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Constraints and Complexities of Information and Analysis in Humanitarian Emergencies

Evidence from South Sudan

A FEINSTEIN INTERNATIONAL CENTER PUBLICATION

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Cover photo: Internally displaced South Sudanese in Jonglei, 2014. By Dan Maxwell.

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Foreword

The current crisis in South Sudan is one of the world's most challenging humanitarian operations. This makes for a difficult environment for gathering and analyzing data: The country is large, population is widely dispersed, and limits on transportation and telecommunications are severe. The IPC system has been able to address many of these challenges, and it has also learned from its experience. This learning has not always been easy, and many challenges remain.

This study was motivated in part by the authors' intensive engagement with the IPC Technical Working Groups in South Sudan over several years beginning in 2014. To be very clear from the outset, the two main researchers (Maxwell and Hailey) served on the Emergency Review Committee (ERC) for IPC analysis that was mobilized every time a famine or near-famine situation resulted from an analysis and thus had an unusual vantage point from which to observe the analysis—and the challenges to which it was subjected. This was also a motivation for the study. However, this study was conducted independently of the ERC, and interviewees were made aware that this research was not conducted for or on behalf of the ERC or the GSU.

This research—and particularly the uptake of the research—has proceeded in a manner that was as participatory and engaged as possible. This relatively high level of engagement with the topic, and with many of the analysts and agencies involved, has meant that some of the recommendations growing out of the research have already been taken on board before this report could be published. Particularly notable was the "Lessons Learned" workshop in May 2018, but other less headline-making changes were made along the way as well. The report is still issued is full, but with progress on particular issues noted.

Many challenges remain. It is in the hope of continuous learning and the collective addressing of these challenges that this research report is offered.

The Authors
Nairobi, Kenya
June 7, 2018

Acronyms

ARCSS Agreement on the Resolution of Conflict in South Sudan
CPA Comprehensive Peace Agreement
ERC Emergency Review Committee
EROF elevated risk of famine
FEWS NET Famine Early Warning Systems Network
FRC Famine Review Committee
FSL food security and livelihoods
FSNAU Somalia Food Security and Nutrition Assessment Unit
FSNMS Food Security and Nutrition Monitoring System
GAM global acute malnutrition
GDP gross domestic product
GRSS Government of the Republic of South Sudan
GSU General Support Unit
IASC Inter-Agency Standing Committee
IPC Integrated Phase Classification
IPC-TWG Integrated Phase Classification Technical Working Group
MUAC mid-upper arm circumference
NBS National Bureau of Statistics
NGO non-governmental organization
NIWG Nutrition Information Working Group
ODHC Office of the Deputy Humanitarian Coordinator
PoC Protection of Civilians
SSDF South Sudan Defense Force
SMART Standardized Monitoring and Assessment of Relief and Transitions
SPLA Sudan People's Liberation Army
SPLM Sudan People's Liberation Movement
SPLA-IO Sudan People's Liberation Army In Opposition
TWG Technical Working Group
UN United Nations
UNHCT UN Humanitarian Country Team
UNMISS UN Mission in South Sudan
UNOCHA UN Office for the Coordination of Humanitarian Affairs
WASH water, sanitation, and hygiene

1. Introduction to South Sudan

Prior to South Sudan's independence from Sudan in 2011, decades of civil war raged in Sudan. In 1983, fighting between the Sudanese People's Liberation Movement (SPLM) and the Sudanese government incited Sudan's second civil war since independence from Britain and Egypt in 1956. The Comprehensive Peace Agreement (CPA) was brokered in 2005, which granted the south regional autonomy, a power-sharing government, and a referendum on independence scheduled for 2011. Over 98 percent of the population voted in favor of secession, and the United Nations recognized South Sudan as an independent country in July 2011.[1]

Despite its per capita gross domestic product (GDP) of $1,700, South Sudan has the characteristics of some of the poorest countries in the world (Central Intelligence Agency 2017). Just over a quarter of the population over age 15 can read and write, with 18 percent of youth aged 15–24 unemployed. The median age of its 13 million inhabitants is 17.3 years, and it is an ethnically diverse country (Central Intelligence Agency 2017). Internal infrastructure, such as roads, markets, electricity, and plumbing, is extremely limited. South Sudan is rich in agricultural land and oil reserves. Approximately 75 percent of the former Sudan's oil stores are located in South Sudan, while the means to refine and export this resource are based in Sudan (BBC News 2018). In January 2012, South Sudan suspended its oil production for 15 months due to a disagreement with Sudan, decimating the country's income and GDP. Resuming production in March 2013 resulted in a quick recovery and a spike in GDP, which temporarily boosted it into the low-middle-income category (World Bank 2015). However, a combination of reduced oil production and conflict has since challenged economic development and poverty reduction. GDP declined 13.8 percent in 2016, while its currency inflated by 379.8 percent that same year. The government's military spending combined with low oil prices have driven the country into debt, and it relies heavily on foreign aid (Central Intelligence Agency 2017).

1 De Waal (2015) notes that, while the South Sudanese appetite for independence was undeniably strong, this overwhelming majority does not reflect the views of some groups that were disenfranchised by the SPLM/A due to their possible connections to or affiliations with the Sudanese government.

2. Background to the crisis in South Sudan

The country born from conflict has continued to struggle with it. Prior to the CPA, southern Sudan was divided between the Sudan People's Liberation Army (SPLA), the Sudan Armed Forces, and the South Sudan Defense Force (SSDF) (ISSAT 2016). The Sudan People's Liberation Movement/Army (SPLM/A) was founded in 1983 by John Garang during the Second Sudanese Civil War. After Garang's unexpected death in a helicopter crash in 2005, Salva Kiir Mayardit assumed leadership of the group from his role as the head of the military wing. Following the CPA, the SSDF was made illegal, and the SPLM/A consolidated power. After a year of instability, Kiir called for amnesty through the Juba Declaration in 2006, incorporating high ranking officials from the SSDF into the SPLA but failing to build internal cohesion and produce sufficient representation of its diversity (International Crisis Group 2014). As Vice President under the CPA, Kiir drove the referendum movement and became President upon independence (BBC News 2013).

Independence has done little to alleviate political and ethnic cleavages. While reportedly more than 40 militia groups are active within South Sudan (Smith 2017), the two key players in the current conflict are the SPLA and the corresponding Sudan People's Liberation Movement (the dominant governing party in South Sudan) on one side and the Sudan People's Liberation Movement in Opposition (SPLM-IO) (a political and military opposition group founded by former Vice President Riek Machar in 2013) on the other. These groups drive the ongoing insecurity and instability.

After two years of governing the independent South Sudan, the SPLM party unraveled due to pre-existing fractures. President Kiir, an ethnic Dinka, dismissed the finance minister and cabinet affairs minister in June 2013. The following month, he dismissed the rest of his cabinet and Vice President Machar, an ethnic Nuer, as a show of power within the SPLM (International Crisis Group 2014). In December 2013, severe fighting broke out in Juba after a weekend meeting of the SPLM's National Liberation Council. The following day, the president accused Machar of planning a coup (Al Jazeera 2014; International Crisis Group 2014). Though Machar denies this claim, the country subsequently erupted into civil war, which has since killed thousands and displaced millions. As a result of this split, Machar declared himself the leader of the SPLA-IO (ISSAT 2016).

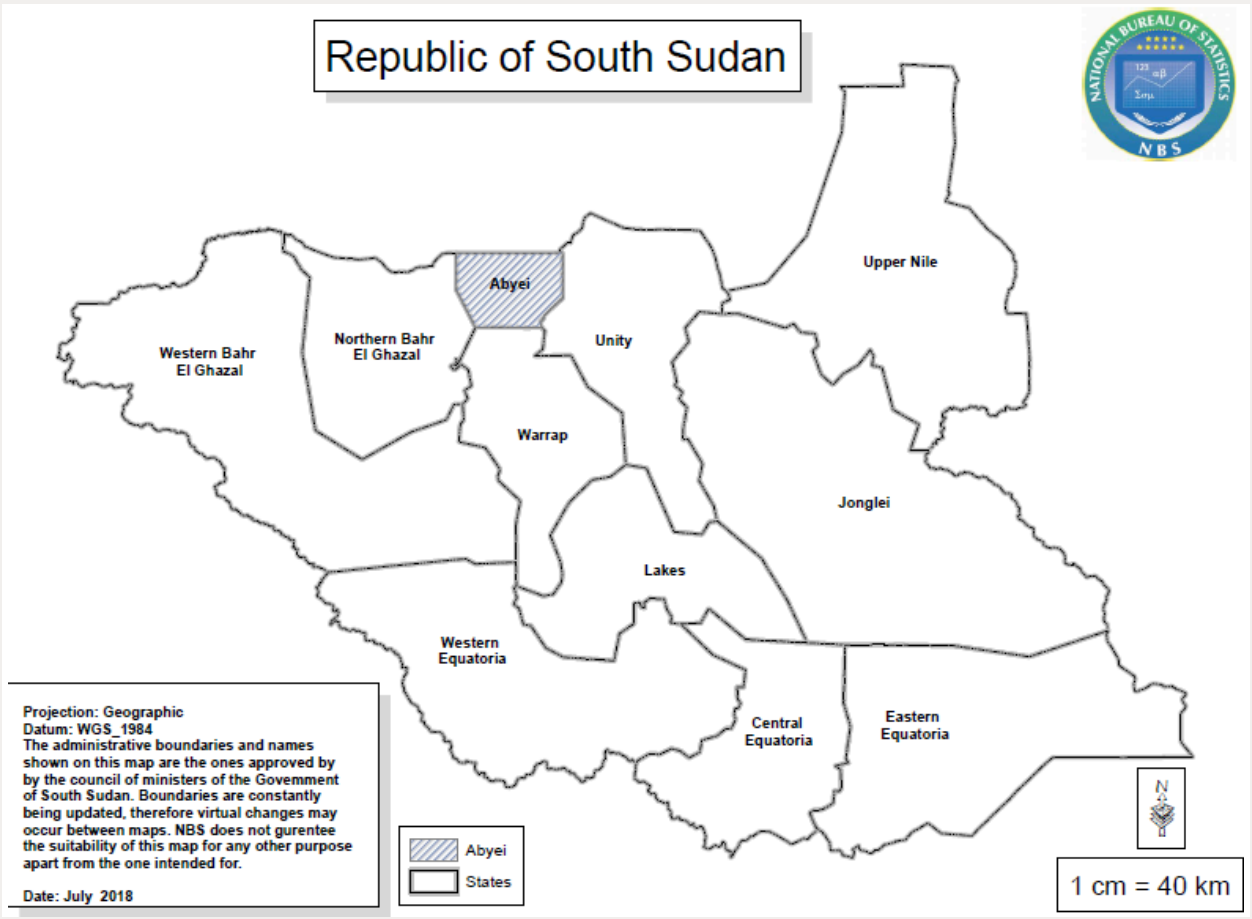
A series of peace talks in 2014 failed. Throughout that year, violence spread across Greater Upper Nile region (Upper Nile, Jonglei, and Unity States) in the northeast corner of South Sudan, with clashes in Bentiu in the north and an attack on the United Nations Mission in South Sudan (UNMISS) compound in Bor, Jonglei State in April 2014 (UNOCHA 2017a). The violence spread eastward and south, forcing aid workers to relocate from Leer, Ganyiel, Nyal, Mayendit, and other towns in Unity State in May 2015, followed by heavy fighting in Malakal throughout June and July. In August 2015, the warring parties signed the Agreement on the Resolution of Conflict in South Sudan (ARCSS) with an agreement to form the Transitional Government of National Unity in April 2016 (UNOCHA 2017c). In October 2015, fighting resumed in Unity State and Western Equatoria, driving displacement and disruption of humanitarian aid (UNOCHA 2017a). Machar returned to Juba to implement the agreement alongside President Kiir in April 2016. The peace was short-lived as tension within the coalition government escalated, funding to make the power-sharing agreement palatable to all parties proved unavailable, and disjointed and unreconciled armies

were forced to work collaboratively to secure Juba (de Waal 2016). Following a resurgence of violence in Western Bahr al Ghazal in June, violence broke out in Juba once again in July 2016 and spread across the country to the Equatorias and Unity State (Smith 2017). From July 8 to 11, numerous civilians and two peacekeepers were killed in intense violence. Conflict has waxed and waned since.

The increase in violent conflict led directly to displacement and a rapid deterioration in the food security, health, and nutritional status of the affected population (see Figures 4 and 5 below). Already by mid-2014 populations were at risk of famine in Greater Upper Nile regions. Populations in Unity State, and later Jonglei and parts of Greater Bahr al Ghazal (Western and Northern Bahr al Ghazal, Warrap, and Unity States), were also at risk of famine. With the spread of violent conflict to the Equatorias in 2016, areas that had been considered the "bread basket" of South Sudan, were also plunged into widespread displacement and became increasingly severely food insecure (see Figure 5). In February 2017, the Government of the Republic of South Sudan declared a famine in two counties in Unity State, based on an analysis conducted by the Integrated Phase Classification Technical Working Group (IPC-TWG) (IPC South Sudan 2017). Although the famine was declared over a few months later, by then the overall magnitude of the food-security and nutrition crisis had increased.

