, ‘Crop and Food Security Assessment Mission to South Sudan, 22 February 2013’, Rome: Food and Agriculture Organization/World Food Programme, 2013, 24; FAO/WFP, ‘Crop and Food Security Assessment Mission to South Sudan, 20 February 2014’, Rome: Food and Agriculture Organization/World Food Programme, 2014, 25; FAO/WFP, ‘Crop and Food Security Assessment Mission to South Sudan, 6 May 2015’, Rome: Food and Agriculture Organization/World Food Programme, 2015, 28; FAO/WFP, ‘Crop and Food Security, 5 April 2016’, 29; FAO/WFP, ‘Crop and Food Security, 26 May 2017’, 25; FAO/WFP, ‘Crop and Food Security, 28 March 2018’, 29.

keeps the traditional sector distinct from the semi-mechanized sector, which is centred on Renk. In the decade before the current crisis (2003–2012), FAO/WFP reports estimated average annual production in the mechanized sector at about 136,000 tonnes, against 830,000 tonnes in the traditional sector.¹⁴⁰ Food from the mechanized sector made relatively little contribution to South Sudan's food basket, though, as most of it went to northern markets. When trade with Sudan was shut down in 2012, production dwindled due to the trade shutdown affecting inputs and access to markets. Between 2013 and 2017, FAO/WFP reports estimated that mechanized-sector production averaged about 60,000 tonnes a year.¹⁴¹

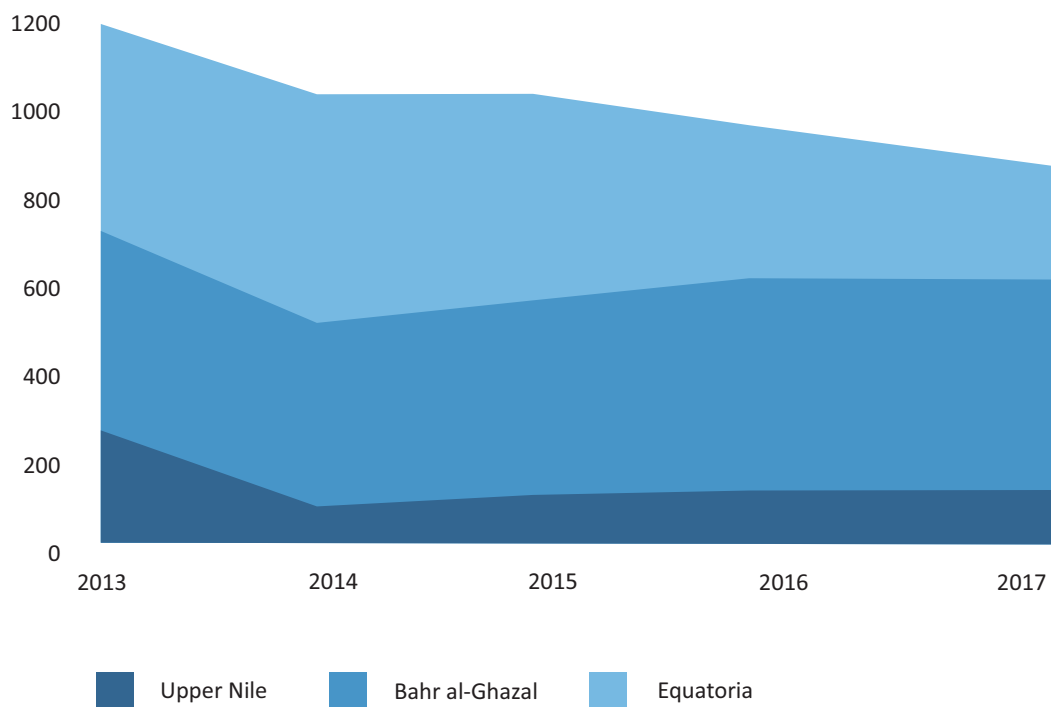
According to the data generated by the FAO/WFP Crop and Food Security Assessment Mission, which is backed by local monitoring, the traditional sector expanded production between 2000 and 2008. Thereafter, a series of different crises undermined food production, with insecurity in Jonglei and Western Equatoria leading to displacement and abandonment of cultivated land, and droughts leading to reduced yields. Although production recovered after 2011, buoyed by a significant increase in harvested area and good rains, the effects of mass conflict and displacement became evident in the contraction in production after 2015.

This contraction was sharpest in the conflict-affected states of Upper Nile (Jonglei, Upper Nile and Unity), where FAO/WFP data suggests that harvested area and gross production in the traditional farming sector halved in 2013, and it has not since recovered (see Figure 9). In Equatoria, harvested area increased at the start of the conflict (which began in December 2013), and contracted as the conflict began to spread there in 2015/16 (see Figure 9). In Greater Bahr al-Ghazal, with much less displacement, producers in the traditional farming sector expanded harvested area and production.

¹⁴⁰ FAO/WFP, 'Crop and Food Security, 6 February 2009', 12, 25; FAO/WFP, 'Crop and Food Security Assessment Mission to Southern Sudan, 17 February 2010', Rome: Food and Agriculture Organization/World Food Programme, 2010, 22; FAO/WFP, 'Crop and Food Security, 8 February 2012', 21; FAO/WFP, 'Crop and Food Security, 22 February 2013', 26; FAO/WFP, 'Crop and Food Security, 20 February 2014', 27; FAO/WFP, 'Crop and Food Security, 6 May 2015', 31; FAO/WFP, 'Crop and Food Security, 5 April 2016', 32; FAO/WFP, 'Crop and Food Security, 26 May 2017', 27; FAO/WFP, 'Crop and Food Security, 28 March 2018', 31.

¹⁴¹ FAO/WFP, 'Crop and Food Security, 22 February 2013', 26; FAO/WFP, 'Crop and Food Security, 20 February 2014', 27; FAO/WFP, 'Crop and Food Security, 6 May 2015', 31; FAO/WFP, 'Crop and Food Security, 5 April 2016', 32; FAO/WFP, 'Crop and Food Security, 26 May 2017', 27; FAO/WFP, 'Crop and Food Security, 28 March 2018', 31.

Figure 9. Harvested area by region, traditional farming, '000 hectares, 2013–2017¹⁴²



Crop and Food Security Assessment Mission reports suggest that most people no longer grow enough grain to feed themselves. Nonetheless, some farmers appear to be selling grain at harvest, as their dependence on the money system has deepened to the point that they are now in debt (see Section 7). Figures 3 and 4 (see Section 2) suggest how this circulation of money and grain might be changing a state like Warrap. Before the 2017 harvest, the market accounted for 60 per cent of grain consumed by an average household, while after it, household production accounted for 90 per cent of grain consumed by an average household.

According to WFP, a lot of traditionally produced grain circulates through markets, as ‘subsistence farmers tend to sell their surplus produce immediately after the harvest in order to settle accumulated debts, school fees and purchase other basic food commodities’.¹⁴³ However, food produced by households is marketed in small quantities and does not circulate very far from village markets, as the road system is so poor.¹⁴⁴ A map of cropland and trade routes in South Sudan, published by the World Bank in 2012

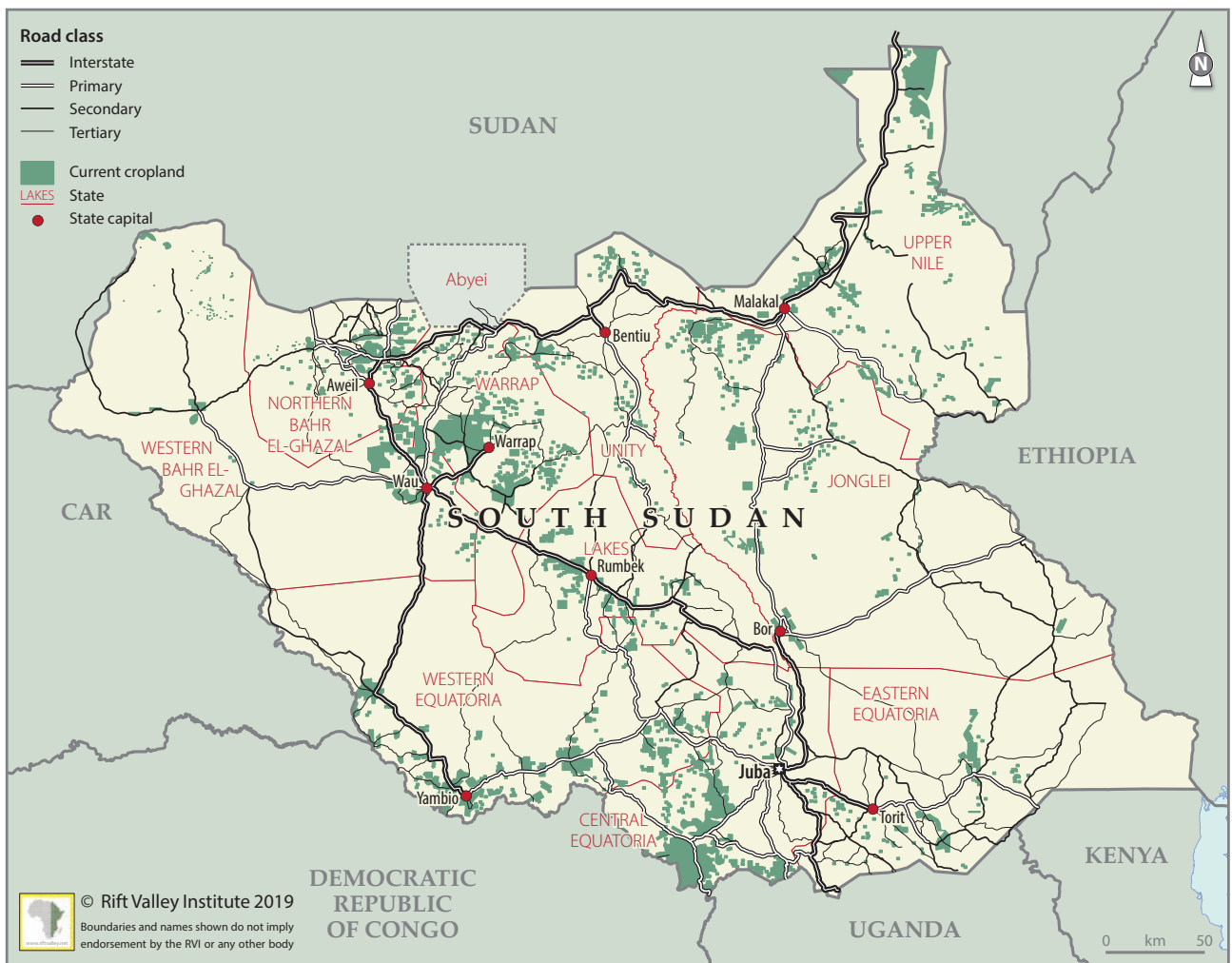
¹⁴² FAO/WFP, ‘Crop and Food Security, 28 March 2018’, 30.

¹⁴³ WFP, ‘Annual Needs 2014–2015’, 32.

¹⁴⁴ Margaret Ngigi, ‘Structure, Conduct and Performance of Commodity Markets in South Sudan’, Linkages Food Security Study, Nairobi: FEWS NET, 2008, 12.

(see Map 3), suggests that cropland is concentrated in specific agro-ecological zones. It also suggests the remoteness and inaccessibility of populous, cereal-deficit areas such as Jonglei. Many areas of productive land are connected to cities only by secondary and tertiary roads. The map partially corroborates a 2015 study of Juba market, which showed that domestic production made up 10–15 per cent of the supply of grain in Juba markets. Most of this was bought by traders who travelled to grain-surplus areas of Equatoria and bought them directly from producers.¹⁴⁵

Map 3: South Sudan's cropland and trade routes in 2012¹⁴⁶



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South Sudan states are according to the Comprehensive Peace Agreement (2005)

¹⁴⁵ Irina Mosel and Emily Henderson, 'Markets in crises: South Sudan case study', HPG Working Paper, London: Overseas Development Institute, 2015, 8.

¹⁴⁶ World Bank, 'Agricultural Potential, Rural Roads, and Farm Competitiveness in South Sudan', Report No. 68399-SS, Washington DC: World Bank, 2012, 66.