As with any conflict, the roots and driving factors are diverse and complex. In an interview with the

Figure 1. Map of South Sudan



Source: South Sudan National Bureau of Statistics

Council on Foreign Relations, Alex de Waal cites the suspension of oil production as an early, devastating mistake: "What this meant was that the actual mechanisms for the political management of South Sudan collapsed. And the political competition within the ruling party intensified" (de Waal 2016). This, combined with the fracturing ethnically diverse militia, set the stage for the devolution of a political conflict to an ethnic one. Search for Common Ground cites increasing ethnic isolation as a key driving factor of the conflict, exacerbated by social fragmentation and economic decline (Smith 2017).

3. The humanitarian context and response to date

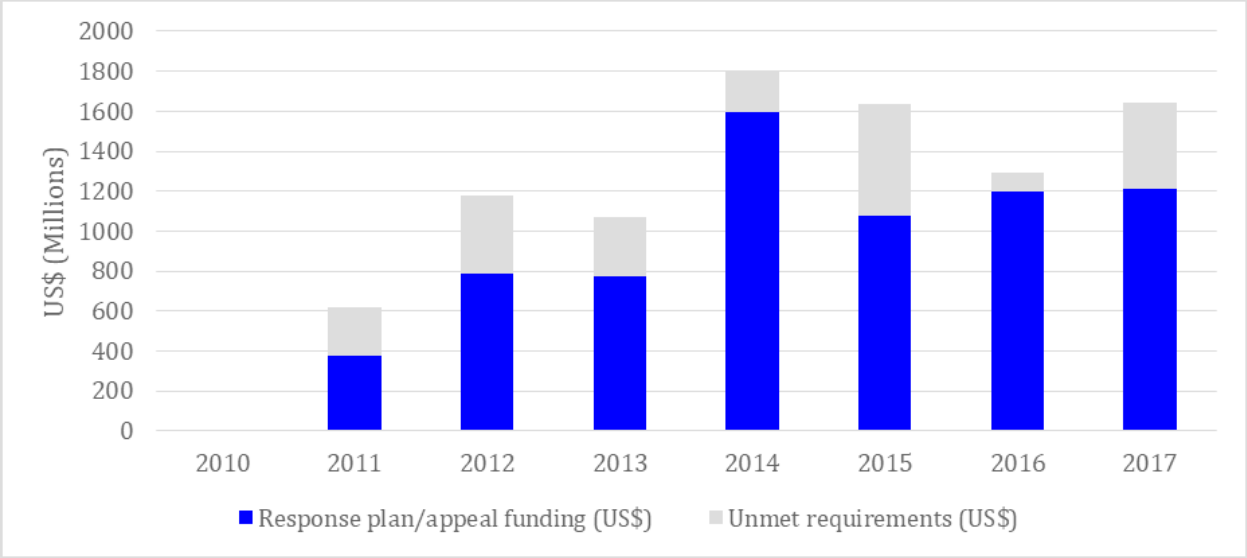
The United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA) report "2018 Humanitarian Needs Overview: South Sudan" (UNOCHA 2017a) highlights continued violence and poor economic growth as key drivers of the ongoing humanitarian crisis. Civilians have experienced severe hardship as a result of the ongoing violence. A 2014 report from Amnesty International cites direct attacks on and looting of civilian infrastructure and property, with many attacks based on ethnicity. Protection of Civilian sites (PoC) have also come under attack; for instance, armed men raided the UNMISS PoC compound in Bor in April 2014, killing over 40 people (Amnesty International 2014). Smith (2017) argues that national violence has greatly exacerbated inter-communal ethnic violence, with greater availability of guns translating into civilian targeting. As a result of increasing insecurity, over seven million people, more than half of the population, are in need of assistance and protection. Four million people have fled their homes, 1.9 million are internally displaced and 210,000 live in PoC sites. An additional 2.1 million people are living as refugees in Sudan, Uganda, and Ethiopia (UNOCHA 2017a). Women and children are particularly vulnerable: Up to 65 percent of women and girls have experienced physical or sexual violence in their lifetime, with women and girls living in Juba PoC sites experiencing multiple incidents of sexual violence. Among reports of sexual assault, 70 percent or more occurred during a direct conflict experience (Murphy et al. 2017).

The 2018 Humanitarian Needs Overview estimates that more than 19,000 children have been recruited by armed actors (UNOCHA 2017a). Almost 1.1 million children under five and 672,500 pregnant women suffer from acute malnutrition (ibid.), while in July 2017 eight out of nine states were assessed with global acute malnutrition (GAM) rates above 15 percent, the emergency threshold (ibid.). As of January 2018, the Famine Early Warning System Network (FEWS NET) warned that acute malnutrition prevalence remains critical in Jonglei, Northern Bahr al Ghazal, Eastern Equatoria, and Upper Nile.

The humanitarian community has responded in several ways. International agencies have long been involved in South Sudan—during the war under OLS (and some outside of OLS), and continuing up to the present. National actors are also active, often participating in the Cluster System and receiving funding from the Common Humanitarian Fund, with some 80–100 national NGOs serving as implementing partners and approximately 150 community-based organizations operating at the state level. They offer close proximity to affected communities and a nuanced understanding of local culture and ethnic ties (Tanner et al. 2017). Internationally, development aid and funding began pouring into the country after the CPA and especially after independence in 2011. Even before 2013, humanitarian aid was part of the mix (Figure 2). To support the transition and state-building processes, the United Nations mandated the UNMISS peacekeeping force in South Sudan in 2011; UNMISS continues to operate with mixed criticism and acclaim (Wells 2017; United Nations 2016). Peacekeepers take primary responsibility for establishing and protecting the PoC sites, which shelter hundreds of thousands of people.

In February 2016, the government signed into law the Non-Governmental Organizations Act, replacing the prior regulatory framework adopted in 2003 (Republic of South Sudan 2016; Akol 2016). This

Figure 2. Humanitarian Funding for South Sudan



	2010	2011	2012	2013	2014	2015	2016	2017
Unmet requirements (US$ million)	0	240.5	389.3	300.1	207.3	558.7	96.1	427.6
Actual response plan/appeal funding (US$ million)	0	379.2	787.6	771.9	1594.4	1076.9	1195.0	1212.1
Total requirements (US$ million)	0	619.7	1176.9	1072.0	1801.8	1635.5	1291.1	1639.7
Unmet requirements		39%	33%	28%	12%	34%	7%	26%

Source: UNOCHA Financial Tracking Service 2017

law allows the government's Relief and Rehabilitation Commission to oversee the work of humanitarian organizations. This requires submission of reports and financial statements to the government, fees for operation, and approval for humanitarian activities, including flights and distributions (Hamsik 2017). The act also requires that at least 80 percent of these organizations' employees be South Sudanese. While the act aims to regulate international organizations and build local capacity (Akol 2016), several members of the international humanitarian community expressed concern regarding the law's provisions mentioned above and the possible hindrances to humanitarian aid that may result (Hamsik 2017; Stylianides 2016).

Though humanitarian aid has reached millions of people with lifesaving assistance, several barriers and challenges to effective aid exist in South Sudan. The country has been the most dangerous place in the world for humanitarian actors over the last few years, with the most victims and overall deaths of any country in which aid is provided (Humanitarian Outcomes 2017). During the outbreak of violence in July 2016, for example, South Sudanese soldiers forced entry into a local hotel serving as a housing base for foreign aid workers and sexually assaulted several women (Beaubien 2016). An October 2017 Humanitarian Access Snapshot cited 116 access incidents in just that month,[2] with 60

2 Humanitarian access incidents in October 2017 include violence against personnel (28%), violence against assets (24%), operational interference (17%), bureaucratic/

Figure 3: Security Incidents, January 2016-November 2017

Source: UNOCHA December 2017

involving violence (UNOCHA 2017b). Almost 40 percent of these incidents were attributed to state security forces. November 2017 was cited as the most dangerous month for humanitarian workers in South Sudan since December 2013. The UNOCHA Snapshot reports 103 incidents, with nine aid workers killed (UNOCHA 2017c). Overall, attacks and threats such as these resulted in suspension of numerous aid activities around the country, as well as relocation of aid workers and the looting and vandalization of humanitarian and health facilities. Due to the threats facing local and international humanitarian workers and civilians alike, the UN Security Council issued a presidential statement in August 2017 highlighting "the need to ensure the security of humanitarian operations and personnel in conflict-affected countries" and "safe, timely and unhindered access for humanitarian assistance to all areas" (United Nations Security Council 2017, p. 1). Humanitarian personnel safety and access to affected populations continue to be a challenge.

In addition, a January 2018 report notes ongoing manipulation and diversion of aid by parties to the conflict, with little respect for humanitarian principles. Both government and opposition forces have participated in looting food aid and supplies, spiking in July 2017. Food aid is often redistributed or diverted, either to armed actors or local elites. The billion-dollar humanitarian and relief budget, as compared to the government's budget of $200 million in 2018–2019, is a huge infusion of foreign currency into the national and local economies from NGOs and foreign governments alike. Politicians at multiple levels also derive legitimacy from the aid they procure for those under their domain, and humanitarian interactions with the government imply support for the government's sovereignty. The report notes that the political elite of South Sudan have learned from years of interaction with the international "humanitarian community" that although objections might exist about aid diversion or capture, the humanitarian imperative will eventually take precedence over capture/diversion concerns (USIP 2018). This creates multiple perverse incentives for both conflict actors and humanitarians and is a constant concern. Likewise, exchange rate gains from the conversion of hard currency into South Sudanese pounds from cash-transfer programs, and the "checkpoint economy" through which both commercial goods and in-kind aid must pass, syphon more money out of the humanitarian effort and into the war economy (Thomas 2018).

The Humanitarian Coordinator for South Sudan, Toby Lanzer, noted that a Level 3 Emergency for South Sudan on February 11, 2014, after "intense" consultation with Inter-Agency Standing Committee (IASC) principals (UNHCR 2014). But the discussion of famine met much more resistance internally in South Sudan. The reasons for this are analyzed below.

administrative impediment (16%), restriction of movement (11%), and active hostilities (4%) (UNOCHA 2017b).

4. IPC analysis

Integrated Phase Classification (IPC) analysis was first introduced in Somalia in the mid-2000s. IPC analysis was intended as a means of graphically representing the severity of crisis in that context and it quickly grew into a generalized means of amalgamating different kinds of information into an overall analysis of the severity of acute food insecurity linked to a mapping protocol organized either by livelihood zones (as was the original application in South Sudan) or localized administrative units (as it is currently done). The purpose of IPC is to compare the severity of crisis across different geographic units of analysis—and indeed across dissimilar contexts to enable the impartial allocation of resources.

IPC analysis relies on the current status of three main indicators: the prevalence of food insecurity, the prevalence of malnutrition, and the crude mortality rate (and sometimes a fourth—changes in livelihoods). This information can be provided by a range of humanitarian actors or by the government of the affected country, but increasingly frequently the data for IPC analysis comes from two main sources: nutrition surveys using the SMART methodology (Standardized Monitoring and Assessment of Relief and Transitions)[3] usually provide the nutrition and mortality information, while standardized food security assessments provide information on food security and livelihoods change. In South Sudan, the food security and livelihoods information comes from the Food Security and Nutrition Monitoring System (FSNMS). Recently, nutrition surveys have begun to incorporate a limited number of food security indicators, and FSNMS incorporates some nutritional measures (it used to be called the FSMS—i.e., it did not collect nutritional information). This information is analyzed and synthesized by a Technical Working Group and mapped according to the different phases in the IPC tool: from no food insecurity to stressed, crisis, emergency, and famine (Phases 1–5 respectively). A constant question has concerned the amount of information and the degree of geographic granularity necessary for this analysis. Another has been about the timing and flexibility of data collection. To date, in most countries, data has been collected on a seasonal basis, representative of the first or second administrative unit level (or livelihood zones in some countries). In South Sudan, data is collected to reflect seasonal differences in the rainy season and in the post-harvest season, with an update at the end of the dry season. Information is representative at the (pre-2015) county level. Producing representative data for 78 units of analysis twice a year is an enormous logistical task. More flexible options are being sought—at least for the updates.

Although not initially intended as a famine analysis tool *per se*, IPC has provided both the consensus definition of famine and the means of determining when famine is occurring. A set of thresholds in each of the three main indicators (food insecurity, malnutrition, and mortality) has to be breached in the same time period for the same population. At the time of the famine declaration in Somalia in July 2011—the first time that the IPC had been used to declare a famine—the Somalia Food Security and Nutrition Assessment Unit (FSNAU) wanted to be certain that the results were seen to be reviewed, so they approached an outside group of analysts to review their data before presenting the evidence to the UN Humanitarian Country Team (UNHCT).

So, when a renewed food security crisis emerged in South Sudan following the conflict that displaced large numbers of people beginning in December 2013, renewed attention was paid to the quality of data and analysis of the crisis. Given both the difficulty in accessing all the displaced population and the likelihood that people's access to food was rapidly deteriorating, the General Support Unit (GSU) for IPC set up the Emergency Review Committee (ERC) in early 2014 to serve a similar function of reviewing data quality and the rigor of analysis in the event that Phase 5 (famine) might be an outcome of IPC analysis in South Sudan. The ERC itself was set up under Guidance Note #14 "Tools and Procedures for Establishment and Implementation of the IPC Global Emergency Review Committee," of April 18, 2014. It outlined the role of the ERC as follows:

3 Hereafter, the report refers to such nutrition surveys conducted using the SMART methodology as Nutrition surveys.

The purpose of the IPC ERC is to support IPC quality assurance and help ensure technical rigor and neutrality of the analysis. The activation of the IPC ERC provides an additional validation step for the Country IPC Technical Working Groups (IPC TWG), before the release of IPC results.[4] The activation of this committee is recommended, especially when there is . . . the potential outcome of an IPC declaration of Famine (Phase 5), [or] a break-down in the technical consensus process.[5]

The ERC was to consist of four to six global experts on various aspects of the analysis—specifically food security, nutrition, and mortality, and more broadly, livelihoods under stress. It was to be independent of the in-country TWG and the GSU, but was to advise both on the technical quality of the information and the rigor and accuracy of the analysis. The roles of the various actors were clearly spelled out in the document, including the in-country IPC TWG, the IPC GSU in Rome, the IPC Steering Committee (the SC) and the ERC (ibid.). This TOR was immediately put into action to review an upcoming analysis in South Sudan in May 2014. Four individuals, all somehow informed by the 2011 Somalia experience, were named to the ERC on April 25, 2014.[6]

From the outset, there were major constraints to the analysis that the ERC conducted. Over the course of two years, fears began to arise that perhaps there were other reasons–beyond just insecurity–for the lack of data that would enable a complete analysis of famine. Those fears, and the observations on which they were based, were part of the reason for this study.

4 Section 4: Building Technical Consensus, "IPC Technical Manual Version 2.0," pages 23–24, 2012.

5 IPC General Support Unit. 2014. "Terms of Reference: IPC Global Emergency Review Committee," April 14, 2014.

6 To repeat the note in the foreword, and for full disclosure, both of the main authors of this report (Maxwell and Hailey) have served on the ERC (now renamed the Famine Review Committee or FRC) for the four years of its existence.

5. Methodological note on the study

This report synthesizes information from a comprehensive desk review and key informant interviews. First, a research assistant at Tufts conducted a review of the literature on the crisis in South Sudan. Second, a team from the Feinstein International Center and the Centre for Humanitarian Change conducted interviews, either in person or via Skype, with respondents from the donor community, UN agencies, international and local non-government organizations, and members of the Government of the Republic of South Sudan who oversee or are directly involved in the IPC process. During these interviews, inquiries were made regarding the technical aspects of the data collection and analysis process and, in particular, to attempt to identify potential gaps in upcoming analyses that might be addressed by quick donor action in advance of the next IPC analysis. These interviews were conducted mostly in May and June 2017. Third, the field team visited South Sudan in June 2017 to conduct in-person interviews with key informants in the GRSS, UN agencies, international NGOs, local organizations, and specialized food security information agencies. Follow-up interviews were subsequently held with staff of regional offices or key informants who had been outside the country at the time of the field team visit.

For all key informant interviews, respondents were identified either on the basis of their positions and engagements with the IPC analysis, or via snowball sampling based on earlier interviews. In person and by Skype or telephone, the team conducted 52 interviews, with a total of 56 people. During each interview, detailed field notes were taken, noting phrases and terminology used by respondents to capture their narrative. Questions were open-ended to avoid leading respondents to particular responses. There were combined with the researchers' field notes from observations of various analysis processes along the way.

Interview notes were coded using the qualitative analytical software NVivo Version 11.4.2. An iterative coding approach was developed with codes determined both deductively from study instruments and inductively from transcripts. Emergent themes were then used to draft the initial outline of this report, with coded information categorized and synthesized accordingly. The Tufts University Social, Behavioral, and Economic Research committee granted Internal Review Board clearance for the overall research program on May 31, 2017. Sources in the analysis below are noted by reference to an interview number in parentheses. No interview respondents or their respective agencies are identified in the report.

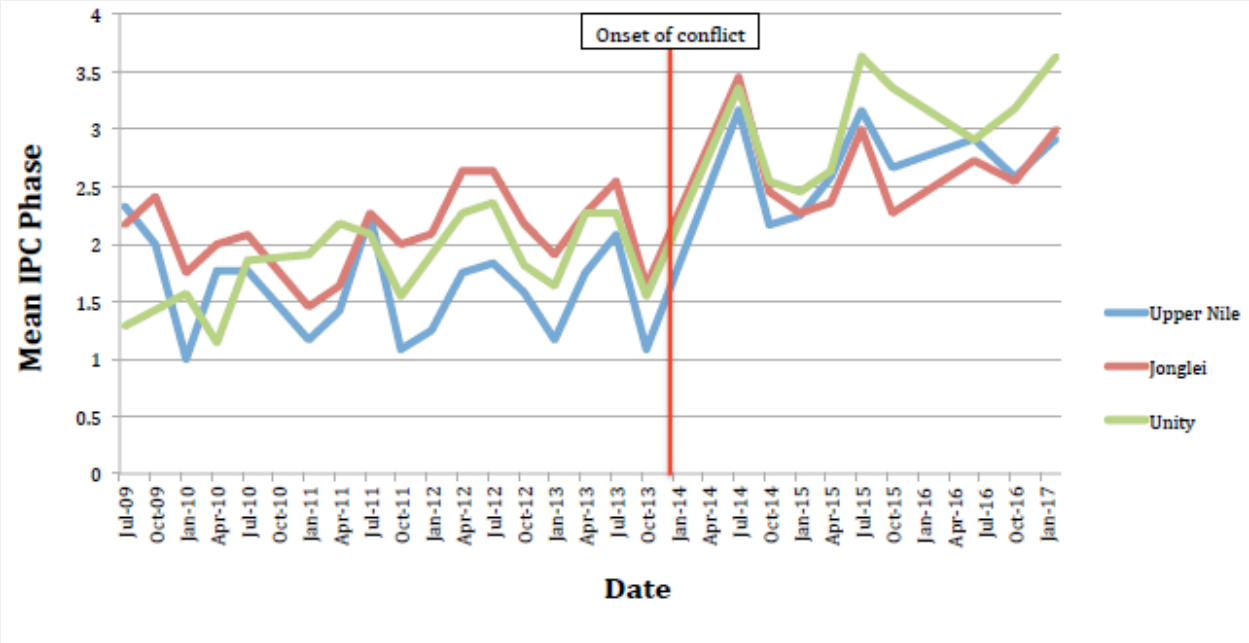
6. IPC Analysis in South Sudan 2013–2017

The spread of violent conflict across areas of South Sudan following December 2013 resulted in a rapid deterioration of food security status. Figure 4 depicts the mean IPC phase classification at the county level, but aggregated to the state level—and the onset of violent conflict in the Greater Upper Nile region of the country. Figure 5 represents the same information for the Greater Equatoria region (Western, Central, and Eastern Equatoria). In both cases, the onset of violent conflict triggered a rapid deterioration in general food security status across the regions. Although the advent of violent conflict was more sporadic in Greater Bahr al Ghazal, the same trend was noted there as well.

Collecting high-quality data in a situation of complex and ever-changing security and access constraints, in addition of other challenges, has led to consistent gaps in the data for analysis in South Sudan. This effort is even more complicated because it demands multi-sectoral, multi-partner efforts that include all the main stakeholders in food security and nutrition response in the country—governmental, UN, donor, and non-governmental.

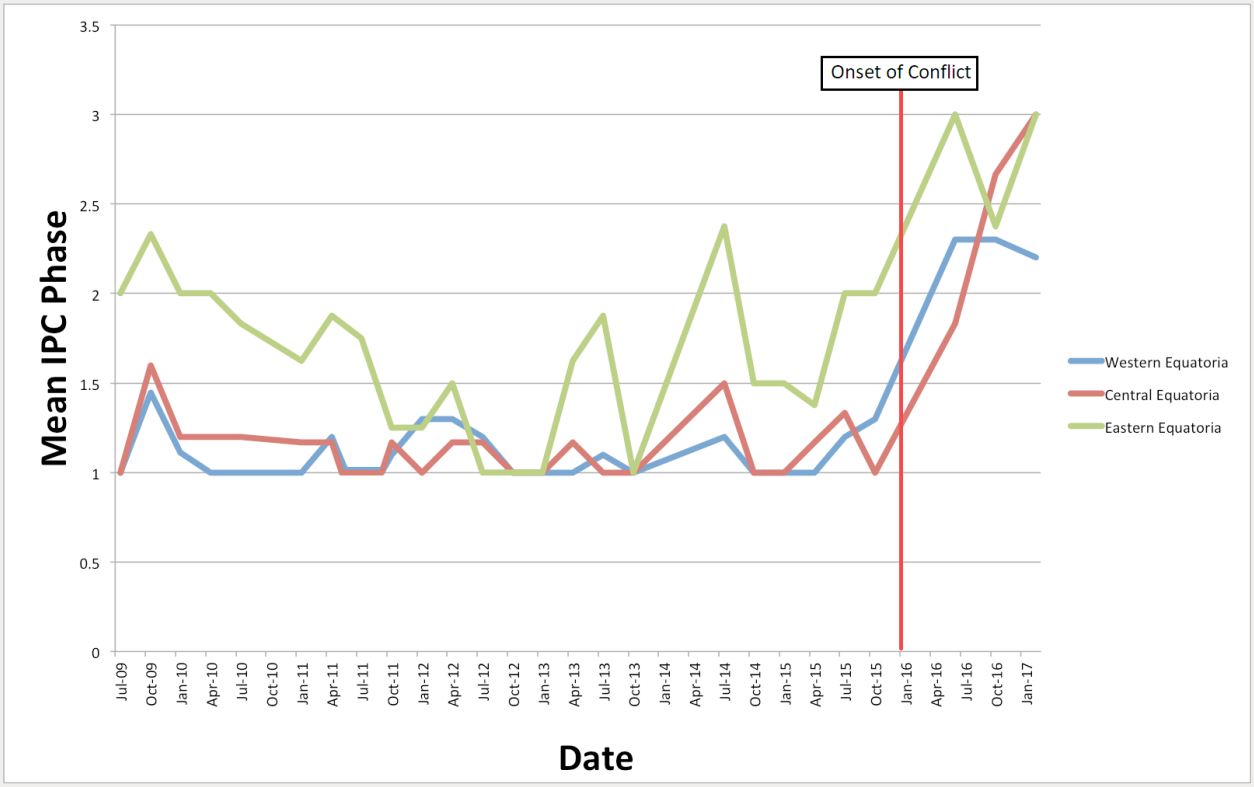
Historically, data for IPC analysis in South Sudan was contributed by whatever organizations have recent assessment information. Since 2014, efforts have been made to improve and dramatically expand data collec-

Figure 4: Onset of Conflict and Impact on Food Security, Greater Upper Nile Region



Source: South Sudan IPC Technical Working Group, Author

Figure 5: Onset of Conflict and Impact on Food Security, Greater Equatoria Region



Source: South Sudan IPC Technical Working Group, Author

tion. As of 2017, the main source of food security information comes from the FSNMS led by the World Food Programme in collaboration with FAO, UNICEF, FEWS NET, the GRSS and the Food Security Cluster, and with other agencies contributing staff, vehicles, and other assets to the data collection process.

As noted above, the FSNMS is now representative at the county level throughout South Sudan, but faces significant challenges in some less-easily accessed areas. Nutrition data is included in the FSNMS but issues of quality and representativeness of the data are still limiting its use in the IPC analysis. Therefore, much of the nutrition and mortality data come mostly from nutrition surveys collected by various organizations and coordinated and validated by the Nutrition Information Working Group (AIMWG). The combined information is vetted and analyzed by the IPC TWG as a technical consensus.

In mid-2014, the TWG conducted an analysis—reviewed by the ERC—that hinted famine *might* be occurring, but did not have adequate data to reach that conclusion. Mortality data were missing. This was a situation that would recur over ensuring years, despite repeated attempts from the ERC and donors to insist on its inclusion in the analysis (001, 006, 007).[7] It was very clear from both the published IPC reports, and from a general knowledge of the conflict, that the likelihood of actual famine conditions was highest in the least accessible and most insecure areas where data collection was most difficult. Poor access, or complete lack of access, was almost without exception the reason stated for the poor quality or absence of data.