FEWS NET also reports that the relationship between traders and agricultural producers with marketable surplus is changing. In the Western/Central Equatoria maize zone, farmers sell surpluses to traders and even to WFP, either directly or through farmers' associations and cooperatives.¹⁴⁷ In the agro-pastoralist ironstone plateau zone of southern Lakes, and the western flood plains—which stretch from southern Unity to Northern Bahr al-Ghazal—traders either come to producers, or producers use bicycles, motorbikes and lorries to deliver the surplus to market.¹⁴⁸ These relatively complex and costly systems of getting produce to market are different from crop-mortgaging systems, which coax tiny amounts of grain out of self-sufficient farmers in return for petty commodities. While crop mortgaging still takes place in South Sudan, farmers with surpluses may no longer be engaging in the practice, that is, exchanging future production for present consumption needs. Instead, they are orienting production towards markets. The social implications of this change are the subject of the next section.

¹⁴⁷ FEWS NET, 'Livelihoods Zone Map', 11.

¹⁴⁸ FEWS NET, 'Livelihoods Zone Map', 15, 23.

7. The Social Implications of Commodification

The subsistence system is giving way to a market system in South Sudan, and as part of this process, food is being commodified. In order to commodify grain, however, it is inevitable that other social changes also take place. The harvested area increases, and in order to increase harvested area, land and labour is commodified. Other elements of the food economy—such as forest products or livestock—become commodified as well. Commodification creates a need for cash, which has implications for gender and other social relations. Household members move to towns to generate cash, and the burden of cultivation may shift towards elders, or women. People attracted to wage labour take on debts to meet the cash needs of the new system. Back at the farm, market production can diminish seed diversity, as producers discard adaptable, reliable or palatable seeds, and instead select seeds on the basis of yield and profit, changing everyday tastes in the process. These changes, and the effects the commodification of food has on issues such as gender, migration and social stratification, are addressed in the literature surveyed in this section.

Increased harvested area

One change with major social implications is the dramatic increase in harvested area, as shown in Figure 8 (see Section 6). Data on harvested area published in the FAO/WFP Crop and Food Security Assessment Mission reports is based on county-level estimates of the number of farm households, average farm area, and average cereal yield. Estimates made before the 2008 census are likely to be less reliable, and both older and newer estimates are suggestive rather than indicative. The data suggests, however, there was a significant and continuous expansion of cultivated area lasting from 2000 until 2013, when expansion peaked (figures in Table 4 cover the period from 2002, when state-level estimates were published). The data suggests that the most significant increases took place in Eastern Equatoria, Jonglei and Unity states, all areas that witnessed severe conflicts in 2002.

Table 4: Increase in harvested land area between 2002 and 2013¹⁴⁹

State	Harvested land area in 2002, '000 hectares	Harvested land area in 2013, '000 hectares	Annualized growth rates, per cent
Upper Nile	88	84	-0.4
Unity	14	54	13.1
Jonglei	31	116	12.7
Northern Bahr al-Ghazal	208	167	
Warrap		115	2.8
Western Bahr al-Ghazal	31	62	6.5
Lakes	73	107	3.5
Central Equatoria	72	161	7.6
Eastern Equatoria	13	139	24.0
Western Equatoria	100	169	4.9

Note: Harvested area for Northern Bahr al-Ghazal, Warrap and Abyei was aggregated in the 2002 survey. In 2002, Central Equatoria was listed as Bahr al-Jebel.

Since 2013, the cultivated area appears to have fallen. While in part this is because of the armed conflict, FAO/WFP data paints a complicated picture of changes in areas not affected by conflict. In their 2015 Crop and Food Security Assessment Mission report, FAO and WFP estimate that cereal cultivation area has increased in Equatoria, Northern and Western Bahr al-Ghazal, fallen in Lakes, and remained constant in Warrap. All of these areas that were relatively free of conflict in 2014. In Warrap and Lakes, the lack of increase in cereal cultivation may reflect intensified commercialization of the crop, as groundnut production for market sale is increasing. For some observers, groundnut production is a reliable indicator of commercialization.¹⁵⁰

The data also points to a significant increase in harvested area, and this in turn suggests significant new demand for manual labour and for land. Demand for labour is likely to have changed gender relations as well.

¹⁴⁹ FAO/WFP 2002, 'Special Report, 24 December 2002', 13–14; FAO/WFP, 'Crop and Food Security, 20 February 2014', 12–15. Thanks to Malcolm Smart for providing annualized growth rates.

¹⁵⁰ FAO/WFP, 'Crop and Food Security, 6 May 2015', 23. Thanks to Brendan Tuttle for this point.

The commodification of agricultural labour

In 2012, the World Bank estimated that each hectare cleared in Morobo, Central Equatoria, required 16–20 days of labour, with the rising line of harvested area seen in Figure 8 (see Section 6) representing a huge investment of workers' time. Clearing land required new approaches to mobilizing labour and, just as this demand for labour emerged, urban migration and military recruitment undermined family labour power. Sometimes, a lack of labour led farmers to abandon crops rather than harvest them.¹⁵¹

FAO/WFP reports describe some of the new systems of labour that have emerged to fill labour shortages. Work parties of neighbours were traditionally paid in beer, food or tobacco, but in some areas these work parties became more expensive than paid labour.¹⁵² Wealthier farmers have begun to hire agricultural workers instead, or lease land to immigrant agricultural workers.

Two common systems are wage labour (paying workers by the amount of time they work) and piece work (paying workers to complete a specific piece of work, or task). In many places, agricultural workers appear to be paid piece rates for specific agricultural tasks. For example, in Northern Bahr al-Ghazal in 2017, workers were paid 4,200 SSP to dig one feddan (about 0.42 hectares). The literature surveyed for this report refers to piece work such as this more often than it reports waged labour for time worked. Piece rates and wages have together attracted migrant agricultural workers from Eastern Equatoria, Uganda and the Democratic Republic of Congo.¹⁵³

Some farmers cannot afford to pay wages, piece rates, or provide beer or tobacco for work parties. Instead, their households organize labour for heavy tasks and seasonal bottlenecks through self-help groups based on reciprocal obligation. In effect: You today, me tomorrow.¹⁵⁴ Some of these farmers may also have to sell some of their labour, meaning they potentially face three labour burdens (paid piece work on land owned by wealthier farmers, free reciprocal work on the land of poor neighbours, as well as work on their own plots) where previously they only worked their own plots. Rural society is probably being stratified into poorer groups performing more heavy labour, and wealthier ones performing less.

The Household Economy Approach (discussed in detail in the Annex) has played an important role in food security studies since the 1990s. It provides a route to understanding the stratification of rural society, as it classifies local societies into two or three

¹⁵¹ FAO/WFP, 'Crop and Food Security, 6 February 2009', 19–20; FAO/WFP, 'Crop and Food Security, 8 February 2012', 51; FAO/WFP, 'Crop and Food Security, 20 February 2014', 20; FAO/WFP, 'Crop and Food Security, 26 May 2017', 49.

¹⁵² Thanks to Charles Wani for this point.

¹⁵³ Ben Mune Ezbon Museli, 'Understanding Socio-economic Challenges Facing Smallholder Farmers in Gondokoro, Central Equatoria State (South Sudan)', masters dissertation, Norwegian University of Life Sciences, 2017, 36; FAO/WFP, 'Crop and Food Security, 26 May 2017', 49.

¹⁵⁴ FAO/WFP, 'Crop and Food Security, 6 February 2009', 19; FAO/WFP, 'Crop and Food Security, 20 February 2014', 20; FAO/WFP, 'Crop and Food Security, 6 May 2015', 23.

‘wealth groups’—poorer, middling and better-off—based on their ownership of assets and their income sources, which vary across South Sudan’s different agro-ecological zones. In the 1990s, these reports generally identified the sale of agricultural labour with displacement and extreme poverty.¹⁵⁵

A 2018 report from FEWS NET—which uses the Household Economy Approach—suggests that paid labour is still associated with poverty. The report provides information on how different groups obtain cash across the country’s 12 identified agro-ecological zones. Among the main sources of cash were the sale of labour locally or through migration. There were also a number of other strategies, such as self-employment (in the agro-pastoral ironstone plateau zone of southern and western Lakes state) or gold mining (in the south-eastern semi-arid pastoral zone around Pibor and Kapoeta).¹⁵⁶

The FEWS NET report looks at the different contribution of better-off and poorer groups to production. The stratification of local societies into different wealth groups undermines the social networks on which the subsistence system is based. It is also, though, linked to the generation of marketable surplus. The report suggests that most of the South Sudan’s surplus is produced on the land of better-off farmers using the labour of poorer farmers. For example, in the western flood plains zone, which stretches from southern Unity state through Warrap to Northern Bahr al-Ghazal, and in the northern sorghum and livestock zone, which covers northern Upper Nile state and Unity state to the north of the Bahr al-Ghazal, poorer farmers have farms of about 0.5 hectares, while better-off farmers have 2 hectares.¹⁵⁷ In these and other areas, better-off farmers hire the labour of poorer farmers.

In pastoralist and agro-pastoralist areas, better-off livestock owners hire poorer neighbours to herd their animals.¹⁵⁸ Better-off farmers are more likely to use animal traction, and some can afford to hire lorries to take their produce to market. Others sell to traders at the farm gate.¹⁵⁹ Surplus extraction is thus linked to social stratification in the countryside. This process may generate its own momentum, given that as household lands and herds diminish, young men have less to do at home and may be pushed towards migration.¹⁶⁰

Commodified labour—workers for hire—may have consequences for cash-for-work schemes and for gender relations. Anecdotal evidence suggests that there may be a secondary market emerging for labour, where people entitled to participate in such schemes hire other workers to perform it at discounted wages. In a situation where

155 Nyaba, ‘Trade Consultancy’.

156 FEWS NET, ‘Livelihoods Zone Map’, 10, 14, 18, 22, 25, 28, 31, 35, 41, 48.

157 FEWS NET, ‘Livelihoods Zone Map’, 32, 44.

158 FEWS NET, ‘Livelihoods Zone Map’, 26, 32.

159 FEWS NET, ‘Livelihoods Zone Map’, 23.

160 Thanks to Malcolm Smart for this point.

people have lost assets and been immiserated, the possibility of discounted wages is likely to increase.¹⁶¹

The commodification of livestock

Unlike other forms of commodification, the commodification of livestock receives extensive treatment in literature on South Sudan.¹⁶² Several common themes emerge. First, South Sudan has large herds of cattle, sheep and goats, which are probably increasing. Cattle numbers in particular have risen significantly, partly because of better control of cattle disease over the past half century.¹⁶³ Second, livestock are difficult to count. This is partly because many people in cattle-owning societies refuse to disclose the size of their herds. Third, many social groups have a 'pastoral ideology' linking prestige and security to cattle ownership, perhaps reflecting the fact that livestock are an indicator of material security. Fourth, the pastoral ideology makes people reluctant to part with cattle, except for social objectives such as bride-wealth or ritual sacrifice. This makes them reluctant to engage in market trade in cattle, and, to a lesser degree, in sheep and goats. Fifth, a combination of colonial government policies and the dramatic and total immiseration faced by cattle-owning communities in the 1983–2005 civil war have led many social groups with a pastoral ideology to sell cattle in markets.

However, the 'pastoral ideology' is still seen as a major barrier to the commodification of animal wealth in South Sudan. Although commodified cattle—cattle traded in a market for money—are relatively new, South Sudanese pastoralist groups have long experience of exchanging grain for cattle and other livestock. In the past, these non-market exchanges were an important means for households to smooth grain supply. FAO and Operation Lifeline Sudan reports from the 1990s suggest that, under pressure of hunger, pastoralists brought cattle to markets and auction centres to exchange livestock for money. In rural areas, people sometimes exchanged grain for cattle, apparently without using money. The terms of trade often favoured cultivators. In 1989, around Leek in present-day Unity state, a heifer (a cow which has not yet produced a calf) was being

¹⁶¹ Thanks to Brendan Tuttle and Alex de Waal for these points.