7 The numbers refer to interviews conducted for this study. All interviewees remain anonymous.

Of 50 nutrition surveys undertaken by humanitarian agencies in South Sudan in 2015, 19 included mortality information, but 11 of those were not in the areas affected by conflict at the time. Of 22 nutrition surveys conducted in Greater Upper Nile (the most conflict-affected part of South Sudan at that point), only 8 included mortality data (206). Although mid-upper arm circumference (MUAC) screening showed the prevalence of GAM in excess of 20 percent and weight for height (the more acceptable standard for GAM) was showing prevalence, in the worst cases, of 40 percent, little could be concretely said about famine even though the malnutrition figures strongly suggested it. And of course, the available data were from accessible areas; there was reason to believe that the situation was even worse in inaccessible areas (032). Although the situation continued to deteriorate (Figures 4 and 5), the ERC was not called for another review until August 2015, over a year later (203, 204). By then the focus was on Guit, Leer, Koch, and Mayendit counties in Unity State—areas that had been the epicenter of fighting, displacement, and the risk of famine for some time. Once again, mortality data were missing from the analysis. The population in Phase 5 (catastrophe—famine conditions, but not in sufficient numbers to declare a famine) was 30,000 in August/September, and projected to be 40,000 in October/November.[8]

Subsequently a group of UN agencies and FEWS NET began talking about basing a rapid assessment team in Rumbek (a government-controlled town just to the west of the main conflict zone in Unity State) that would be ready to move quickly to field locations if access negotiations would allow—particularly in the four worst affected (and least accessible) counties in Unity (004). But this would have been primarily for helicopter assessments that would have provided some qualitative information about conditions, but would not have been able to address some of the key crucial gaps in information—especially mortality, but also a systematic and reliable assessment of nutritional status and food insecurity. The lack of data was a serious concern for nearly everyone following the IPC analysis process, including donors and agencies, and a source of much anxiety for the ERC (001, 006, 010, 009, 015, 025).

Fears began to arise that perhaps there were other reasons beyond just insecurity for the lack of data that would enable a complete analysis of famine.[9] It was not clear whether political pressure was being subtly brought to bear on the analysis group. Interviews from this study noted that substantial pressure existed, but from a variety of sources including local authorities on both sides of the conflict.

On October 22, 2015, the BBC announced that the UN had noted at least 30,000 people were "facing starvation" in South Sudan. The same day, the GRSS released a statement that noted "improvements" in the food security situation and explained that even where problems continued to exist, they were due to "high food prices, erratic rainfall patterns, and depleted livelihood options," (not mentioning the conflict in Greater Upper Nile where conditions were the most dire). The GRSS statement went on to put limits on what could be said about the crisis in South Sudan, stating, "Therefore, we advise against the irresponsible use of the word such as *famine* by stakeholders, including the media."[10] This was one of the more public manifestations of the subtle influences that members of both the TWG and the ERC had perceived for some time (009, 030, 206, 207, 208).

In November 2015, the UN reported that 7.5 million people (70 percent of the population) were "at risk of famine" (Dujarric 2015; see also, *Sudan Tribune* 2015). The GRSS hit back hard against this—noting that earlier the figure was 3.9 million. It is not clear where the 7.5 million figure came from—it did not come from the TWG.

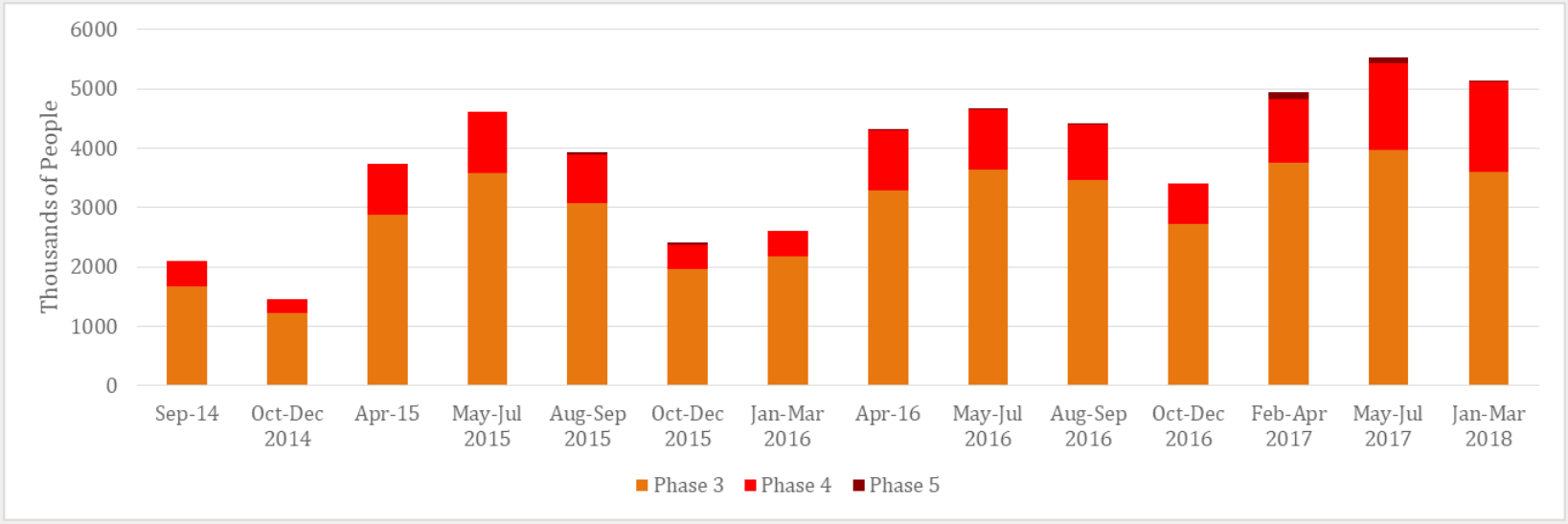
In January 2016, it emerged that the Office of the Deputy Humanitarian Coordinator (ODHC) had undertaken a mortality study on its own, without the participation (or even knowledge) of the IPC TWG, the GSU or the ERC. It was not funded by any donor and involved only a handful of trusted partners. It showed mortality to be well above the famine threshold although the prima-

8 This was below the 20% threshold needed for a declaration. It was not clear how the numbers were reached.

9 This was the moment at which the rationale for the current research emerged and plans for the current study began to be made.

10 GRSS 2015. "Press Release on October 22nd 2015 Expected Food Security Situation Progressive Improvement in the Republic of South Sudan."

Figure 6: Numbers of People in IPC Phases 3-5 (2014-2018)



Figures in thousands	Sep 2014	Oct-Dec 2014	Apr 2015	May-Jul 2015	Aug-Sep 2015	Oct-Dec 2015	Jan-Mar 2016	Apr 2016	May-Jul 2016	Aug-Sep 2016	Oct-Dec 2016	Feb-Apr 2017	May-Jul 2017	Jan-Mar 2018
Phase 3	1,680	1,215	2,886	3,578	3,067	1,964	2,174	3,293	3,637	3,468	2,724	3,763	3,979	3,601
Phase 4	414	245	861	1,036	835	415	440	1,000	1,023	928	676	1,074	1,457	1,526
Phase 5	0	0	0	0	27	41	0	5	20	29	0	102	89	19
Total Phases 3-5	2,094	1,460	3,747	4,614	3,929	2,420	2,614	4,298	4,680	4,425	3,400	4,939	5,525	5,146

Source: South Sudan IPC-TWG

ry cause of death was from violent conflict and drowning, not from malnutrition and disease.[11]

Unfortunately, the discussion over which causes of mortality would be acceptable in IPC analysis overshadowed more fundamental questions raised by the ODHC report: How could the ODHC mount a mortality survey like this when the agencies that belong to the TWG could not? How would the government and the rest of the "humanitarian community" respond? The recommendations state loud and clear that the first priority should be ramped up assessment and improved access for humanitarian assistance. The report contained a major criticism of the current analysis process, and the strong implication was that the ODHC undertook the assessment of mortality because the agencies responsible for collecting mortality data had not done so (Office of the Deputy Humanitarian Coordinator 2016).

Indeed, subsequent interviews made it clear that the reluctance to move forward aggressively with data collection and analysis came as much from some of the agencies as it did from the government (001, 002, 003, 004, 010). In fact, the government staff most closely involved in the TWG seemed not only eager to get on with the task (highlighting the diversity of views within the government), they also agreed that it appeared that someone, somewhere, didn't want the process to move forward. However, from 2016 onward, mortality data became more available—at least in some areas.

In August 2016, an IPC update took place outside the country. Even though it was based on data collected at the height of the "hungry season," the report gave no indication that famine thresholds had been surpassed. However, subsequent interviews noted that in fact, there had been a disagreement with the government over this update, and in the end the update was never released. One senior official reportedly explained that it would "tarnish the reputation of the country" (018). The unreleased report was, of course, not available for review in this research, but reportedly did not suggest that a famine existed.[12]

This incident would have gone mostly unnoticed, except that it made the government officials on the TWG extremely wary about the way that any further reports would be issued. Ultimately, a few months later in February of 2017, a famine was declared in several counties in Unity State. This time, however, the report of the TWG was released by the National Bureau of Statistics (NBS), not the Ministry of Agriculture—a choice that reflected the difficulties encountered in August 2016 (020, 030). Although there was some backlash against GRSS staff members who had participated in the analysis, this was subsequently over-ruled, and the actual declaration of famine seemed to cause less controversy than had the possibility of a declaration in earlier times. There was also something of a backlash against the declaration within the humanitarian community, with some agencies saying that in their view, the conditions in Unity were not much different than they had been for some time, and others saying that conditions had, at various times, been *worse* elsewhere in the country (023, 024, 032). By the time the subsequent update was issued, available data on food security and nutrition conditions in the affected areas in Unity State showed an improvement, and the famine was declared over—even though the number of people affected in the entire country was now substantially larger. By this time, conflict had spread not only to parts of Greater Bahr al Ghazal, but also to the Equatorias, and indeed a number of new "hotspots" emerged that took some of the emphasis off of Unity State. But many of the same problems continued to affect the analysis of the crisis.

The maps in Figure 7 show the progression of the crisis from late 2013, when violent conflict re-erupted in South Sudan, through mid-2017. In early 2017, FEWS NET released a report that noted four countries were at risk of famine in 2017 and estimated that some 80 million people required food assistance—a major increase over the previous year (FEWS NET 2017). The focus on the "four famines" in some ways relieved the pressure on South Sudan, since there were now four countries being watched

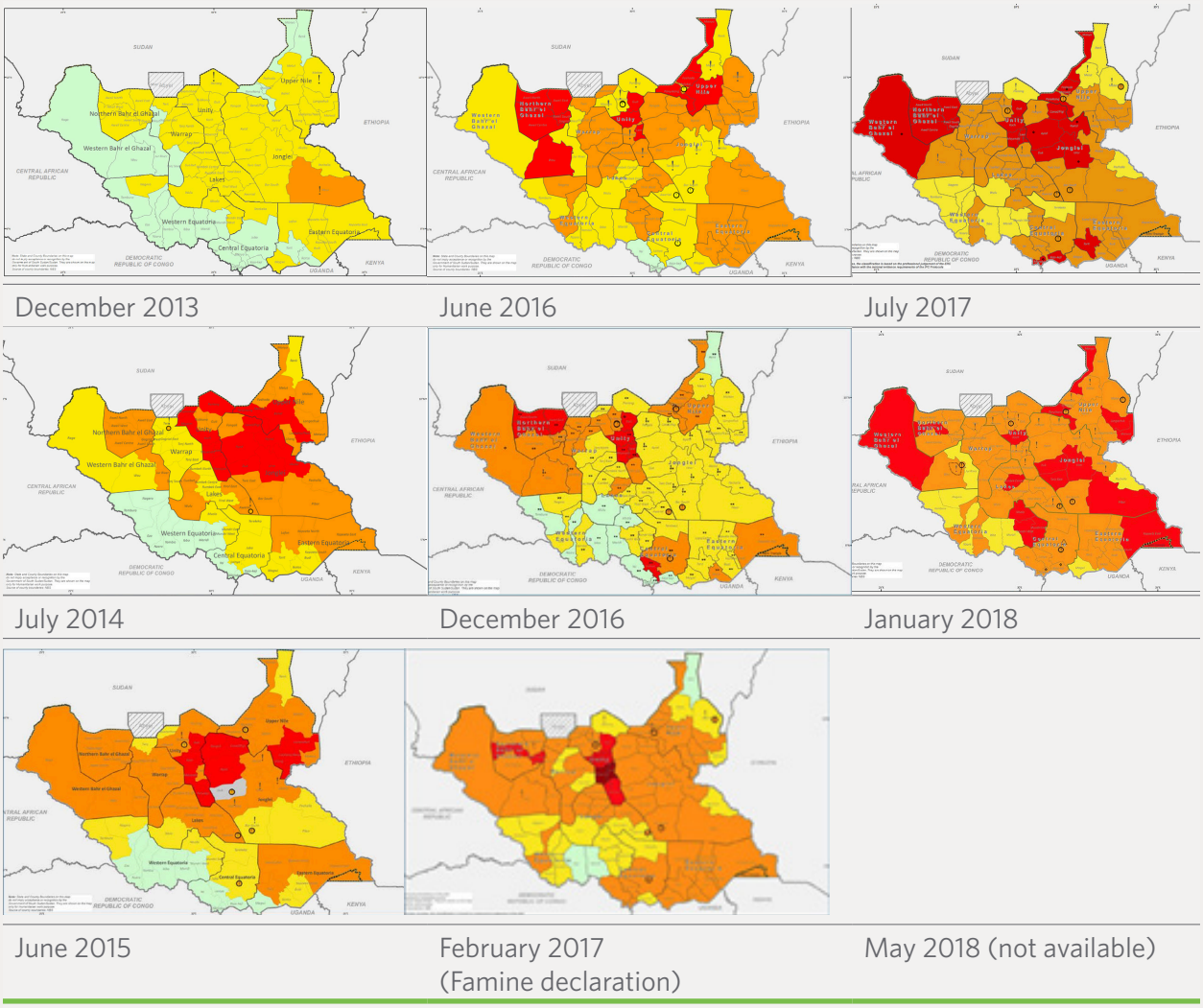
11 This led to a major debate about what mortality "counts" in an IPC analysis. Previously no attempt had been made to analyze mortality by proximate cause. Ultimately, the citing of trauma-related deaths in IPC mortality analysis was ruled out, stating that only "food security-related causes" of mortality could be cited. This didn't clarify the issue of drowning, since much of the drowning was caused by desperate measures to ensure access to fish, water lilies, and other uncultivated foods, but drowning was ruled out of IPC analysis.

12 Note however, some respondents subsequently noted that the situation in Northern Bahr al Ghazal during this period was worse than anything in Unity in February 2017, when famine was declared (032).

closely, not just one. Substantial resources were released on the basis of the FEWS NET report and similar analyses; resource allocations for South Sudan, however, only changed marginally—some donors increased their allocation for South Sudan on the basis of the February 2017 declaration; others did not. Overall, although the appeal increased, the actual allocation of resources to South Sudan in 2017 was almost identical to what it has been the previous year, and substantially less than it was in 2014—the first year of the conflict when far fewer people were affected and the conflict was mostly limited to one region of the country. By 2017, it was a nation-wide conflict. The link between the number of people assessed to be in humanitarian need and the actual level of funding seem to fluctuate somewhat independently, with number in need rising steadily (albeit with seasonal fluctuations) since 2014, but with funding actually the highest in 2014, and seemingly leveling out in 2016–17 (Figures 2 and 6).

Thus, the history of food security analysis in South Sudan, the available data (and specifically the data that was often *not* available), and the way in which the process unfolded, suggested a series of constraints and issues about the way in which the analysis might have been influenced. These are addressed in the next section.

Figure 7: IPC Food Security Phase Classification Maps, 2013–2018



Source: South Sudan IPC Technical Working Group

7. Challenges and constraints of information and analysis

A number of constraints and challenges emerged from the interviews. The main challenges fall into two broad categories. The first are largely technical in nature. The second broad category is related to the causes of the crisis and the external influences on the analysis. These issues are addressed in this order. Many analyses in 2014–2018 have resulted in classifications (at least in some areas of the country) that were difficult to differentiate between Phase 4 and Phase 5—meaning that some of the indicators suggest famine, but not all. And as already noted, sometimes the available data were inadequate to make a clear determination. These are the circumstances in which the ERC has been mobilized to help with the analysis. Many of the factors outlined below help to explain why the analysis of famine is frequently incomplete. Resolving these factors—whether technical or more political in nature—is critical to enabling a more complete analysis of famine in South Sudan, and therefore a more comprehensive response.

Missing data and data quality

Major constraints are related to the fact that critical data have frequently been missing and very "patchy" throughout the course of the analysis of famine in South Sudan since the outbreak of the current crisis. Data are missing on both a sectoral and geographic basis (001, 007). At times, missing data have been the major limiting factor in an analysis that was unable to make clear statements about the nature or current status of the crisis. Major categories of frequently missing data include mortality, population, and displacement. But information may also be missing in the area of nutrition and other key elements of the IPC. Information on health and WASH are frequently not available or only partially available; protection and conflict data are routinely unavailable (although these are not central to the IPC analysis—which is a different issue). Finally information is missing on gender or gender disaggregation—and its relation to food security. The impact of missing data is that it has frequently been difficult to make firm statements of current status in South Sudan.

The sheer size of the country and magnitude of the crisis. When the crisis was limited to Unity and Jonglei, conducting a comprehensive analysis was more feasible. Since 2016, the crisis has been nationwide, and it has become very difficult to determine in advance where and when to deploy limited assessment capacities (019). The IPC stakeholders seem torn between getting headline advocacy figures (e.g., six million in need of aid) or data to be used for response analysis that is sufficiently granular to help set priority programs in different areas. Several interlocutors noted that many of the most vulnerable populations are divorced from the seasonal impacts on food security, and that conflict and access to aid are now the principal drivers of food insecurity and malnutrition, noting that perhaps the timing of the IPC in certain areas could also be reconsidered—e.g., conducting a more complete analysis for the Equatorias at a different time from an analysis for Northern Bahr al Ghazal or Unity and Jonglei. With practically the whole country engulfed in either conflict or food insecurity resulting from other factors, by definition, data is going to be missing for some places and at some times.

Mortality data. Mortality is the most frequently mentioned missing data in South Sudan IPC analyses (001, 002, 005, 007, 011, 015, 018, 031). Several people mentioned mortality as a "taboo" topic. Everyone realizes it is necessary for a complete analysis—but it is the most politically problematic. Mortality was missing from so many of the key analyses that at one point in 2016, as noted above, ODHC undertook an independent analysis of mortality, quite apart from the IPC team (004, 007). The report that was issued showed mortality well above famine levels in key areas of Unity State, but also showed that the causes included trauma (being killed by violence) and drowning—and the ensuing debate at that point was whether or not such mortality "counted" towards the analysis of famine. Ultimately the IPC rules were changed so as to exclude such causes of death, even though arguably some of them were directly related to food insecurity and famine (see below). Mortality continues to be frequently missing from on-going IPC analyses (031). The most frequent explanation for missing information was that the mortality module was dropped because of limited time on the ground for assessments and the time required for a complete assessment of mortality. Others hinted it was because there was an incentive *not* to know much about mortality, or that mortality survey modules were being actively avoided (040). Whatever the causes, it added up to not having a critical piece of the necessary information for famine analysis.

Population data. The lack of confirmed population data is a constant concern (015, 022). Overall population estimates are available, but are unreliable and have changed frequently (006, 011, 022). The population baselines are sometimes questioned, and without agreed baselines, it is very difficult to calculate current estimated population figures (015). On top of this, factoring in both refugee numbers and the internally displaced—and the locations to which they are believed to have been displaced—is extremely problematic (020). The result is that putting populations into IPC Phase categories by location—a key step in the analysis—is very difficult.

Displacement data. Displacement data are also often not up to date or not available (017). Given the nature of the crisis, populations are constantly on the move but the analysis is often not able to accurately account for where the population is (008, 022, 023 106). Several organizations track displacement, and this information is useful, but the nature of the conflict means that populations in given locations can change very rapidly and population movements often involve large numbers of people. Unfortunately large numbers of people moving in a short timeframe are also likely to be indicators of extreme food insecurity. In many cases, information from the REACH project[13] is the best information there is on the conditions of populations on the move, but this is qualitative information that is difficult to turn into numeric estimates.[14] Conflict and the associated population movements often happen between the seasonal assessments so IPC projections are very time-delimited in the areas of South Sudan most at risk for famine.

Nutrition data. Until the last round of the FSNMS (December 2017), the majority of nutrition data used in the IPC was collected through a different mechanism (nutrition surveys and rapid MUAC surveys) than that used for the majority of the food security data—the FSNMS. Previously the FSNMS did collect MUAC data, but considerable debate ensued about the quality, representativeness, and utility of the MUAC data in the IPC analysis.[15] The latest two rounds of the FSNMS have included weight-for-height measurements and MUAC estimations of the prevalence of undernutrition but not mortality. The inclusion of weight-for-height measurements and other nutrition indicators in the FSNMS has necessitated a significant increase in sample size and thus time and resources spent on the ground. Concerns remains about the quality, representativeness, and utility of the simultaneous collection of nutrition and food security data. The major source of nutrition (and mortality) data is still from nutrition surveys. Around 55 surveys are conducted throughout the year. Therefore, an objective of having full coverage of all counties (around 86 counties) at the same time twice a year is far from

13 REACH is an information project, led by the NGO ACTED that produces various forms of data, many of which are qualitative in nature, and which were initially not acceptable in IPC analysis. IPC analysis has subsequently been reshaped to incorporate much of this data.

14 Note that FEWS NET has piloted new tools for population estimates that include figures updated for recent displacement. These tools have been tested but have not been fully implemented to date.

15 Note that MUAC information is fully incorporated into IPC analysis with IPC Manual V3.0.

being feasible. The overlap of programmatic and IPC analytical objectives for the timing and geographic coverage of nutrition surveys—combined with the fact that the timing, geographical priority, and number of surveys is primarily dictated by NGOs and their donors and not by a fully developed central coordination mechanism—means that gaps in nutrition (and mortality) data regularly emerge.

Other kinds of data. Health and water, sanitation, and hygiene (WASH) data are frequently not included because they are not required for IPC analysis (006, 039). But this kind of information is critical to interpreting food security, malnutrition, and mortality information (105) and their absence makes the analysis of divergent outcomes from food security, malnutrition, and mortality information all the more difficult to conduct. Information is only occasionally disaggregated by gender—and then often only for malnutrition and mortality results (102, 112). The latest FSNMS incudes a section on gender and includes analysis on who accesses food distributions and who controls the decision making on use of food rations. It also analyses the gender protection issues related to food issues. However, there does not appear to be an analysis of the differential impact of food insecurity on gender or analysis of the implications of gender differences. Finally, information on protection and information on conflict and the other drivers of the crisis are frequently not available—or only available in very broad outlines. This problem is discussed in greater detail below. There is no information on protection, and the protection cluster is not involved in IPC. This is uncharted territory but given the critical importance of conflict as the main driver of the crisis, it is important that protection and conflict data be incorporated (009).

Data quality and access. Data quality constraints have been reduced over the course of recent years, but some constraints still remain. The Nutrition Information Working Group (NIWG or now called the Assessment Information Management Working Group or AIMWG), a sub-group of the Nutrition Cluster, have a jointly agreed protocol for checking data quality, and agreed ground rules for excluding evidence that is found to be of low quality. The food security information is not subject to any such agreement on quality or exclusion. Indeed, data access continues to be a major issue on the food security component of the analysis (see below on "speaking outside the consensus").

Data preferences. The perception is that the IPC process is *inflexible*, that it prioritizes quantitative indicators and thresholds, and that it is difficult for the TWG to deal with in-depth reporting on conditions where there are no numbers (009, 041, 101, 107). However, a rapidly changing context, access constraints, and the limited capacity of agencies to collect core indicators of the quality required by the process often mean that some contexts simply cannot be analyzed very well. There is no systematic means of incorporating qualitative/contextual data, even if it could add depth to the analysis (009).

Technical capacity

Technical capacity is often a constraint—both to good data collection and to the analysis process. People are not trained on all aspects of information planning, collection, and analysis but perhaps most importantly, there is a lack of capacity to take a productive role in the IPC processes (019).

Capacity and access constrain data collection and analysis. International staff come and go, and several agencies with strong capacity do not engage (023, 024). Often it is only national and local partners—who sometimes have the least technical and logistical capacity—who can collect data in areas with security or access constraints (013, 019, 020, 026, 033, 040, 101, 102, 104, 105, 110). Frequently, the quality of such data is questioned and more-experienced analysts urge stringent supervision structure in place to ensure quality data (106). As data collection processes have become more automated, some observers believe this problem is exacerbated: "Even when [agencies] go to the field, people are just pushing buttons on a tablet. They are not taught to probe, to verify, to cross check, let alone to find out what is behind an answer" (020). This leads to the accusation of "garbage in, garbage out" in the analysis process (111). State-level staff also need more training, but the capacity constraints go beyond just train-

ing—government staff are also limited by transportation constraints, lack of computers, and other issues.

The most experienced people are often not engaged. There are good people in senior positions in government but they have little in the way of support staff or analytical help (008). More junior people and a lot of the international staff are just not very experienced. This adds to the tendency for the "loudest voice in the room" effect (see below). This also increases the power of the "nutritionists" with their very technical and formulaic approach to analysis and use of evidence, who don't always see a need to have experienced people to be confident about results and don't see a need to have discussion about how nutrition results fit into context (214).