¹⁶² SDIT, 'Natural Resources'; William Mogga, 'The Livestock and Poultry Farm Systems in Southern Sudan', in *The Agricultural Sector of Sudan: Policy and System Studies*, eds. A. B. Zahlan and W. Y. Magar, London: Ithaca, 1986; Howell et al. 1988; Scott-Villiers and Banggol, 'An Investigation', Karen Iles, 'Feasibility Study for Restocking Displaced Dinka and Nuer peoples in Southern Sudan', Nairobi: UNICEF OLS HHFS programme, 1994; Hutchinson, *Nuer Dilemmas*; Nyaba, 'Trade Consultancy'; Alan King and E. Mukasa-Mugerwa, 'Livestock Marketing in Southern Sudan, With Particular Reference to the Cattle Trade between Southern Sudan and Uganda', Nairobi: Organisation of African Unity Inter-African Bureau for Animal Resources, 2002; MARF/SNV, 'The Livestock Sector in Southern Sudan: Results of a Value Chain Study of the Livestock Sector in Five States of Southern Sudan covered by MDTF with a Focus on Red Meat', Juba: MARF/SNV, 2010; Thomas, *Slow Liberation*; Perner, *Anyuak*; see also reports listed in bibliography by FEWS NET and FAO/WFP.

¹⁶³ Mogga, 'Livestock and Poultry', 239.

traded for a single sack of sorghum, indicating pastoralist distress.¹⁶⁴ In 2018, in contrast, a goat was traded for the monetary value of five sacks of grain in Juba market.¹⁶⁵

A 2018 FEWS NET report suggests that livestock sales, including cattle sales, are now part of livelihoods in most parts of South Sudan.¹⁶⁶ Access to market may limit commodification, with a 2010 study finding that Jonglei state had only ten markets at a time when the lowest estimate put its cattle population at over a million (the highest estimate was many times more).¹⁶⁷ There are also social limitations on commodification of cattle, with many people circulating their cattle through social networks rather than markets. A 2011 study of a herd of 66 cattle in Jonglei showed that only 7 were traded in the course of a year, while 24 circulated through the bride-wealth system, and 5 were raided or looted.¹⁶⁸

Another limit on cattle-commodification might be a lack of access to cash in the pastoralist areas of South Sudan. During the current civil war, huge herds have been looted. While some of these circulate through markets, many circulate through military hierarchies instead. Human rights reports narrating the SPLA's 2015 attack on southern Unity state noted that after cattle were looted from there, large numbers of them appeared in SPLA-controlled areas around Bentiu.¹⁶⁹ Pinaud's work describes how SPLA commanders have used access to cattle to intervene in the bride-wealth decisions of their subordinates, showing how cattle accumulation does not necessarily follow the logic of the marketplace.¹⁷⁰ Commanders may instead be using cattle to build more stable military followings. It is also possible they lack alternatives, as it may be there is not enough money to buy up all the cattle in South Sudan's huge raiding zones.

The commodification of forest goods and fish

Wild food collection is part of South Sudan's food production system. Wild foods were often used to help people manage pre-harvest food shortages, as well as providing edibles considered festive or delicious, such as termite oil or honey.¹⁷¹ Forest goods, such as firewood or wild foods, once provided dietary diversity, ecological knowledge, foraging adventures, and social occasions for the women and children who mostly

¹⁶⁴ Scott-Villiers and Banggol, 'An Investigation', 40.

¹⁶⁵ FAO/WFP, 'Crop and Food Security Assessment, 15 March 2019', 42.

¹⁶⁶ FEWS NET, 'Livelihoods Zone Map'.

¹⁶⁷ Thomas, *Slow Liberation*, 80, 247.

¹⁶⁸ Thomas, *Slow Liberation*, 246.

¹⁶⁹ POESS, 'Interim report', 18; OHCHR 'Assessment mission by the Office of the United Nations High Commissioner for Human Rights to improve human rights, accountability, reconciliation and capacity in South Sudan: detailed findings', A/HRC/31/CRP.6, 10 March 2016, Geneva: Human Rights Council, 2016, 53.

¹⁷⁰ Pinaud, 'Military Kinship'.

¹⁷¹ Culwick, 'A Dietary Survey', 40.

collected them.¹⁷² During the wars of the twentieth and twenty-first century, when harvests were frequently lost to conflict, people were sometimes pushed into dependence on wild foods for longer periods, and some observers began to associate them with destitution rather than the diversity inherent in the subsistence system.¹⁷³

As the subsistence economy was reshaped by the market, wild foods began to be commodified, with colonial officials from the nineteenth and twentieth centuries recording sales of honey and shea butter.¹⁷⁴ Other foods, though, appear to have circulated only within household and social networks. Perner's study of Anyuak living conditions, conducted in the 1970s, discusses the importance of wild rice, wild nuts, wild mushrooms and wild vegetables, particularly during seasonal shortages.¹⁷⁵ He does not, however, mention that any of these forest goods were traded.

Catherine Gullick's work on wild foods in South Sudan in the 1990s reflected interest from humanitarian organizations, which had started to realize that wild foods had become an important part of the country's diet.¹⁷⁶ As a result, wild foods began to be described as a 'coping strategy'. Indeed, FAO/WFP Crop and Food Security Assessment Mission reports still routinely describe wild food consumption this way.¹⁷⁷ In the 1990s, wild foods were being commodified under the pressure of hunger, the emerging food market and war. Gullick notes that the income from commodified wild food was often held by women.¹⁷⁸ For observers alert to the possibility of competition over cash between male and female members of the same household, it was an important sign.

Commodification of wild foods has taken an even more competitive direction under the current conflict. In 2018, FEWS NET and FAO/WFP reporting indicated that wild food collection is widespread,¹⁷⁹ with competition over access to wild foods becoming sharper.¹⁸⁰ In some places, women have been pushed out of forest goods collection by hungry soldiers collecting wood for sale. A 2018 report from REACH reported that violent competition over pastures has inhibited wild food collection,¹⁸¹ while Michael Arensen's 2017 report on wild foods claimed there was a danger of depletion of wild

¹⁷² Caroline Gullick, 'A Brief Investigation of the Stigmas surrounding Wild Foods in southern Sudan', in *An Introduction to the Food Economy Research in South Sudan 1994–2000*, eds. William Fielding et al., Nairobi: World Food Programme and Save the Children UK, 2000.

¹⁷³ Gullick, 'A Brief Investigation', 78.

¹⁷⁴ Gessi, *Seven Years*, 340; Foreign Office 1934: 87.

¹⁷⁵ Perner, *Anyuak*, 170.

¹⁷⁶ Gullick, 'A Brief Investigation'; Catherine Kenyatta and Amiee Henderson, eds. 'The Potential of Indigenous Wild Foods', workshop proceedings, 22–26 January 2001. Accessed 24 March 2019, https://www.fsnnetwork.org/sites/default/files/indigenous_wild_foods.pdf.

¹⁷⁷ FAO/WFP, 'Crop and Food Security, 26 May 2017', 42.

¹⁷⁸ Gullick, 'A Brief Investigation', 78.

¹⁷⁹ FEWS NET, 'Livelihoods Zone Map', 10, 14, 18, 22, 25, 28, 31, 35, 41, 48.

¹⁸⁰ Thanks to Charles Wani for this point.

¹⁸¹ REACH, 'South Sudan. "Now the Forest is Blocked": Shocks and Access to Food', Juba: ACTED and UNOSAT, 2018, 11–12.

foods. Women also report that foraging trips that once involved twenty minutes' walk, now take two or three hours.¹⁸²

The pressure of commodification may be part of the reason for this. *Lalop*, the bitter kernel of the desert dates that are the fruit of the *Balanites aegyptiaca* (*thou* in Dinka and *heglig* in Sudanese Arabic), is one of the most common wild foods in South Sudan. In 2015, *lalop* kernels were sold in 50 kg sacks in the markets of Northern Bahr al-Ghazal, the state which appears to have the highest level of cash use in the country, suggesting commodification is advancing rapidly within it.¹⁸³

In twentieth-century South Sudan, fishing was practiced in areas where fish were available, particularly in periods of food shortage or fish abundance. Fishing was not a specialist activity, although some social groups centred their livelihood on it, such as the Monythany in Bor district, a group of Dinka speakers who did not own cattle.¹⁸⁴ Some social group organized fishing parties or camps. In Anyuak areas, fishing and hunting parties drank sorghum beer, but in the 1970s, as people began brewing beer for sale instead of for local consumption, fishing parties declined.¹⁸⁵

Fish were one of the first food groups to be commodified in South Sudan. Commercial fishing began in 1951, when the colonial government introduced improved nets and boats, and set up its own fishing camps. Production records suggest these government fish camps increased almost twenty-fold in the next decade or so, before South Sudan's first civil war ended them.¹⁸⁶ Fish were sun-dried and traded internationally, becoming one of South Sudan's first food exports, sold mostly in what was then Belgian Congo.

Fishing is an area of productive activity that sharply reflects the complexity and multivalence of the transition towards markets. FEWS NET reported in 2018 that fish is gathered, produced (presumably as dried fish), traded and consumed in almost every agro-ecological zone of the country. In some remote and swampy areas, IDPs organize fishing and foraging camps, adapting part of their diverse repertoire of techniques to survive the catastrophes of displacement.¹⁸⁷ Some fish are not seen as marketable, such as the mudfish, which lives under the mud in riverbeds during the dry season, and which some people refuse to eat because they smell and taste strange.¹⁸⁸ FEWS NET found that, in Upper Nile, fishing contributes to rural social stratification structured around markets, with poorer groups catching fish and selling it to richer people, or even exporting it to

182 Arensen, *Indigenous Solutions*, 18.

183 Arensen, *Indigenous Solutions*, 17; NBS, 'Household Survey 2009', 47.

184 SDIT, 'Natural Resources', 111.

185 Perner, *Anyuak*, 69.

186 Gabriel K. Bassa, 'Fishery Resources of Southern Sudan', in *The Agricultural Sector of Sudan: Policy and System Studies*, eds. A. B. Zahlan and W. Y. Magar, London: Ithaca, 1986, 292.

187 FEWS NET, 'Livelihoods Zone Map', 51.

188 Arensen, *Indigenous Solutions*, 21.

Sudan.¹⁸⁹ However, Humphreys et al. found that, in southern Unity state, fisherfolk enjoy some autonomy vis-à-vis the market. They are able to sell dried fish, but do not rely heavily on the market for food.¹⁹⁰

Gender

The South Sudanese expend enormous productive efforts cultivating, herding and collecting food, their efforts resembling those of their forebears. How much of this effort, though, is channelled through markets and money? How has this shift affected gender and generational relations? And how many of today's agricultural workers or food gatherers are older or younger women? It is very difficult to generalize in a country with as much social and ecological diversity as South Sudan, but a better understanding of the composition of the agricultural workforce might help in understanding changing patterns of vulnerability. Unfortunately, the gendered division of labour receives little attention in the literature surveyed for this report.¹⁹¹

Several sources suggest that the gender division of agricultural labour has changed. FAO/WFP Crop and Food Security Assessment Mission reports routinely state that most household units are farmed by women-headed households, a reflection of the polygyny practiced by most social groups (in 2006, about 42 per cent of women aged 15–49 in South Sudan were in polygynous unions).¹⁹² Other factors, such as labour migration and military recruitment, may also affect the gendered division of labour in household agriculture. Generational issues are also relevant, with anecdotal evidence from different areas of Sudan suggesting that older people, particularly women, bear the burden of agricultural labour as younger people are drawn towards education, military recruitment or urban labour.¹⁹³

Wild food collection used to be a productive activity led in many places by women and children. Competition over forest resources, caused by hunger and market pressure, have pushed women into longer journeys to collect food. Additionally, insecurity in the countryside blocks access in some areas. Anecdotal evidence suggests that charcoal production is dominated by military entrepreneurs, creating a competition for forest fuel, and discouraging women from wood collection.

¹⁸⁹ FEWS NET, 'Livelihoods Zone Map', 44–5.

¹⁹⁰ Humphrey, Krishnan and Krystalli, 'Currency of Connections', 17–18.

¹⁹¹ A few exceptions are Culwick, 'A Dietary Survey'; Reining, *Zande Scheme*; Dwight A. Jurey, 'Agriculture among the Lopit Latuka in Eastern Equatoria', Cornell/International Agricultural Economics Study, A. E. Research 81-30, Ithaca NY: Department of Agricultural Economics, Cornell University, 1981; Hutchinson, *Nuer Dilemmas*; WFP 2004 'Annual Needs Assessment' reports; Biong Deng, 'Livelihood diversification'; Perner, *Anyuak*; Santschi, 'Encountering and "Capturing"'.¹⁹²

¹⁹² FAO/WFP, 'Crop and Food Security, 6 February 2009', 7; GNU/GOSS [Government of National Unity/Government of Southern Sudan], 'Sudan Household Health Survey 2006', Khartoum: Federal Ministry of Health and Juba: Ministry of Health, 2007, 141.

¹⁹³ Thomas, Gworo and Wani, 'Cash-based Programmes', 15.

These changes have implications for the way women and men use their time. If women are managing most agricultural production, this will reduce the time they have available for other activities, such as food collection, maintaining social networks and providing care. The burden of production appears to be shifting in some places towards older women, as younger people seek education or cash employment. Meanwhile, the displacement of these older women from many areas of Equatoria may cause a crisis in production.¹⁹⁴

The commodification of land

Commercialization of agricultural production changes relationships with land, as several examples from the literature about Equatoria suggest. In Gondokoro, Central Equatoria, many people have moved to the city and, rather than paying wages, leased their land to Ugandan, Darfurian or Eastern Equatorian farm workers. These leaseholders used more intensive cultivation practices, which some observers believe exhausted the soil.¹⁹⁵ Urban migrants from Magwi, Eastern Equatoria, sometimes used wage labour drawn from their family or from unrelated agricultural workers to cultivate ‘their’ land, which is not the privately owned and registered land of an absentee landowner, but belongs to them due to their membership of local communities.¹⁹⁶ South Sudan’s Land Act (2009) protects ‘lands traditionally and historically held or used by local communities’, and says communities may be ‘identified on the basis of ethnicity, residence or interest’.¹⁹⁷

As a result of the commercialization of agricultural production, ‘communities’ in places such as Magwi are being defined on the basis of ethnicity and tradition, not by residence or interest. The SPLA committed itself to community ownership of land during the 1983–2005 armed conflict, partly to help extend the war into areas of northern Sudan where people were being displaced by the commercialization of grain production. Community ownership of land gives communities economic and juridical importance, and can lead to disputes about who belongs to which particular group when the pressures of commercialization are brought to bear. This has enormous implications for displaced communities in places such as Magwi, which may be pressured off productive land, or may try to develop hostile claims to land on the basis of ethnicity. Ironically, commercialization and wage labour can stratify the very communities seeking to maintain the ideal of community ownership in the face of pressure from displaced outsiders.

Competition over land has been framed around ethnicity, and military actors are sometimes able to use this to acquire lands they do not till. This competition appears to have been created by the politics of ethnicity in South Sudan, with the government unable to intervene in systems of traditional production, and instead rearranging borders in a

¹⁹⁴ Thanks to Venansio T. Muludiang for this point.

¹⁹⁵ Museli, ‘Understanding Socio-economic Challenges’, 42, 46, 54.

¹⁹⁶ Thomas, ‘Community development’.

¹⁹⁷ Land Act, 2009: Section 6 (4).

way that creates conflicts over land that has not even been put to the plough. There is some evidence in the literature of competition over land for cultivation. Northern Bahr al-Ghazal has had some commercial rice production since the 1970s, and there has been competition over land between village communities wishing to expand sorghum cultivation in abandoned rice basins.¹⁹⁸ Competition between South Sudanese and Ugandan commercial farmers in a contested area along border near Kajo Keji even led to high-level meetings between the two governments.¹⁹⁹ Around Gumbo, on the east bank of the Nile at Juba, Ugandan farmers acquire leases and grow market crops such as watermelon, which were previously imported from Uganda.

Gumbo freeholders are able to generate rents from commercial agricultural revenues as they own land near to the food markets of Juba, but because the commodification of land is shaped by a garbled version of land rights in the subsistence system, not every freeholder can turn land into revenue in this apparently straightforward way.

Commodification and the need for cash

These financialized relationships to land in Gumbo are part of wider processes reshaping everyday life around money. These processes were given a great deal of momentum at the end of the 1983–2005 civil war. During the conflict, few people had regular wages, but the 2005 peace led to South Sudan’s oil boom, which funded a huge government payroll of as many as 400,000 people, perhaps half of which were in the army and security services.²⁰⁰

This payroll was big enough to transform the purchasing power of many households, particularly among social groups with significant numbers of soldiers.²⁰¹ The 2009 National Baseline Household Survey (NBHS), undertaken when South Sudan’s oil boom was near its peak and the government payroll was expanding, found that wages and salaries were the main source of livelihood for about 12 per cent of households, with profits from enterprises the main source for 2 per cent (this figure was much higher in urban areas).²⁰²

The payroll probably accelerated the shift towards markets, distributing the country’s oil wealth unevenly across the population through institutions led by the military and political elite. Most people had to access cash through trade and paid labour, and many got into debt. The only national figures for household debt identified in the course of this literature review are from 2009, with the NBHS finding that about 18 per cent of

¹⁹⁸ FAO/WFP, ‘Crop and Food Security, 26 May 2017’, 55.

¹⁹⁹ Cherry Leonardi and Martina Santschi, ‘Dividing Communities in South Sudan and Northern Uganda: Boundary disputes and land governance’, London: Rift Valley Institute, 2016, 41.

²⁰⁰ Thomas, *Slow Liberation*, 164.

²⁰¹ Thanks to Charles Wani for this point.

²⁰² NBS, ‘Household Survey 2009’, 32.

the population had borrowed money in the past year, mainly for consumption.²⁰³ Anecdotal evidence suggests that household items such as phones, tools or weapons, which may previously have represented household savings or been circulated within social networks, are now being collateralized for money loans.²⁰⁴

Another factor accelerating commodification processes is the decision by humanitarian actors to develop cash-based programmes. In South Sudan, as elsewhere, most food aid is still delivered in-kind, but cash-based programmes are expanding rapidly, accounting for as much as 8 per cent of food aid.²⁰⁵ The literature reviewed for this report contained several references to the effect of cash transfers on South Sudan's transition towards commodified food, with a 2015 FEWS NET report from Sudan finding that cash assistance programmes may increase food price volatility in times of shortage,²⁰⁶ and a 2018 FEWS NET study finding that cash transfers were likely to reduce reliance on kinship and social support networks.²⁰⁷

A 2019 study from Mercy Corps looking at cash transfers in southern Unity state finds that social networks still play an important role in productive activities, such as land clearing and cattle keeping, and that food aid is shared through social networks. It also suggests the recipients of cash transfers are pressured to share cash through social networks, although cash-sharing does not seem to foster reciprocity in the way that labour-sharing or food-sharing does. In addition, the study reports that men often control how cash transfers were spent, in part because market networks are male-dominated, and that traders believe cash-transfer recipients are more credit-worthy.²⁰⁸ Cash-transfer beneficiaries are identified on the basis of externally-generated classifications of vulnerability, and receive very small sums of cash.

South Sudan's shift from household self-sufficiency in grain to purchased grain is an outcome of a wider shift from the subsistence system of production and distribution, structured around social and kinship networks, to new systems structured around markets. This shift changes the way production and distribution is organized, and impacts on relationships between people, as well as relations with land and forests. The shift also has international implications, as the next section discusses.

²⁰³ NBS, 'Household Survey 2009', 47, 49.

²⁰⁴ Thanks to Brendan Tuttle for this point.

²⁰⁵ Thomas, Gworo and Wani, 'Cash-based Programmes', 5.

²⁰⁶ FEWS NET, 'Sudan: Staple Food Market Fundamentals', Washington, DC: FEWS NET, 2015, vii.

²⁰⁷ FEWS NET, 'Livelihoods Zone Map', 52.

²⁰⁸ Humphrey, Krishnan and Krystalli, 'Currency of Connections', 33.

8. International Implications of the Turn Towards Markets

South Sudanese agricultural producers now sell grain in local markets, rather than consuming it themselves or exchanging it through social networks. An equally significant change is that two of South Sudan's most interfering neighbours—Uganda and Sudan—have begun competing to supply its new markets. The influence of these two neighbours on South Sudan's food supply are changing tastes in grain as well as shifting international relationships. Ugandan and Sudanese experiences of the commercialization of agriculture and the commodification of food may shape South Sudan's future too. This section looks at how imported food is changing South Sudanese society.

Like many African countries, South Sudan is a net food importer, with low, stagnant agricultural yields.²⁰⁹ In the 1990s and early 2000s, South Sudan relied on sorghum imports from Sudan and, to a lesser extent, maize imports from Uganda.²¹⁰ After the 2005 peace deal that ended South Sudan's second civil war, however, Ugandan supply expanded.

In the run-up to South Sudan's independence, government policy seemed oriented towards import dependence rather than increased production, at least unofficially. An example of this was the Dura Saga of 2008, a financial scandal rooted in the government's decision to set up a strategic grain reserve of maize and sorghum in each of South Sudan's ten states, at a cost of several billion dollars.²¹¹ In 2008, South Sudan paid out around USD 250 million to contractors, but a succession of audits and investigations found that little grain was delivered, and much of what was delivered was rotting.²¹² In contrast, the 2008 budget for the Ministry of Agriculture, which financed the government's support to South Sudanese agriculture, was USD 25 million.²¹³ While the Dura scandal generated a lot of debate about corruption, in many respects the real story was

²⁰⁹ Manitra A. Rakotoarisoa,, Massimo Iafrate and Marianna Paschali, 'Why has Africa become a net food importer? Explaining Africa agricultural and food trade deficits', Rome: Food and Agriculture Organization, 2011.

²¹⁰ Nyaba, 'Trade Consultancy', 29–32.

²¹¹ NAC, 'The Report of the Auditor General on the Financial Statements of the Government of Southern Sudan for the Financial Year ended 31st December 2008, to the President of the Republic of South Sudan and South Sudan National Legislative Assembly', Juba: National Audit Chamber, 2009, 149–50.

²¹² Hilde Johnson, *South Sudan, the Untold Story: From Independence to Civil War*, London: I.B. Tauris, 2016,

38.

²¹³ MOFEP, 'Government of Southern Sudan Supplementary Budget 2008', presented to the Southern Sudan Legislative Assembly, October 2008, 8.

that the government intended to import grain to feed its burgeoning cities, rather than seeking to develop local production.

Officially, however, government policy aimed at increased cereal production. South Sudan's 2011–2013 development plan called for expanded production led by 'small-scale private, predominantly family, agriculture and livestock sectors'.²¹⁴ Despite good rains and population increases augmented by Sudan returnees, though, harvests did not meet minimum cereal requirements and in the three years following independence, supplies of food aid were limited. Instead, imports filled the gap.

The history of grain supplies to South Sudan

The published literature surveyed for this report shed little light on the volume and value of grain imports to South Sudan. It seems clear, though, that most grain imported to South Sudan comes from Uganda or Sudan, with other neighbouring countries contributing relatively little.²¹⁵ Trade links between South Sudan and the Democratic Republic of Congo (DRC) and the Central African Republic (CAR) are very limited, Ethiopia exports little grain, and Kenya (one of the most maize-dependent countries in the world) has an annual maize deficit of about 400,000 tonnes.²¹⁶

Estimating Ugandan and Sudanese grain supplies is not straightforward, with different sources providing widely varying accounts of the value and volume of grain exports. Take, for example, the following figures for 2013. Official Ugandan statistics put formal and informal maize exports to all countries at 349,056 tonnes,²¹⁷ while Comtrade, a UN trade statistics database, says that Uganda exported 55,238 tonnes of maize and maize flour to South Sudan²¹⁸ (though this figure may exclude informal exports of maize, which make up 7–15 per cent of Uganda's total informal exports).²¹⁹ In contrast, the Food Secu-

²¹⁴ GSS, 'South Sudan Development Plan 2011–2013: Realising Freedom, Equality, Justice, Peace and Prosperity for All', Council of Minister's Draft, 5 July 2011, Juba: Government of South Sudan, 2011, 92.

²¹⁵ World Bank, 'Eastern Africa: A Study of the Regional Maize Market and Marketing Costs', Report No. 49831 – AFR, 31 December 2009, Washington, DC: World Bank, 2009; Yutaka Yoshino, Grace Ngungi and Ephrem Asebe, 'Enhancing the Recent Growth of Cross-Border Trade between South Sudan and Uganda', Working Paper, Africa Trade Policy Notes, Washington, DC: World Bank, 2011.

²¹⁶ USDA, 'Ethiopia: Grain and Feed Annual: Grain Production Better than Expected', Foreign Agriculture Service, Global Agricultural Information Network, Report No. ET 1813, 9 Mar 2018. Washington, DC: USDA, 2018; World Bank, 'Eastern Africa', 5–6; James McCann, 'Maize and Grace: History, Corn, and Africa's New Landscapes, 1500–1999', *Comparative Studies in Society and History* 43/2 (2001): 247–8, 254.