Time constraints and lack of training. Participation in IPC analysis takes up a lot of time—given that analysis work is done on top of operational work—and the most experienced analysts often do not have the time to sit through the whole process, leaving critical analytical choices to less experienced colleagues (013, 112) particularly at the state-level analysis. Training is often seen as the answer to this problem (106). However, long-term observers note that training has been offered, but when people leave, the capacity built through training is lost; training, while it helps, is not really compensation for lack of experience (007). Some government technical staff noted that they had to wait years for IPC Level 2 training and this had impeded a full involvement at all stages of the IPC process (028, 029, 030, 111).

Data collection and analysis

The issue of coordination arises in part because of the nature of the process: Government leads it, but the budgets go through one or more of the UN agencies.

Timing of data collection and units of analysis. Coordination of the data collection process has long been recognized as an issue. Until recently, there was little coordination of the timing of data collection, meaning that food security and nutrition analyses did not line up in terms of timing or geographic coverage. Timeframes and the "granularity" of the analysis don't match up (018). Thus, through 2017, there were food security assessments that are representative at the state level and happen twice a year (with some updates for a third analysis), and nutrition surveys that are supposed to be representative at the county level but often reflected only a few payams.[16] Progress has been made to join up both time frames and units of analysis, but especially from 2014 to 2016, this was a major problem (018).

Using administrative areas as the units of analysis misses the opportunity of using livelihood zones and/or humanitarian livelihood zones or zones of population movement in extreme circumstances. One often-seen issue concerns identifying a phase classification for a county when half the county is experiencing completely different conditions than the other half and populations are moving across county borders to follow aid. Relying on administrative boundaries to encompass widely variable populations or where one population is moving across administrative boundaries can be inappropriate and the IPC should be able to take this into account (007).

Methodological preferences. The strong focus on rigorous, established data collection techniques and reluctance to admit other types—that are more innovative or of lower quality, or are more qualitative data and data collection techniques—result in missed opportunities to collect evidence on the situation. As one respondent noted, if you can't do a cluster survey, then it is not worth doing an assessment because IPC, especially the nutrition part, does not use or value this type of data (009).

Numerous respondents noted that good, in-depth field notes from canoe or on-foot assessments by experienced observers were available to the TWG. But the TWG didn't know what to do with qualitative data, so it was essentially ignored (009, 035, 104, 112). REACH data can be used to address some of the gaps in early warning information and can also help in addressing the question of what to do with qualitative data. But REACH data are not officially part of IPC analysis (104)—though they are increasingly incorporated where possible.

16 Payam is the sub-county-level administrative unit.

Data quality validation. Poor-quality data is a major issue, especially for food security and livelihoods (FSL) indicators. As mentioned above, trainings are underway to build capacity but it is reportedly suspected that in some cases enumerators simply make up the data given the widely dispersed households. While validation systems are in place for nutrition data, MUAC screening information continues to be problematic because agreed quality and reporting protocols are not being applied by organizations using MUAC as a rapid survey technique. Therefore, considerable debate occurs about how much emphasis should be given to the results. The NIWG has established several mechanisms to address this issue but progress is still to be made in applying these new mechanisms. Built-in validation systems are not in place for FSL data and the data quality checking process relies heavily on time-intensive daily quality checks and oversight by local team leaders and analysts. The funds are not sufficient to dedicate adequate capable staff to data quality checks. The Data Planning Report commissioned by the UK Department for International Development (DFID) confirmed these data quality issues, especially given the substantial increase in volume of data associated with the increase in scope of the FSNMS to county-level surveys (Kim et al. 2018).

Data timeliness, representativeness, and completeness. Data in IPC analyses are often out of date or borrowed from a nearby location. Or the level of analysis that can be inferred from the data does not match the unit of analysis for the IPC process. Insecurity and access constraints are also recurring problems, thereby biasing assessment information towards more-accessible areas and potentially underestimating the conditions. The Data Planning Report also noted the lag time between data collection and analysis, which, in addition to a very mobile population, creates an uncertainty about who the data are capturing and which population they represent (Kim et al. 2018).

Early warning and "hotspots"

No one is actively mapping the data collection (006) and there is little basis on which to project the need for intensive data collection—that is, there has not been much in the way of "hotspot" detection or early warning analysis.

Hotspot identification and the limits of early warning information. Hotspots are often identified *as a part of* IPC analysis, meaning that these places only really come to light as the result of some data that makes its way into IPC analysis. A systematic means for identifying hotspots does not exist—just informal consultations with stakeholders (018, 021, 026, 102, 104, 213). This means that it is already late to respond to these places. And frequently only one kind of information highlights the "hotspot" (008, 016). This problem is linked to the lack of an early warning system in South Sudan that can identify hotspots in a way that is timely both for response and for the deployment of adequate data collection assets so that the situation can be fully assessed and understood (018, 025, 026, 032, 033). Some observers noted that the lack of systematic early warning was "the weakest link" in the food security analysis process (032). This frequently means that programmatic responses are already lined up before the TWG meets to conduct the analysis, and IPC analysis only triggers "after-the-fact changes in programming" (025). Finally, even when hotspots are identified, there is no guarantee of being able to access them and the process is quite slow (101, 102, 103, 104).

IPC projections. The issue of the projections time frame came up frequently, because that is what passes for early warning (020). And yet example after example arose that demonstrated the weakness of IPC projections for early warning purposes, no better than the observation that the May 2017 IPC analysis, which mostly missed the Northern Jonglei (Ayod, Uror, Nyirol counties) situation because these areas weren't particularly highlighted by the February analysis. In 2017, staff of the Ministry of Humanitarian Affairs and Disaster Management set up an early warning system. It doesn't have the resources to do good prediction nation-wide, but is able to publish some information that otherwise might not be published (029).

Participation and uptake

In South Sudan, the understanding of IPC membership and participation, "consensual" analytical process, and classifications has been limited, which impeded the use of and trust in IPC classifications.

IPC membership and participation. The perception is that there is an "IPC TWG bubble" (112). Though government-led, the IPC is perceived to be "owned" by the UN and it remains unclear for many who can be on the TWG or who is at the table for key decisions and planning (008, 028, 035). The IPC analysis is supposed to be based on a technical consensus—built on the convergence of evidence and evidence-driven conclusions about the severity of food insecurity. However, disagreements often arise during the meeting and people have to resort to voting—not the purported "technical consensus" the analysis is supposed to represent (025, 031, 110). The TWG is meant to be a multi-stakeholder group, but the more-vocal organizations appear to get more attention or say in the process while smaller and local NGOs are not heard (013, 031). Who is and who isn't a member of the TWG is often not clear. People come and go. Often agencies send their less-than-best analysts to TWG meetings. And once a "consensus" is reached, it can be difficult to challenge, as one respondent shared: "Those who disagree keep silent because the damage would be bigger if there was seen to be no consensus. The system's credibility would have crumbled" (038). Some agencies are completely outside of the IPC process. A few respondents noted the reluctance of some agencies to share data—at times due to data unavailability, not necessarily with nefarious intentions (011, 015, 030). These agencies release their own reports concurrent with the IPC but do not share the information with the TWG.

Communication of IPC process and classifications. Generally, the perception is that communication about the IPC process and classification is poor (009, 025). Beyond the need for greater transparency about the IPC membership and participation, as discussed above, "politically savvy technical experts" are needed to explain the general process and communicate results to donors, users of the classification, and the general lay audience (027, 034, 037). The sense is that the communication strategy in South Sudan is poor, leading to classifications being misinterpreted, ignored, or dismissed (026, 027, 032, 034, 038). As one respondent shared, "We need clearer messaging—and *common* messaging—around the release of an IPC. Lots of time even members of the TWG are not saying the same things after an IPC comes out" (032, emphasis added).

Uses of IPC analysis. Some donors specifically asked for more help on the program side. IPC is useful for generating numbers in need (although the numbers of people that are food insecure are sometimes conflated with general humanitarian need by other actors—which is not the case). Specifically, several donors suggested the need to include some response analysis—which would help not only to make decisions about who and where, but also about *what*—in terms of response (021, 025, 037). However the data are often not granular enough to tailor humanitarian operations (006, 022). Respondents noted that organizations use the IPC to advocate for their planning but rely instead on their own data and contextual analyses, which can be in contradiction to what the IPC is saying (035). Moreover, the timing of the IPC analysis is not effective in influencing programming, as it comes out at the end of August *after* the peak of the lean season in July. Respondents noted the need to better link IPC classifications with advocacy and funding efforts—for example, re-considering the timing of the IPC to come out before the Humanitarian Response Plan, and to consider having flash updates similar to those that FEWS NET produces (035, 038).

Leadership and management of the process

To organize high quality evidence collection across sectors in a highly complex environment and then construct a consensus analysis, technical capacity alone is insufficient. In South Sudan, limited clarity on technical and political leadership in the IPC process is a major

constraint to collaborative, neutral, and transparent data planning, collection, and analysis.

Technical and political leadership. A sub-set of respondents (mostly international staff) strongly felt a need to develop a more managed and systematic approach to data planning, collection, analysis, and communication (009, 019, 040, 111, 112). GRSS officials are formally in the lead, but may have less time, less funding, and fewer resources at their disposal than some of the UN staff. NGO staff frequently come and go. The UN staff tend to be seen more as technical leaders but have not always been formally tapped to lead the process. Respondents noted that the lack of technical leadership and responsibility at the TWG level invited political influence (009, 019, 111, 112). Many respondents noted that fewer political tensions would exist if leadership was better established and managed.

Some organizations are seen by others to be controlling the process, but not necessarily providing leadership (001, 021, 022). This issue is perceived to be damaging the inclusion, ownership, and consensus around the results—and has, at some points, led to arguments resulting in voting rather than consensus (009, 031). Partners are sometimes not incentivized to take responsibility for the process (009, 019, 040). The sense is that the process is fragmented, with partner agencies and stakeholders operating independently and undermining overall analysis, performance checks, or coordination (112). Clearer and stronger accountability mechanisms are needed for the TWG to produce good-quality consensual analysis.[17]

Self-reflexivity and lesson-learning. The sense is that learning is not being adequately incorporated and the process is not improving, apart from the changes in the GRSS process to have the reports released by the NBS. Respondents noted that opportunities to discuss a number of issues and build in more-formalized action-learning reflection after each cycle are ample (038, 041, 101) but these often don't take place, or follow up to ensure that lessons learned are incorporated into future processes is inadequate. The "Lessons Learned" workshop that was held in May 2018 was another area where significant progress has been made since the case study interviews were conducted. However, with the fairly frequent turnover of analysts, some of this progress may be vulnerable.

17 As was noted in the foreword, in places the TWG has made significant progress since some of the interviews were conducted. The area of leadership and organization of the data collection process appears to have been one of these areas.

Access constraints

Access is a major constraint to timely data collection and humanitarian operations. Obstacles to access manifest themselves in various ways, including security (008, 023, 026 109, 110), the unpredictable nature of the conflict (109), the sheer size of the country (111) and underdeveloped infrastructure (026), and bureaucratic impediments (037, 110).

Security. Access is limited by security (008, 023, 026, 109, 109, 110). Access can also be blocked by limited communication capacity among conflict actors in the field. Obtaining security clearance from both the government and the opposition can take a long time, and often by the time permission is granted, it is too late for data collection—analysis has already begun (025, 102, 112, 106). As one respondent noted, "Both GRSS and I-O [grant permission] but authorities on the ground can still tell you that you can't go" (035). Humanitarian agencies complained that they are accused of "feeding the enemy" (102). Others clearly thought the delays were a way of trying to make it difficult to have adequate information for a complete analysis: "If the risk of P5 was mentioned, there was a lot of concern from the humanitarian actors on the ground how to do it safely. . . . We fell into the 'it's too risky, it's too sensitive,' etc." (007). This sense of "kicking the can down the road" with regard to ensuring adequate data for analysis came from several quarters (001, 009).

Infrastructure. Although less-prominent concerns, the massive size of South Sudan, the fact that nearly the whole country is now engulfed in conflict, and the limited infrastructure in some areas of the country also serve as constraints on access for data collection and assessment (026, 111). Of the 86 counties (estimates vary—IPC uses 76), some have little in the way of road infrastructure so even if they are

not immediately conflict affected, access to some of the more-remote areas is frequently difficult.

Hotspots. Almost by definition, the issue of access and incomplete data arose with regard to "hotspots," areas most affected by conflict and displacement. Getting timely permission to access these areas was frequently impossible, and hence obtaining a clean data set for analysis was frequently difficult. As one respondent commented, "Access [to hotspots] was very difficult. Security officers wouldn't grant access for more than a few hours . . . some of this [data collection] got sidelined" (008).

Access as an "explanation." Access problems are no doubt real—although there was a fair amount of suggestion that they might be overplayed. In other words, security and access may be offered as reasons why data are missing, but there may be other reasons that respondents don't want to discuss. According to the professionals that actually do the negotiating, access is complicated but only rarely is it a binding constraint (009, 023, 024, 026). Several respondents engaged in access negotiation with both the GRSS and the SPLA-IO mentioned that they had never been approached by the TWG or other agencies for help with negotiating access (whether for assessment or response).