²¹⁷ UBS, 'Formal and Informal Exports by Commodity and Quantity, Calendar Year – Last Updated on 1st November 2018', Entebbe: Ugandan Bureau of Statistics, 2018. Accessed 8 Nov 2018, <https://www.ubos.org/explore-statistics/10/>.

²¹⁸ COMTRADE data, available at <https://comtrade.un.org/data/>, accessed on 7 Nov 2018.

²¹⁹ UBS, 'The Informal Cross-border Trade Survey Report 2016', Entebbe: Ugandan Bureau of Statistics, 2017, 13.

rity and Nutrition Working Group says that half of Uganda’s maize exports went to South Sudan.²²⁰ Elsewhere, the International Food Policy Research Institute, citing the African Development Bank and FEWS NET, say that South Sudan imported 873,315 tonnes of maize and maize flour from Uganda.²²¹

South Sudan’s grain imports are linked to the rise of commercial grain production in Sudan. In the late nineteenth and early twentieth century, colonial officials created a unified market in grain across a triangle of land centred on Khartoum, reaching up the northern Nile valley, as well as west and east along the rainlands of Kordofan and Eastern Sudan. Railways (which only existed in the central triangle) played a critical role in moving production of food staples from villages to a grain belt in the rainlands. In the 1940s, about 100,000 tonnes of Sudanese sorghum was marketed each year (only about 3 per cent went to the southern provinces, see Figure 10).²²²

Figure 10. Net imports and exports of grain by river transport, Southern Provinces, 1930–1953²²³



²²⁰ FSNWG, ‘East Africa Cross-border Trade Bulletin’, Nairobi: FEWS NET/FAO/WFP Joint Cross-Border Market and Trade Monitoring Initiative, 2014.

²²¹ Dorosh et al., ‘Enhancing Food Security’, 13.

²²² J. H. K. Jefferson, ‘The Sudan’s Grain Supply’, *Sudan Notes and Records* 30 (1949): 78.

²²³ SDIT, ‘Natural Resources’, 137.

Colonialists did not want a unified market across the whole of Sudan, fearing it might foster national consciousness. Outside the central triangle, they restricted both the grain market and the activities of traders, who had to patiently accumulate capital through low-volume, long-distance trade, which transformed the recalcitrant subsistence system. Around the time of Sudan's independence in 1956, the trading class began to invest their capital in pump-irrigated cotton schemes along the Nile banks. When global cotton prices fell in the late 1950s, they shifted investment into sorghum production for domestic markets. As a result, the sorghum trade boomed.

In the colonial period, South Sudan imported very little grain and most recorded grain imports came from northern Sudan by steamer. Between 1930 and 1953, grain imports averaged around 3,500 tonnes per annum.²²⁴ Domestic sorghum production in Sudan increased in the 1960s, however, just as war in South Sudan was pushing the country towards purchased grain. In the period from independence to 1972, river supplies of northern Sudanese grain doubled. In 1972, about 18,000 tonnes of grain were delivered by steamer.²²⁵ Neither Kenya nor Uganda exported grain to South Sudan in this period, but significant quantities of food aid—much of it American grain—was shipped through Mombasa and trucked through Uganda. In addition, the railway delivered twice as much freight to Wau.²²⁶

None of the sources surveyed for this report provided quantitative data on transfers of northern Sudanese grain to South Sudan in the period after 1972. Other, non-quantitative evidence has already been reviewed in this report, showing that in the 1970s, Sudanese sorghum helped reduce sorghum shortages, and in the 1980s and 1990s, northern traders and Sudanese army officers worked together to align Sudanese sorghum supplies with their military objectives in South Sudan.²²⁷ Evidence of the circulation of food aid and of locally produced sorghum in markets in SPLA-held areas suggests the war may have led to a decrease in Sudanese supplies to South Sudan in this period. Indeed, Sudan exported sorghum abroad during the famines the war created.²²⁸

The impact of grain on social and international relations

In most countries, grain imports are likely to make up a relatively small proportion of total imports by value. They are, however, high in volume, and have wide-ranging social significance, as well as implications for international relations.

Ugandan and Sudanese grain tastes different. Uganda mostly sells maize, while Sudan mostly sells its commercial, short-maturing varieties of sorghum (see Maps 4 and 5).

²²⁴ SDIT, 'Natural Resources', 133, 137.

²²⁵ Estimate based on IBRD, 'Report of a special mission', Annex 3.3, Table B-4.

²²⁶ IBRD, 'Report of a special mission', 31, 41.

²²⁷ Keen, *Benefits of Famine*.

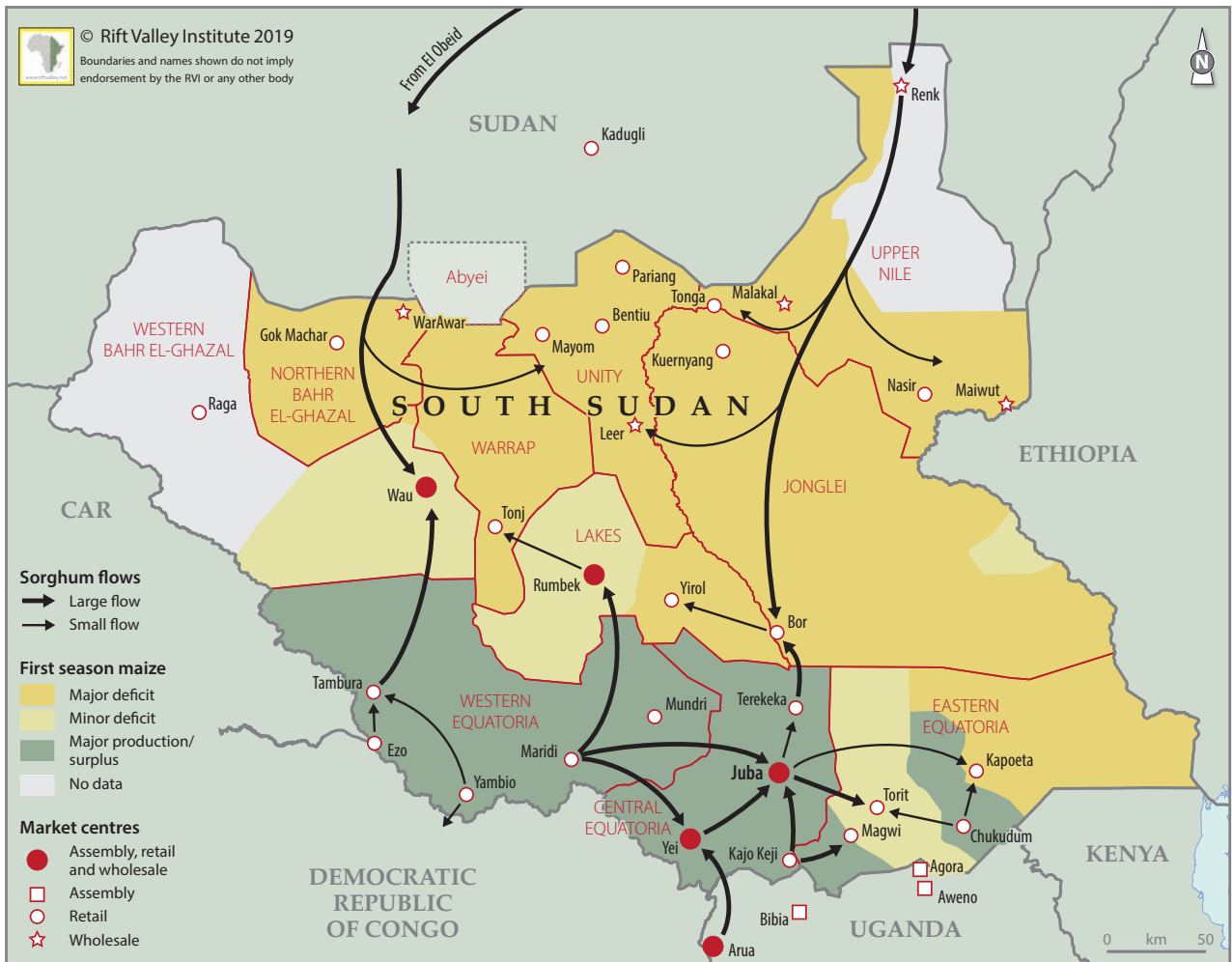
²²⁸ Michael Medley, 'Humanitarian parsimony in Sudan: The Bahr Al-Ghazal famine of 1998', PhD dissertation, University of Bristol, 2010, 182.

The switch to maize, which swept the rest of East Africa in the 1990s, is changing urban palates across South Sudan. Porridge is one of the main ways in which both grains are consumed, and maize porridge is easier to cook than sorghum porridge. South Sudanese people even use the Ugandan word for maize porridge, *posho*, where the Sudanese Arabic word *asida* was once more common. As well as bringing about such social changes, the shift towards imported maize from Uganda and the rising urban demand for the grain is likely to accelerate maize production and commercialization in areas around major cities.

As well as affecting social relations, different imports affect international relations. At independence, South Sudan's oil rents made its government one of the richest in the region. An oil shutdown in 2012, however, led to a breakdown in relations with Sudan, and a sharp contraction in government oil revenues. The shutdown led to an increase in Ugandan grain coming to South Sudan, and a decrease in Sudanese grain.²²⁹ In retrospect, this shift had many implications for regional relationships, with South Sudan's dependence on Ugandan grain growing just before the 2013 crisis, when Juba became militarily dependent on Ugandan troops. In 2018, a rapprochement between Uganda and Sudan helped frame a revitalized peace agreement for South Sudan, and this rapprochement may lead to a greater role for northern grain.

²²⁹ FAO/WFP, 'Crop and Food Security, 22 February 2013', 35; Dorosh et al., 'Enhancing Food Security', 14.

Map 4. Sorghum flows to South Sudan in 2012²³⁰



© MAPgrafix 2019

South Sudan states are according to the Comprehensive Peace Agreement (2005)

230 World Bank, 'Agricultural Potential', 38–9.

Map 5. Maize flows to South Sudan in 2012²³¹



In addition to their role in commercial imports, Uganda and Sudan are two of the biggest sources of food purchased by WFP.²³² In the past, much of the food aid in South Sudan was grown in the United States, and was linked to US subsidy regimes for agricultural states. Dependence on the grain of two adversarial neighbours might be even more complicated than (the already extremely complicated) dependence on superpower grain. South Sudan’s cereal deficit is now linked to its neighbours’ cereal surpluses, and Ugandan and Sudanese cereal producers may come to ‘need’ South Sudan’s deficit.

Finally, Uganda and Sudan may become competitors in South Sudan’s grain markets. If, however, South Sudan is able to produce a grain surplus one day, its neighbours might

²³¹ World Bank, ‘Agricultural Potential’, 38–9.

²³² WFP, ‘Update on food procurement. Executive Board Annual Session’, WFP/EB.A/2018/10-C. 25, Rome: World Food Programme, 2018, 3.

provide models for development. The trajectory of agricultural commercialization in these two countries is very different (highland Ethiopia, south-western Ethiopia, the DRC and CAR also have very different trajectories, which suggests that paths away from subsistence systems may be as unpredictably diverse as the subsistence systems they arise from).

Changing yields and changing palates

Sorghum is the most important cereal in South Sudan, covering an estimated 70 per cent of the area sown to grain in 2017. Maize comes second, at 27 per cent (cassava, a tuber, is an important non-grain cereal in Equatoria and Western Bahr al-Ghazal).²³³ Maize arrived in East Africa in the seventeenth century, and nineteenth-century travel writers found it in many areas of South Sudan. A few areas, such as Western Equatoria, the Sobat basin in Upper Nile, and northern Unity state, are today seen as traditional maize-growing areas.²³⁴

Since the nineteenth century, maize followed empires and traders into East Africa, and at the end of the twentieth century it began to sweep aside other cereals, such as sorghum and millet, transforming agriculture and tastes across the region. Uganda adopted maize production when it moved away from cotton as a cash crop in the 1980s, and many farmers in Ethiopia (now primarily a maize country) switched to it during a crisis in international coffee prices.²³⁵

Maize is growing in importance in South Sudan (see Table 5). While many find maize less palatable than sorghum, and it lacks key amino acids—for this reason, it was discouraged by British colonialists²³⁶—maize does offer farmers expediency. It requires only one ploughing and little weeding, matures quickly, and has relatively high yields.²³⁷ The spread of maize, and large traders in maize, probably signifies new pressures of production and commercialization.