The perception was that access is a technical excuse (009, 027, 038, 111) but actually the issue of access is much more nuanced (027):

- "People like to throw around the issue of access, but it is just a catch-all phrase and often doesn't really mean anything except that no one got around to organizing the data collection" (009).
- "Access is possible most of the time, [you] just need to be innovative and flexible" (038).
- "Access issues are used to avoid data collection such as mortality" (012).

The consequences of the totality of the access problem, however, is that needs are not well understood—particularly in the places where there is reason to believe that they may be the most dire. Being unable to access these areas likely underestimates the food security, nutrition, and mortality outcomes because the analysis reflects only the more-secure areas (106, 111).

Causal analysis and conflict

The cause of the crisis in South Sudan is almost entirely driven by the level of violent conflict, and conflict is the most frequently given reason for access constraints.

Conflict as the driver. Despite the broad recognition that conflict is the "driver of almost everything" (030, 031), information on conflict and its inclusion in IPC is very limited (031, 032, 035, 037, 038): "No one is very good on conflict data—in fact, monitoring the conflict is the weak point of the whole FS information system. It is hard to keep up other than looking at press accounts. There is some information on livelihoods and displacement based on partners information but overall, the analysis of conflict is weak" (031). Ultimately this means that the ability to explain the impact of conflict on food insecurity is weak, which undermines the ability to project or forecast food insecurity.

Overly focused on conflict-affected areas. At the same time, the sense is of being too focused on the conflict-affected areas. Several respondents noted that in 2016, they feared that Northern Bahr al Ghazal State may have been close to—or actually in—famine (010, 032). But the IPC never particularly highlighted the issue, "because there was no fighting there. It wasn't just malnourished kids—it was adults too" (032).

Conflict as a taboo topic. There is also the sense that conflict cannot be discussed in the IPC (035). "We can't discuss conflict in the IPC. IPC is supposed to be only about outcome indicators, but if you can't discuss conflict in SS, you are missing a huge part of the picture" (035). This is reflective of experience in other countries: First, IPC as a tool is focused on outcomes indicators. Hence, while a category for "contributing factors" (such as conflict) exists, the tools for analyzing these are few. And second, there is a strong sense that analyzing conflict is "too political"

and may overstep the boundaries of what is acceptable and what isn't for a technical working group.

External influences on the analysis

A number of threats to an independent and objective analysis emerged from key informant interviews. Some of these were depicted as subtle and not always easy to fully understand; others were not subtle at all. This section notes the salient influences undermining the independence of the analysis.

Missing data. A fear was that someone of some power was intervening in the data collection process, to ensure that certain pieces of the information not be available for a complete analysis of famine. But this was probably reading too much into the fact that mortality data were frequently missing. Some respondents noted that the IPC gives "cover" to the analysts, because it allows them to analyze technical issues, and get the analysis out into the public, without having to talk about causes (028).

Slowing down the process. The way the crisis is managed and the relationship of the UN to the GRSS are critical to the way analysis is conducted. This relationship also affects the way the results of the analysis are presented to the humanitarian community and donors. The expulsion of the former humanitarian coordinator for some outspoken observations sent a chill through the humanitarian community (008). If people didn't already know, this was clear evidence that "speaking out" could have direct personal consequences. On the other hand, "government" is hardly a monolithic structure in South Sudan. State and local officials may have a very different agenda from national leaders vis-à-vis the outcomes of IPC analysis. And there are differences in view between technical ministry staff and the higher political leadership of the government (003, 010, 028, 029).

In 2015–16, the UN instructed the Humanitarian Country Team to be more cautious in its language (001). Though no one has ever overtly ordered changes in the IPC analysis or changed figures in phase classification, this order to tone down the language resulted in subtle pressure on the TWG (003). However, it also appeared at times that it was the agencies slowing the process down, not the government.

This set of pressures in turn affected the IPC process and made members of the TWG extremely wary of what they could say. Donors saw this (001, 006, 025), as did members of the TWG (003, 004). When UN officials began to describe the crisis—publically and privately—as "calming down," or when either UN or GRSS officials begin to promote the "early recovery" agenda, it sent a signal to the TWG about what they could and couldn't say (002, 008). This often resulted either in slowing down the process of reaching conclusions—or in failing to reach firm conclusions. Some respondents blamed specific people or agencies (003). Some noted a tendency to reject changes to procedures in order to preserve comparable data sets (011). Some just blamed the generally risk-averse culture that was pervasive at the time (014).

Overt influences. However, several actions demonstrated more overt interference. The GRSS Press Release of October 22, 2015 (see above), warning against the use of "irresponsible" language or the quashing of the August 2016 IPC analysis and report were examples of overt influence over the analysis process. After the declaration of famine in February 2017, several members of the GRSS staff on the TWG were removed from their jobs. Although they were eventually reinstated, these events combined with some of the more subtle influences caused people to worry that if their analysis suggested famine, the political consequences might be unpleasant, to say the least.

Consequences

The consequences were very real—though fortunately short-lived—for the technical staff who got caught up in the release of the February 2017 report (030). In the broader sense, these incidents have resulted in a lot of self-censorship—and it is *not* clear what the consequences of this have been in humanitarian terms. One consequence was described as

the tendency to "kick the can down the road"—when an analysis came out that could not make a strong determination on the difference between Phase 4 and Phase 5, the tendency was to delay making a decision. This was in part because important data were missing. But little was done in the subsequent analysis to address the problem of missing data. This might appear to be technical incompetence, but in at least some cases, respondents suggested it is more likely explained by the knowledge of the consequences if the analysis showed strong evidence for Phase 5 determinations (009).

Technical consequences. Although the intent of the IPC is a "technical consensus" of the analysts reviewing the data, there was no clarity on determining classification with imperfect data, or what was to happen if a technical consensus was not reached (033). Several respondents noted that without clear data, or clear convergence of evidence around a particular phase, the analysis is often swayed by the "loudest voice in the room" (009, 015). There was also a fair amount of "second guessing" the analysis (especially in February 2017 when famine was declared), "minority reports," and "speaking outside the consensus." Another consequence was reliance on the ERC to make the call (009, 031). The ERC was mobilized eight times to review South Sudan analyses between May 2014 and December 2017.[18] But much of what was going on behind the scenes didn't come to the attention of the ERC, because the ERC was only mobilized if the TWG made a Phase 5 determination, or if the technical consensus broke down over a Phase 5 determination.

Several respondents noted that the ERC was functioning not as a final check on the quality of data and analysis, but rather as the "analyst of last resort" when the TWG did not or could not take responsibility for a result. Several respondents referred to the role of the ERC as a form of "moral hazard" for the TWG (009, 015)—meaning that as long as tough questions could be passed on to the ERC, there was less imperative to reach a technical consensus, and this contributed to the problem of relying on the ERC (019).

A number of agencies not involved complained that the IPC process is not transparent, delays are not explained, and often direct questions are not addressed (009, 011). Several agencies not involved in the analysis vehemently (and publicly) disagreed with the famine declaration in February 2017, undermining its credibility (023, 024) and further pressuring the TWG in the subsequent analyses to not make decisions with imperfect data. The validation process is not clear, and no one explains what is happening when an analysis "disappears" for days on end after a workshop.

The use of "EROF" and the distribution of population numbers by phase. All of these processes led to an attempt to portray a situation that might be in Phase 5 as being as close to famine as possible without actually using the term. This included frequent use of "elevated risk of famine" (EROF) as an outcome, or putting some small proportion of the population of a county in Phase 5. It also resulted in some odd distributions of population by phase classification (Figure 8). The allocation of populations into IPC phases by county is one of the most fraught activities in the analysis process (043).

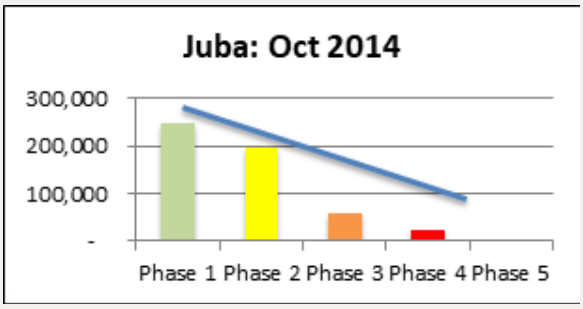
While there is no expectation that these numbers are normally distributed across IPC phases, Figure 8 gives examples of distributions that might be expected. For example, under relatively "usual" conditions (8a), a "left-skewed" distribution might be expected, with declining proportions of the population in each higher phase. In a crisis situation, you might expect some kind of "central tendency" across several phases (8b depicts what this looks like with some of the population in Phase 5). In very severe situations, you might expect a "right-skewed" distribution with increasing proportions of the populations in each higher phase (8c depicts this situation in Leer County for the actual famine declaration in February 2017). The population distributions in Figure 8 all come from actual classifications by the South Sudan TWG.

The distributions on the right side of Figure 8 (d, e, and f) however depict increasing proportions of the population in each higher phase, until Phase 5, where there is none—hence a sort of "right-skewed but truncated" population distribution. This hap-

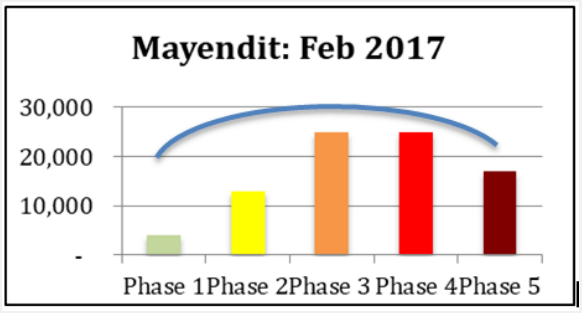
18 For the sake of comparison, the ERC has only *ever* been mobilized twice for analyses involving other crises.

pened with many cases in 2015–2016. And indeed this continues in some areas (for example, in Northern Bahr al Ghazal in 2017). In theory, population distributions mapped by IPC category could be left-skewed (if most people were in good current food security status), "quasi-normally" distributed (i.e., somehow evenly distributed around a central tendency or mean IPC classification) in a crisis of moderate severity, or right-skewed in a severe crisis. But, *a priori*, it makes little sense that the distribution would be right-skewed but then truncated at Phase 5. When queried, respondents noted that this might represent one of two phenomena: One was a fear of using Phase 5 or "famine;" the other was a tendency to "overload" Phase 4. There is no supporting evidence for the latter, but it was noted by several respondents (214).

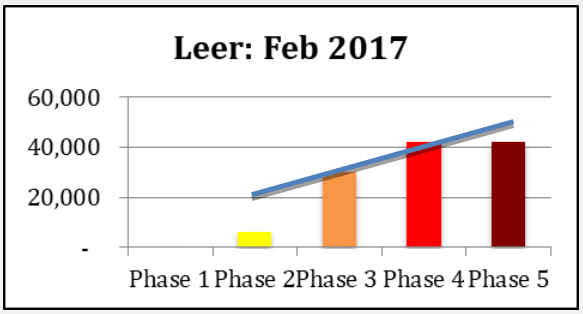
Figure 8: Distribution of Populations in IPC Phases



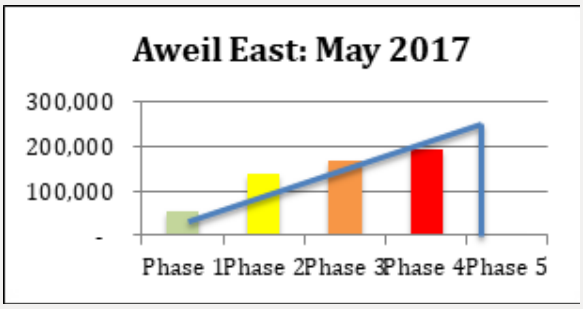
a. "Left-skewed" distribution (no famine)



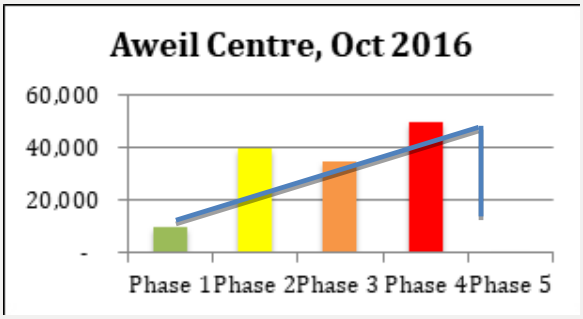
b. "Bell-shaped" distribution (famine)



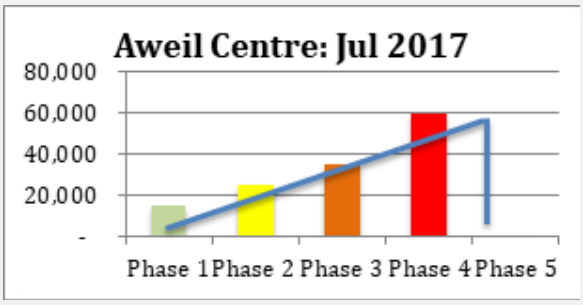
c. "Right-skewed" distribution (famine)



d. "Right-skewed truncated" (no Phase 5)



e. "Right-skewed truncated" (no Phase 5)



f. "Right-skewed truncated" (no Phase 5)

Source: Author's analysis, data from IPC TWG

8. Conclusions and recommendations

As noted in the foreword, the IPC system and its component parts in South Sudan operate in one of the world's most challenging conditions for evidence-based analysis. Despite this the IPC system has shown innovation and ingenuity to address these challenges and has managed to produce regular analysis across the country through the peak of the crisis. Yet, significant challenges still exist. The following is a summary of lessons learned and recommendations. Some points suggest iterative next steps to build on the adaptations that have already been made. Other points suggest that a more fundamental reflection on the assumptions underpinning the IPC approach in South Sudan is needed.