²³³ FAO/WFP, 'Crop and Food Security, 28 March 2018', 15.

²³⁴ FEWS NET, 'Livelihoods Zone Map', 1; Evans-Pritchard, *The Nuer*, 76.

²³⁵ World Bank, 'Uganda: Country Economic Memorandum', Washington, DC: World Bank, 1982, 52.

²³⁶ Co N. L. Corkhill, 'Nutrition', in *Agriculture in the Sudan, Being a Handbook of Agriculture as Practised in the Anglo-Egyptian Sudan*, ed. J. D. Tothill, London: Oxford University Press, 1948, 261.

²³⁷ McCann, 'Maize and grace', 247–8, 254, 265.

Table 5. Statistics illustrating the spread of maize in South Sudan

1948	All Sudan produces 25,000 tonnes of maize, probably representing about 20,000 hectares of harvest ¹
1968	South Sudan harvests 74,800 hectares of maize ²
1978	South Sudan harvests 67,200 hectares of maize ³
2013	South Sudan harvests 322,000 hectares of maize ⁴

The spread of maize is linked to the development of markets. Juba traders deal with different grains differently. Sorghum consumption in rural areas is much higher than in towns,²³⁸ with a 2017 World Bank survey finding that the sorghum trade was mostly handled by small traders, who pool trucks or use bicycles to bring grain to market. Farmers bring sorghum to rural primary markets in villages and small towns, and in grain-surplus areas there are rural assembly markets. Meanwhile, maize is mostly handled by large-scale suppliers, who use trucks and barges.²³⁹

Though maize allows for increased productivity, its rapid spread across East Africa has raised concerns, some of which are relevant for South Sudan. Farmers in the traditional sector have many sorghum landraces, that is, seed varieties that have developed locally to fit different agro-ecological niches, and that mature at different rates. A 2014 study of seeds used in Northern Bahr al-Ghazal found that farmers used their own seeds for all millet and maize cultivation, and mostly used their own seeds for sorghum cultivation.²⁴⁰

The farmers use local knowledge to make decisions about different plantings. In areas where the rains are clustered into short and long rains, farmers can use short- and long-maturing landraces to ensure they have two harvests. The former is used at the short rains that end the lean season, and the latter at the long rains that end the year. These local landraces have low yields, but give skilled farmers a capacity to manage ecological risk.²⁴¹

Most maize is grown in Equatoria, and although local maize landraces have emerged, many Equatorian farmers use Ugandan seeds.²⁴² These improved, imported seeds can enhance productivity, but also bring risks. Maize is more sensitive than sorghum to

²³⁸ NBS, 'Household Survey 2009', 54.

²³⁹ World Bank, 'Reducing Poverty Through Improved Agro-Logistics in a Fragile Country: Findings from a Trader Survey in South Sudan', Washington, DC: World Bank, 2017.

²⁴⁰ FAO, 'Seed Security Assessment Report, Northern Bahr el Ghazal State, South Sudan, April 2014', Rome: Food and Agriculture Organization, 2014, 19. Accessed 15 March 2019, http://www.fao.org/fileadmin/user_upload/food-security-capacity-building/docs/Seeds/SSA/FAO-SSAReport_SouthSudan-April2014.pdf.

²⁴¹ FAO/WFP, 'Crop and Food Security, 28 March 2018', 15.

²⁴² FAO/WFP, 'Crop and Food Security, 28 March 2018', 15.

deprivation of water, sunlight, and nitrogen; and it rots easily in tropical storage.²⁴³ In areas of Magwi county, maize is displacing older, more drought-resistant crops, such as millet.²⁴⁴ International forces may be pushing South Sudan towards maize, and if maize monocultures develop in response to pressures for higher yields, this will entail risks that the diverse subsistence system was previously able to evade. These risks may become starker if South Sudan becomes more arid as a result of climate change.

Transitions to the market

South Sudan depends on two neighbours for much of its food, a situation that has arisen due to both these countries having undergone long and painful transitions to market food systems, in the process generating a commercial grain surplus in need of a market. The pace and trajectory of these transitions has been very different, symbolized in Uganda by the prosperous smallholder, and in Sudan by the well-connected absentee landlord and his mechanized sorghum farm. Both transitions have generated enormous pools of migrant agricultural workers, on whose labour the food systems of all three countries depend, as well as being implicating in the massive violence of the twentieth century. Neither, though, has led to significantly increased yields, with Sudanese yields having been particularly disappointing.²⁴⁵ Below, the report looks at what lessons these transitions might hold for South Sudan.

Uganda's transition

Uganda began exporting its cereal surplus in the late twentieth century, when, even during the armed conflicts of the 1970s and early 1980s, it produced enough cereals to feed itself. Ugandan exports were, however, mainly 'cash crops' that had been spread by colonialists, namely coffee, tea and sugar. Cotton was once Uganda's most important export, but by the 1980s adverse terms of trade for cotton pushed farmers in towards maize.²⁴⁶ After Uganda's armed conflicts ended in the late 1980s, it adopted policies aimed at diversifying foreign trade, and began exporting maize.²⁴⁷ By 2017, maize was Uganda's fourth most important export commodity by US dollar value.²⁴⁸

Like other countries in the region, Uganda had more than one agricultural regime. In the fertile and populous areas such as Buganda, complex and reciprocal relations between

²⁴³ McCann, 'Maize and grace', 249.

²⁴⁴ Edward Thomas, 'Community development in Obbo, Magwi County, Eastern Equatoria', unpublished paper, 2015b.

²⁴⁵ Rakotoarisoa,, Iafate and Paschali, 'Why has Africa'.

²⁴⁶ World Bank, 'Uganda', 49–52.

²⁴⁷ Oliver Morrissey and Nicodemus Rudaheranwa, 'Ugandan trade policy and export performance in the 1990s', CREDIT Research Paper, No. 98/12, Centre for Research in Economic Development and International Trade (CREDIT), Nottingham: University of Nottingham, 1998, 10.

²⁴⁸ UBS, 'Formal and Informal'.

chiefs, clans and cultivators were remodelled as landlord–tenant relationships under British rule, and plantation agriculture and different versions of colonial ‘cash-cropping’ were promoted during the twentieth century.²⁴⁹ In northern Uganda, in contrast, communal land-tenure arrangements were still intact until 1975, when a land reform act opened the door for increased commercialization of land.²⁵⁰

Mahmood Mamdani’s description of 1980s Amwona, in Lango district, north-eastern Uganda, bears some similarity to the situation in South Sudan today. Communal work beer-parties were becoming too expensive for ordinary cultivators. As a result, the poorest cultivators switched to self-help systems, while richer cultivators employed wage labour. At the same time, land was being leased commercially in the name of development. Customary land tenure was still operative, so those leasing land were required to have a connection to the area. Most of those able to lease land had state connections, and were then able to live off rents and profits. A key element of this system, according to Mamdani, is the fact that the land leaseholder made little or no contribution to the production process.²⁵¹ Lango is today an area of maize surplus and of contests over land, often involving military veterans with state links.²⁵²

Sudan’s transition

The rural class stratification that took place in Amwona offers one possible trajectory of development for South Sudan, towards prosperous smallholders employing poorer cousins, or exporting those cousins to areas of labour shortage. Does Sudan’s path to commercialized agriculture offer an alternative model for South Sudan? While commercialization has increased cereal production by putting more land to the plough, productivity is stagnant (see Figure 11). Wage labour was initially difficult to mobilize, but today a large, seasonal agricultural workforce has put many workers on the move, and may have contributed to declining returns to subsistence agriculture. Commercial agriculture has not led to the kind of competitive production that rewards higher-yielding processes and generates a wider, rural competitive order.

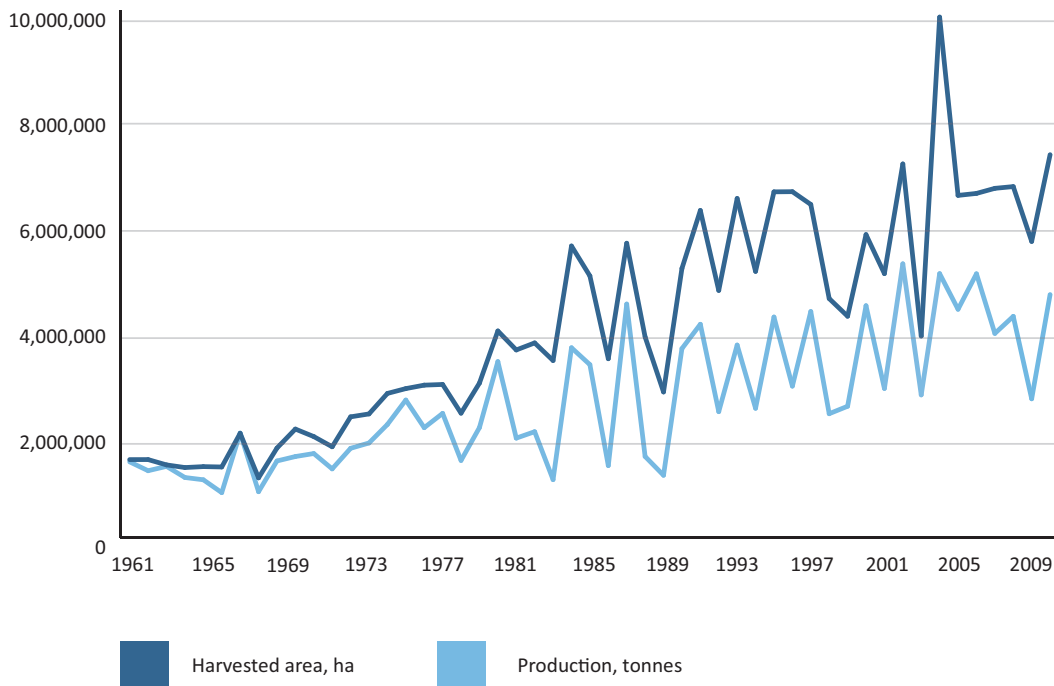
²⁴⁹ Thanks to Cherry Leonardi for this point.

²⁵⁰ Mahmood Mamdani, ‘Extreme but Not Exceptional: Towards an Analysis of the Agrarian Question in Uganda’, *Journal of Peasant Studies* 14/2 (1987): 196; Audrey I. Richards, Ford Sturrock and Jean M. Fortt, eds., *Subsistence to Commercial Farming in Present-Day Buganda*, Cambridge: Cambridge University Press, 1973.

²⁵¹ Mamdani, ‘Extreme’, 205, 207.

²⁵² World Bank, ‘Eastern Africa’, 8; Samuel B. Mabbike, ‘Escalating Land Grabbing in Post-conflict Regions of Northern Uganda: A Need for Strengthening Good Land Governance in Acholi Region’, Rotterdam: Land Deals Politics Initiative, 2011, 19.

Figure 11. Stagnant yields for sorghum in Sudan: harvested area and production, 1961–2001²⁵³



Increasing production without increasing yield is a strategy that increases the pressures on agricultural workers. In some respects, it mirrors the strategy of the crop-mortgage traders, or *jallaba*, that have played a key role in shifting the peripheries of Sudan and South Sudan away from the subsistence system. *Jallaba* are merchants with origins in the northern Nile valley whose forebears responded to wars, high taxes and land fragmentation along their narrow strip of land by travelling to Sudan’s vast subsistence zones, selling commodities such as salt or cloth. They developed methods of monetizing societies in South Sudan by commodifying forest products and slave trading. They also developed methods of monetizing and commodifying agricultural production, such as pre-harvest crop mortgaging. Over the course of two centuries, the *jallaba* emerged as the winners of the oppressive racial order created out of the processes they managed in the subsistence zone, disrupting production systems in the places where they worked, generating new demands, and reworking distribution systems, sometimes in unexpected ways. They did not, however, orient productive systems towards wage labour, private property, and competitive production.²⁵⁴

This commercial penetration of rural Sudan was backed by the state. Colonial governments directly taxed people in cash, creating a need for cash among the taxpayers in

²⁵³ FAOSTAT data, available at <http://www.fao.org/faostat/en/#data/QC>, accessed on 7 Nov 2018.

²⁵⁴ Abdel Basit Saeed, ‘Merchant Capital, The State and Peasant Farmers in Southern Kordofan’, in *Economy and Class in Sudan*, eds. Norman O’Neill and Jay O’Brien, Aldershot: Avebury, 1988, 196.

the agricultural sector, in turn pushing them towards selling and wage-earning. An even more important mechanism of commercialization was the government sugar monopoly, which by the 1930s was a far more important source of revenue than direct taxation.²⁵⁵

In 1960s Sudan, those who had accumulated capital by devising mechanisms for extracting surplus from subsistence systems, made an alliance with the state. This allowed them to put their money into commercialized sorghum production, sited on huge farms in the clay plains to the east and west of the Gezira (the fertile triangle of land between the Blue and White Niles). These farms became magnets for wage workers migrating away from the fragmenting subsistence systems of South Sudan and western Sudan.²⁵⁶ The failure to address changes in these subsistence systems has put millions of people on the move across Sudan and South Sudan.²⁵⁷

Commercial agriculture has not led to the kind of competitive production that rewards higher-yielding processes and generates a wider rural competitive order. New export-oriented farms, the origins of which lie in the commodities boom and land grabbing that occurred in the first decade of the twenty-first century, may change commercial agriculture in countries such as Sudan and Ethiopia, where long leases have been granted to outsiders. However, these new systems, backed by the coercive power of the state and linked to new displacements, may perpetuate stagnant yields while intensifying social polarization. The dominance of a military elite over land decisions in South Sudan suggests it may follow the Sudanese path to the commercialization of agriculture, whereby well-connected landowners acquire huge lands and promote mass migration from non-commercialized areas to the new plantations.

²⁵⁵ Foreign Office, 'Report by the Governor-General on the Administration, Finances and Condition of the Sudan in 1938. Presented by the Secretary of State for Foreign Affairs to Parliament. Cmd. 6139 Sudan. No. 1 (1939)', London: H.M.S.O., 1939, 21.

²⁵⁶ Taisier Ali and Jay O'Brien, 'Labor, Community and Protest in Sudanese Agriculture', in *Politics of Agriculture in Tropical Africa*, ed. Jonathan Barker, Beverly Hills: Sage, 1984.

²⁵⁷ Mark Duffield, *Maiurno: Capitalism and Rural Life in Sudan*, London: Ithaca, 1981, 159.

Conclusion: Aspiration and Accumulation

God asked man, 'Which one shall I give you, Black Man; there is the Cow and the thing called "What", which of the two would you like?' The man said, 'I do not want "What".' God said, 'But "What" is better than the Cow!' The man said, 'No.' Then God said, 'If you like the Cow, you had better taste its milk before you choose it finally.' The man squeezed some milk into his hand, tasted it, and said, 'Let us have the milk and never see "What".'²⁵⁸

Retelling this Dinka story during the 1983–2005 civil war, when South Sudan's transition was experienced as destitution, hunger and slavery, Francis Deng noticed a sense of purpose about the Dinka people he wrote about. They recognized the need to generate income that went beyond their cattle wealth, in order to make the most of the new world that war had pushed them into. They needed education to achieve this. As Deng observed:

It is that self-confidence in both the conversion of cattle to the cash economy and the mobilization of human resources that makes the Dinka positive self-perception a significant asset for development. The Dinka now demonstrate willingness to give up the cow in pursuit of the thing called 'What'.²⁵⁹

South Sudan's shift away from a subsistence system to a market system has reframed aspiration. Better-off farmers who hire workers to cultivate their plots and sell their harvests in order to pay school fees or hospital bills, or to buy phones or handbags, are experimenting with a new kind of life. While the kinship-based subsistence systems of the past still have social and moral resonance, many South Sudanese people have aspirations to accumulate wealth through the market. Though sentimentalizing subsistence systems does not make sense, idealizing the market is also a mistake. Markets can produce prosperous smallholders whose aspirations and wealth 'feels' legitimate but, as in 1980s Amwona, South Sudan's market holds the potential for a non-productive class with powerful links to the state, as well as a more stratified system of agricultural production.

In South Sudan, markets are overshadowed by the military. Being a commander is a much better route to the accumulation of wealth than being an enterprising smallholder. A 2015 study of market traders in Juba found there were about 3,000 registered members of the Chamber of Commerce dealing in food items. Most companies were partnerships between foreigners and local shareholders, with the latter rarely providing capital. Instead, their role is to facilitate relationships with the bureaucracy. The study

²⁵⁸ Francis Deng, 'The Cow and the Thing Called "What": Dinka Cultural Perspectives on Wealth and Poverty', *Journal of International Affairs* 52/1 (1998): 102.

²⁵⁹ Francis Deng, 'The Cow', 128.

also found that following the outbreak of conflict in 2013, the army stopped sourcing its maize from the market, and instead began organizing supplies independently. These findings suggest that a maize trade connecting Uganda to elites in South Sudan may be entrenched by the current conflict.²⁶⁰

Some military entrepreneurs in South Sudan mobilize labour from the army payroll, rather than from disoriented rural civilians. And while agrarian change has led to improved productivity in Uganda, in South Sudan yields are stagnant. The increased commercialization of farming has not led to an intensification of production, as in Sudan, and may be implicated in violence in the countryside.

The literature surveyed for this report suggests that South Sudan has undergone a long, slow shift away from the subsistence systems of the past, and that market dependence has reached an irreversible point. The shift has many social implications, and appears to be entangled in asset transfers and processes of commodification that are integral to South Sudan's history of armed conflict. Understanding this shift might help South Sudanese people and outsiders to interpret wider social changes, while understanding aspirations and patterns of accumulation in South Sudan can help in interpreting how the shift from subsistence to markets will unfold, and what new vulnerabilities may emerge in the course of the transition.

Towards a new research agenda

To meet this challenge, however, new approaches to knowledge generation are needed. First, new analytical frameworks for understanding the shift from subsistence are needed. These frameworks are sometimes sketched out in disciplines such as social history and economic anthropology, but date quickly. Second, South Sudan's multi-dimensional transition away from subsistence cannot be described through snapshot research produced by outsiders with limited language skills (such as the present author), which predominates in South Sudan today. South Sudanese researchers and research institutions need to be closely involved in the process, shaping research questions and developing methodologies. Third, understanding the shift requires more than one discipline. Some of the most thoughtful descriptions of the shift have come in the ethnographies of Sharon Hutchinson and Conradin Perner, but in the tradition of South Sudan anthropology, these ethnographies are limited to a single social or ethnic group. This is potentially problematic, as the shift appears to be taking place unevenly across the various social groups of South Sudan. Data on crops published in the FAO/WFP Crop and Food Security Assessment Mission reports has a national scope, but is focused on agricultural output rather than the whole dynamic systems of production and distribution.

In order to address these challenges, RVI is currently developing a research strategy with the Catholic University of South Sudan, and hopes to develop collaborations with

²⁶⁰ Mosel and Henderson, "Markets in crises", 11, 17.

researchers from other institutions. As stated above, research questions will be developed in collaboration with South Sudanese researchers. Even so, it is useful to conclude with a list of potential areas of research arising from this literature review:

- *Kinship orders*: How has the shift away from subsistence changed kinship orders? Studies could look at how male and female students survive in urban areas, comparing this with the livelihoods of older and younger relatives in rural areas.
- *Gender and generational orders*: How are changes to subsistence systems shifting gendered burdens in agricultural production? Studies could address the gender and generational division of labour in different agro-ecological zones in the countryside.
- *Wild food and forest products*: Who is engaged in food and forest products? Is wild food being commodified?
- *Changes to bride-wealth*: How are bride-wealth systems changing in agrarian societies? While much is written about bride-wealth inflation in pastoralist societies, not much attention is paid to the same shifts in agrarian societies, and its implications for gender relations and processes of monetization.
- *Agricultural wage labour*: What kinds of paid labour exist in agricultural production? Who carries out agricultural production for pay? What risks do agricultural workers face? What aspirations do they have?
- *The role of the military in processes of accumulation*: How are military commanders involved in cattle accumulation and grain markets? What are the implications of class consolidation on the part of the military elite for relationships and processes of production?
- *Emergence of wage relations in livestock production*: How do rich people with large accumulations of cattle manage herds? How is wage labour changing relations of production in the livestock sector?
- *Financial revolutions in agriculture*: Where is land being leased for production and what implications does this have for subsistence systems? How important is crop mortgaging and how socially acceptable is it?
- *Displacement and markets*: Are displaced people more dependent on markets than others? What correlations, if any, exist between market dependence and hunger?
- *Maize and sorghum*: Where is the shift towards maize taking place? Is maize production linked to processes of commercialization? How do these shifts affect tastes?
- *Biodiversity and climate change*: How does the shift away from diverse local landraces affect biodiversity? Does the shift to maize imply any new risks from climate change?
- *Food imports*: Which countries are exporting food to South Sudan? Are South Sudanese food imports consumed more in cities or in the countryside? What are the

social implications of urban reliance on imported food? How does it affect urban food security?

- *Changing land tenure*: How does commercialization of agricultural production affect perceptions of land ownership? How might commercial agricultural production interact with *de jure* community ownership of land, or with *de facto* military appropriation of land?
- *Implications for humanitarian programmes*: What implications does the breakdown of kinship structures have for humanitarian programmes, particularly those that promote markets?
- *Foreign labour*: Many economic sectors in South Sudan are dominated by foreigners, for example, Ugandan cultivators, Ethiopian hotel workers, Somali bankers, Chinese oil workers, and Kenyan, European and North American aid workers. How does the presence of these foreign interests affect processes of wealth extraction? What are the implications for rural youth migration?
- *Forest ownership*: Who owns the commodified produce of South Sudan's forests?
- *Urban sprawl*: How does the spread of towns into agricultural land affect subsistence systems?

Annex: Data Sources

This report formulates some key arguments based on quantitative surveys of population, agricultural production, food consumption and exchange. These key arguments include the following:

- South Sudan’s grain production does not keep up with population growth;
- The area harvested to grain increased significantly between 2000 and 2013;
- Uganda has increased its exports of maize to South Sudan over the past decade;
- For the past decade or two, South Sudanese people have sourced most of their foods from markets;
- Food aid has never made a significant contribution to household consumption, except in very specific times and places.

Quantitative data on South Sudan has several limitations, which are reviewed below in order to help readers assess the conclusions reached.

Population data

Calculating South Sudan’s cereal requirement – the gap between national production and the food needs of the population – requires population data. For most of the twentieth century, the 1955 census, conducted at the end of the colonial era, was the most important source of demographic data. After independence in 1956, the Khartoum government’s decadal censuses scarcely reached beyond a few garrison towns. The first big foreign aid effort for South Sudan, in the 1970s, used population projections based on the 1955 census, with an assumed fixed population growth rate.²⁶¹

During Operation Lifeline Sudan (1989–2005), demand for demographic information in order to support planning for relief operations grew.²⁶² The national censuses of this period, however, and the 1989/90 Demographic and Health Survey, largely or totally excluded South Sudan from coverage.²⁶³ Aid agencies therefore continued to estimate population based on assumed fixed growth rates.

²⁶¹ IBRD, ‘Report of a special mission’, 8.

²⁶² UNICEF, ‘Progress of Regions: Multiple Indicator Cluster Survey Results in the Southern Parts of Sudan’, no bibliographic information, 2000.

²⁶³ Republic of the Sudan, ‘Sudan Demographic and Health Survey 1989/1990’, Khartoum: Department of Statistics Ministry of Economic and National Planning, and Columbia, MD: Institute for Resource Development/Macro International, Inc., 1991, 135.

The 2008 Southern Sudan census was conducted by what became known as the National Bureau of Statistics. It transformed understandings of South Sudan's demography, allowing for more sophisticated sampling methods, which could be used to produce household surveys that provided a rich new description of everyday life. However, there has been no census since 2008. WFP and FAO today estimate South Sudan's population using 2008 census data and fixed assumptions about growth rates. Their population estimates are key to their estimates of national cereal requirements, but these are open to criticism as the assumptions made regarding fixed population growth rates do not take adequate account of migration and conflict-related mortality. An in-depth study of conflict-related mortality conducted by a team from the London School of Hygiene and Tropical Medicine estimated the population at 9.7 million in April 2018, while FAO and the UN system estimated the population at 11.2 million in mid-2018.²⁶⁴

Production data

Calculating South Sudan's cereal requirement also requires data on their domestic production. While colonial census data played an important role in subsequent accounts of South Sudan's population, colonial agricultural data was more patchy. Province reports published annually in the Governor-General's report, which contain some anecdotal evidence on production and scarcity, were reviewed. Until the late 1940s, though, colonial administrators did not estimate agricultural production outside the commercial cotton- and grain-growing areas of the northern Nile valley, and information on production was scattered through province and district reports. An important book on agriculture edited by the former director of the government's Department of Agriculture and Forests appeared in 1948, while two major reports on the natural resources potential of South Sudan appeared in 1954 and 1955. All three shed some light on harvested areas and production.²⁶⁵

After independence, agricultural ministries in Khartoum (and after 1973, in Juba) published production data. It was not possible to review primary sources for this report, but secondary sources provided some important insights into the growth of agricultural production between the 1960s and 1980s, as well as after this period.²⁶⁶

²⁶⁴ Francesco Checchi et al., 'Estimates of crisis-attributable mortality in South Sudan, December 2013–April 2018: A statistical analysis', London: London School of Hygiene and Tropical Medicine, 2018, 17; FAO/WFP, 'Crop and Food Security Assessment, 15 March 2019', 11.

²⁶⁵ Tothill, ed., *Agriculture in the Sudan*; JIT, 'The Equatorial Nile Project and its Effects in the Anglo-Egyptian Sudan', report of the Jonglei Investigation Team, 4 volumes, Khartoum: Sudan Government, 1954; SDIT, 'Natural Resources'.

²⁶⁶ IBRD, 'Report of a special mission'; Binayson and Dima, 'Background and Economy'; Bassa, 'Fishery Resources'; Gore, 'Seasonal Labour'; G. M. Craig, ed., *The Agriculture of the Sudan*, Oxford: Oxford University Press, 1991; Onak, Ajameng Andrew Kalichan. 'Impact of Agricultural Policies on the Performance of the Agricultural Sector in South Sudan State (1970–2015)'. MSc dissertation, University of Gezira, Department of Agricultural Economics, Faculty of Agricultural Sciences, 2015.

During the 1983–2005 civil war, humanitarian organizations became the main source for production data. In 1995, the FAO’s Global Information and Early Warning System began publishing crop assessment mission reports, which included data on South Sudan. These reports aggregated rainfall, production, price and population data to give an overview of supply and demand of food. The methodologies used in Crop and Food Security Assessment Mission reports have changed significantly over the period under study.

There is no baseline agricultural survey in South Sudan, and it would be difficult to produce one, as many people grow food in scattered, intercropped little patches. This is a feature of many subsistence systems, and makes quantification difficult. There is likely satellite data on agricultural production, but it is not available to food security organizations working in South Sudan. FAO’s assessments of harvested area and cereal yields, published in its Crop and Food Security Assessment Mission reports, are currently based on data from 39 County Crop Monitoring Committees across the different agro-ecological zones of the country. These monitoring committees base their production data on county-level estimates of active farming households, average farm sizes and average yields, which are then backed up by annual studies of factors affecting yield (such as rainfall and security), county visits, farm case studies and reports from the government and NGOs.²⁶⁷

The data published in FAO’s Crop and Food Security Assessment Mission reports has also been criticized on a number of grounds. First, FAO’s population estimates are based on an assumed fixed rate of growth, which does not take into account displacement or excess mortality during conflict. Second, FAO’s reports are biased towards cereals and may misrepresent social groups that depend more on tubers or milk. Third, the reports are biased towards the quantities of cereals produced, rather than looking at systems and relations of production. Fourth, the Crop and Food Security Assessment Mission reports do not routinely review evidence from assessments carried out by other agencies. Sometimes local assessments from smaller humanitarian groups shed light on local conditions that may be at odds with the general picture presented by crop monitoring or food security data. This is a limitation shared by this report, which does not systematically review all local food security assessments over time. Finally, the FAO has used different methods for calculating production over its 25 years of reporting, undermining the comparability of results. This report sometimes compares FAO estimates over different years, although the estimates are not strictly comparable.

These limitations affect a key finding of the Crop and Food Security Assessment Mission reports, namely, the ‘cereal requirement’. This is the amount of cereals FAO/WFP and their partners assume the country will need in a given year. In 2017, for example, the mission report estimated there were 11.4 million people in South Sudan, consuming on average 110 kg of cereals, adding up to a cereal requirement of 1.2 million tonnes. The report estimated that South Sudan’s net cereal production was 764,107 tonnes, and that its cereal deficit was 482,287 tonnes.

²⁶⁷ FAO/WFP, ‘Crop and Food Security Assessment, 15 March 2019’, 16.

Basing cereal requirements on a notional average consumption figure of 110 kg per person per year is problematic. Other, less regular, studies estimate production based on cereal consumption, using consumption figures from the 2009 National Baseline Household Survey, which are much higher than FAO/WFP notional cereal requirements.²⁶⁸ Consumption-based estimates use assumptions about quantities of food produced, purchased and imported.

Import data

Import data can also shed light on South Sudan's cereal requirement. Import data for South Sudan did not exist before it became an independent country in 2011. Colonial trade records for Kenyan and Ugandan exports to Sudan show there was no trade in grain between the two countries in the first half of the twentieth century.²⁶⁹ Ugandan and Kenyan exports to Sudan can be followed through their own trade records, World Bank reports, and, from the 1990s onwards, through Comtrade, an online trade database managed by the UN. These sources suggest that grain exports from Uganda to Sudan only became significant after the 2005 peace deal. Kenya and Ethiopia export little grain to South Sudan.

Steamer records published by the colonial government and the International Bank for Reconstruction and Development give an indication of the movement of grain from present-day Sudan to South Sudan between 1930 and 1970.²⁷⁰ After 1970, however, this report was not able to identify sources quantifying intra-Sudan trade, although it seems possible that some official records exist, and international institutions such as the World Bank and the African Development Bank have published customs data on grain imports from Sudan.²⁷¹

Since 2012, Sudan has frequently prohibited exports to South Sudan and this has affected data gathering. Data on Ugandan imports is set out in the main text of this report, and raises more questions than answers.²⁷² Other countries export relatively little food to South Sudan. Detailed food import figures could show cereal requirements and shed light on production figures.²⁷³

²⁶⁸ World Bank, 'Agricultural Potential', 14; Dorosh et al., 'Enhancing Food Security', 10.

²⁶⁹ Colony and Protectorate of Kenya and Uganda Protectorate, 'Annual Trade Report of Kenya and Uganda for the year ended 31st December 1948', Nairobi: Government Printer, 1949; Uganda Protectorate, 'The External Trade of Uganda (1950–1960)', Entebbe: Statistics Branch, Ministry of Economic Affairs, 1960.

²⁷⁰ SDIT, 'Natural Resources', 133, 137; IBRD, 'Report of a special mission', Annex 3.3, Table B-4.

²⁷¹ World Bank, 2009; ADB, 'South Sudan: A Study on Competitiveness and Cross Border Trade with Neighbouring Countries', Tunis: African Development Bank, 2013, 55.

²⁷² BOU [Bank of Uganda], 'Composition of Exports'. Spreadsheet accessed 8 Oct 2018, https://www.bou.or.ug/bou/rates_statistics/statistics.html; UBS, 'Formal and Informal'.

²⁷³ FAO/WFP, 'Crop and Food Security, 6 May 2015', 11, 25.

Food security data

Understanding whether people access food through markets or other means requires a more complex picture of a society's food systems than that given by the production and population aggregates produced by crop surveys. It requires household surveys, or simplified versions of household surveys.

In the late colonial period, the government nutritionist produced ground-breaking surveys of nutrition in some areas of South Sudan.²⁷⁴ In the period between 1955 and the 1980s, however, few sources on nutrition or on food access and availability in South Sudan were identified by this report. Operation Lifeline Sudan initially used malnutrition and mortality rates to understand food security and plan operations.²⁷⁵ From 1994, though, it adopted the Food Economy Approach (later known as the Household Economy Approach). This used local, participatory sampling methods to understand how richer and poorer people obtained food in different seasons and ecologies. It described the relative importance of different food sources—own production, market, wild foods and gifts—to the annual food requirements of a household.²⁷⁶

The Household Economy Approach is no longer used in South Sudan. However, its techniques still shape the food security reporting of WFP and FEWS NET. Food security data is nowadays collected by the National Bureau of Statistics, in conjunction with WFP and other agencies. Their Food Security and Nutrition Monitoring System (FSNMS), conducted before and after harvest each year, uses randomized sampling techniques. This is likely to give a clearer picture of food security, as its sampling plan is based on the census data collected by the National Bureau of Statistics. In 2018, the FSNMS sampled over 8,000 households in 711 clusters, in 79 counties in each state of South Sudan. This system addresses three main topics, namely food consumption (based on dietary diversity and food frequency); share of household expenditure on food; and the different coping strategies adopted by households. The system uses multiple indicators to give a richer account of food security, and identifies major shocks, such as food price inflation.

These methods for assessing food security are used by humanitarian planners to help prioritize allocations of food aid worldwide. They are intended to give a nuanced picture of nutrition, hunger, food availability and access, and may give lower estimates of food needs than crop assessments.²⁷⁷ They have been criticized due to being implicated in the 'resilience regime', which is the notion that promoting individual responsibility and capacity to withstand shocks is an appropriate response to protracted food and security

²⁷⁴ Culwick, 'A Dietary Survey'; JIT, 'Equatorial Nile Project', vol. 1, 244–7, vol. 4, E12.

²⁷⁵ Ataul Karim et al., 'Operation Lifeline Sudan: A Review', Geneva: UN Department of Humanitarian Affairs, 1996, 119.

²⁷⁶ Penny Holzmann et al., 'The Household Economy Approach: A guide for programme planners and policy-makers', London: Save the Children, 2008; Duffield et al., 'Sudan: Unintended Consequences', 126.

²⁷⁷ Jaspars, *Food Aid*, 122.

crises, such as is the case in South Sudan.²⁷⁸ They are supposed to identify ‘the most vulnerable’ groups in a traumatized population, but are sometimes used to cut food-aid allocations to people living in a protracted emergency.²⁷⁹ They can also be criticized for their use of the term ‘coping strategies.’ People living in a subsistence system have multiple livelihood strategies, but once they move into a market system some of those strategies, such as wild food collection, are classified as ‘coping strategies’. These are deemed markers of failure rather than markers of diversity.²⁸⁰

Food aid and market food

This report argues that markets represent much more important sources of food than food aid. This conclusion is based on food security data going back to the 1990s, using the decentralized, local studies based on the Household Economy Approach that formed the main source of food security information during the 1983–2005 civil war. In 2009, the National Baseline Household Survey, and from 2010 the FSNMS, began to give a richer and more detailed picture of food sources, based on randomized sampling of households across the country.

Though the FSNMS questionnaire looks at all food groups—including dairy, meat, fish, eggs, dairy, vegetables, fruits, oils, sugars, condiments and wild foods—published reports focus on grain. This is why this report also focuses specifically on grain.

Households in the sample were asked questions about the food they actually consumed in a given time period—the previous 7 or 30 days—and then asked to describe the source of that food. For example, the December 2018 FSNMS questionnaire asks respondents to choose between the following responses: Own Production, Market Purchase, Borrowing/Debts, Food Assistance, Support from Neighbours, Exchange of Food for Labour, Bartering. These responses are then aggregated across the county, state or country, to give a picture of the main food sources.

Data on actual deliveries of food aid can help build a picture of food-aid dependence. It is hard, however, to find figures for actual distribution of food aid. There is much more information on cereal requirements and targets than on actual deliveries (see Box 1 in Section 1), with figures for the latter more likely to appear in retrospective evaluations of aid programmes.²⁸¹ For example, WFP’s Country Portfolio Evaluation, published in 2017, provided data on actual distributions over a five-year period.²⁸²

²⁷⁸ Jaspars, *Food Aid*, 176.

²⁷⁹ Jaspars, *Food Aid*, 87.

²⁸⁰ Gullick, ‘A Brief Investigation’, 78.

²⁸¹ Betts, *The Southern Sudan*; Karim et al., ‘Operation Lifeline’; Duffield et al., ‘Sudan: Unintended Consequences’; WFP, ‘Country Portfolio Evaluation’.

²⁸² WFP, ‘Country Portfolio Evaluation’.

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