Lessons Learned

In conclusion, a number of lessons learned emerge from the above analysis and are briefly summarized here. The corresponding recommendations are offered in the following sub-section.

1. In the aftermath of the quashed 2016 report, there was a clear decision to change the release mechanism of the IPC reports. Previously, they went through the Ministry of Agriculture to the Council of Ministers. The move to release the IPC reports by the National Bureau of Statistics was made so that the IPC reports would be seen in the same light as any other statistical or factual report, and interference in their publication would be less (029, 030). This was a good innovation that helped to shield the TWG from external influences.

2. Although the purpose of IPC analysis is assumed to be clear, the sense is that over time the IPC community of technicians and users have an increasing variety of views on what IPC can do, should do, and might do. There are constant calls for the process to do more, or to do something different, including providing greater assistance to donors in terms of response (response analysis) and greater assistance to agencies in terms of programming. Over time some of these requested adaptations have been incorporated and others not, further confusing the picture of what the IPC ought to be doing. For example the use of an exclamation mark ('!'—meaning that the situation would be one phase worse in the absence of humanitarian assistance and associated presentation of the results with and without humanitarian assistance), as well as the use of the designation Elevated Risk of Famine (EROF) all represent iterations of the IPC analysis added at the request of various IPC constituents. While it might be clear that IPC processes can provide the general overview of the crisis (current status assessment), the projections (early warning) are a more contentious issue. Clearly, IPC cannot do everything equally well.

3. Up to now, South Sudan has not had a pan-territorial early warning system, and consequently has no way to identify "hotspots" except when they have already emerged (and even then, sometimes only if there is an agency on the ground to take note and raise the alarm). Early warning in the context of violent conflict can be politically fraught—several respondents noted that any attempt to monitor conflict would be interpreted as political interference (019). But clearly conflict analysis is a critical component of identifying "hotspots" and conflict is the major driver of some of the most acute manifestations of the humanitarian crisis. Tracking displacement and

interviewing people recently displaced could be one means of providing this kind of information without crossing political "red lines." Methods such as those utilized by the REACH Initiative might be applicable.[19] With limited data collection and analysis capacity, some kind of early warning is necessary to focus those capacities on the areas of greatest concern. Finally, while IPC is not intended to speak to more than the food security and nutrition situation, many interviewees suggested that at a minimum, more emphasis on water, sanitation and health and their impact on food security and nutrition is necessary.

4. The causal understanding on which IPC Phase 5 is based assumes a relationship (both causal and temporal) between food security, malnutrition, and mortality. Yet time and again, the data from South Sudan contradict the presumed relationship between FS, GAM, and mortality. This is an issue that has to be recognized and dealt with sooner or later.

5. Systematic and proactive monitoring of information gaps has been limited. As of 2017, this is not anyone's particular job or responsibility. The Nutrition Information Working Group tracks both planned and actual nutrition surveys, so they know what areas are and are not being covered—but they didn't necessarily know where the demand for coverage ("hotspots") is. Sometimes an attempt is made to address the lack of information, but it frequently happens after a specific analysis has already occurred. This magnifies the problems of "synchronicity"—that is, data are not available for the same place at the same time across the necessary indicators for an IPC analysis. As of 2018, progress has been made to identify "hotspots" and to provide specific information to update the analysis of these areas. Challenges remain, however, in some cases where hotspots remain unidentified, or are not included in the analysis for various reasons.[20]

6. It is not always clear exactly who is leading the process. Formally, it is a government-led process, and GRSS officials do convene the meetings and release the reports, etc. However, even government officials note that sometimes they do not know the budget, or really control the process. Control over the process and leadership are not always the same thing. Nevertheless, an empowered leadership team is needed to really make the process run. Sometimes in South Sudan, it has not been clear who this is.

7. In a conflict crisis such as that in South Sudan, evidence is inevitably part of the political domain. Currently, IPC processes have a double objective: The first is to provide an independent, reliable and objective analysis of the crisis; the second is to be a locally-owned, government-led, technical consensus. In some cases, these two objectives are relatively uncontroversial; however, at the extreme end of the severity scale, and particularly where famine is being discussed, the two objectives are not always compatible and may fuel suspicions of political influence on the analysis.

8. Clearly in South Sudan, external influences on the analysis have challenged its independence and affected its ability to clearly and unambiguously assess the current status of populations affected by the crisis. This has taken many forms, including in the most overt form, the quashing of reports, suspending staff from their jobs, and overt warnings against the use of "irresponsible" language. But this has also taken the form of more subtle messaging, and, combined with some of the overt influences, has resulted in self-censorship, in chronically missing data, and in the search for an outcome to the analysis that attempts to highlight significantly worrisome areas without evoking the interferences outlined above—more of a political solution to fraught analyses rather than a technical consensus. Attempts have occasionally been made to push difficult choices to the ERC or to simply put off making difficult calls in the analysis. This has occasionally led to a lack of consensus in the analysis, or what some members would describe as a "forced consensus," leading to "minority reports," and to some

19 Indeed the research team understands that efforts have been made since the conclusion of the case study to build on REACH methods to begin a nation-wide early warning initiative.

20 This is another area in which improvement has been made since the case study interviews.

members of the team feeling that in order to speak truthfully, they had to speak outside the formal (and they would say, forced) "consensus." All of these have undermined the independence of the analysis and the credibility of the analysis.

9. These divisive issues tend to arise precisely when the technical information and the technical processes are the weakest, or where information is missing altogether. Sometimes information has been missing because of genuine access and security concerns; sometimes, various respondents noted, access has been used as an excuse and missing information was the intent, not the consequence. Hence one of the clear recommendations (see next section) is to strengthen the quality and the independence of the technical information, to document access constraint issues, and to be transparent about the cause for missing data. But more is required to manage external influences on the analysis.

10. Much of this suggests important questions for humanitarian analysis in South Sudan (including IPC but involving other elements of an information system as well):

    - Are the attempts to deal with the short-term repercussions of the above undermining the credibility of analysis and threatening the reputation of IPC and other kinds of analysis?
    - Do the loudest voices tend to carry the argument? And what is the agenda of the loudest voices: technical or political?
    - What is needed to ensure greater technical capacity, stronger data collection protocols, better guidance on the minimum standards for data in situations where access is limited to a few hours on the ground? Are the provisions in the upcoming Version 3.0 of the IPC Manual adequate?
    - Can a more transparent system be agreed for the timing of data collection, the sharing of data, data quality checks (especially for food security data—data quality checks already exist for nutrition and mortality data)?
    - Does the process expend so much time and energy on minutiae that it misses the big picture? Is the process overly formulaic, with the result that very high technical quality thresholds (especially for nutrition) and quantitative data are overvalued?
    - Are the right actors involved in the process? Is a higher level of engagement needed at the agency level or the UNHCT? At the moment, the fact that this doesn't happen means that people think something is being manipulated behind the scenes and lowers the general credibility of the IPC report.
    - Has the widely discussed doubts about the classification of famine in February 2017 reinforced the reluctance to use a "no regrets" approach to declaring famine?
    - While the IPC has built in protections against the error of false positives (that is, of mistakenly declaring a famine when none exists) can it develop corresponding protections against false negatives (that is, failing to declare a famine when one is actually occurring)?

Recommendations

Recommendations are broken out by category. The first category deals with the governance of IPC and analytical processes and the need to better manage external influences on the analysis. The second category is more technical in nature.

Governance recommendations

1. **Initiate a humanitarian system-wide reflection to clarify the objectives of the IPC.** Stakeholders have a wide variety of opinions on what the priority objectives of the IPC are. The more-benign views of the objectives show a tension between those who see the IPC role as giving a periodic "big picture" of the food security situation and related funding advocacy and others who see the IPC as providing a more granular and regular food security situation analysis that will influence adaptable food security response strategies. The more-suspicious views of the IPC objectives sug-

gest that key players in the process have conflicting interests. Despite efforts to be transparent, some people still see IPC as a "black box" (038). A very public clarification of the objectives of IPC analysis would also allow a clearer positioning of the IPC within the overall humanitarian planning processes. Issues such as the timing and coverage of the analysis and its role in representing only a food security needs analysis or a wider perspective of the entire humanitarian endeavor are all important issues to clarify and are further discussed below. This recommendation applies more broadly than just in South Sudan

2. **Build better in-country political buy-in at higher levels for IPC analysis.** In circumstances where famine is a possible outcome of the analysis, and where data and evidence is missing or of poor quality, the checks and balances to buffer the technical analysis from political influence become crucial. Some examples of these mechanisms at the global level include the Famine Review Committee (FRC) and the Real Time Quality Review. The new version of the IPC guidelines also clarifies the roles and responsibilities of the IPC Steering Committee in dealing with country-level disputes about findings of the country-level IPC especially when "famine" is mooted. However, some respondents noted these global mechanisms, especially the FRC, create a "moral hazard" in the national IPC process. This suggests the need for more involvement of the highest levels of the UN agencies, donors and government in steering and maintaining an overview of the IPC process with a specific objective of buffering the technical process from the political use of the evidence. Regional staff involved in the analysis can be helpful in shielding some of the local or in-country staff from political pressures.

   An in-country steering group could be proactive to shield the technical analysis from political influences. Against their best intentions the TWG seems to be too caught up in juggling perceived or explicit political influences—especially the GRSS staff, but others too. People appear to be spending time calculating the political consequences rather than dedicating their time to their principal task of conducting the analysis. This is obviously a lot easier said than done. In the South Sudan environment, this situation is unavoidable but an explicit recognition of the issue should lead to higher level safeguards and release more of the technicians' time and attention to the technical challenges.

3. **Create and invest in a dedicated and empowered leadership, management, and coordination function for the IPC.** Stakeholders observed that many of the key weaknesses discussed here result from time and resource limitations of the leadership of the IPC process. Individuals within the UN agencies and the government have defined roles and responsibilities vis-à-vis the leadership, management, and coordination of the IPC processes, but their job descriptions do not adequately incorporate these tasks. Few individual analysts involved have job descriptions that focus solely on IPC-related tasks. In many cases, resources and clarity on mandates do not appear to be adequate to empower these individuals to establish themselves as trusted and acknowledged leaders of the process. A strong technical consensus is built on coordination of good quality and coverage of data and well-managed IPC classification, validation, and communication processes. This clarification of leadership should also deal with the question of the role of the ERC/FRC, on which some respondents felt the TWG had become too reliant for making difficult calls.

4. **Clarify membership of the TWG.** Several organizations and individuals have committed to and are invested in TWG work; however, some key members of the TWG appear to be less committed to and invested in the IPC and TWG processes. Key agency leadership should be strongly encouraged to commit to and invest in TWG processes and to commit their most appropriate and capable staff members to consistently take part in the TWG.[21] The membership of the TWG could include clusters beyond food security and nutrition (WASH, health and protection). Including OCHA at agreed steps of the process could strengthen coordination, ownership, communication, and use of the IPC analysis.

21 Again, progress appears to have been made in this area since the case study was conducted.

5. **Develop a clear approach to communication, consultation, and transparency in-country prior to and after the release of the final IPC analysis.** Analyses that appear to have been poorly communicated have damaged ownership and consensus in future analyses and compromised the involvement of stakeholders in the IPC process. An analysis without a communications strategy has led to unfortunate outcomes in the past—future efforts should involve communications specialists as early as possible in the process (even before the validation process). Important stakeholders include senior management within the IPC-involved organizations, donors, and government and with organizations outside of the IPC structure (such as the International Committee of the Red Cross and Médecins sans Frontières). This would mean communicating during the analytical, validation, and dissemination phases in a transparent and collegial fashion. This means communication about the process, not just about the findings. The question of transparency about the results of the analysis before the dissemination of the report is a sensitive one. On the one hand, a perceived lack of transparency has damaged the technical consensus, leading to sense of loss of confidence in the results among some key stakeholders. On the other hand, the IPC findings are increasingly seen as an "evaluation" of the humanitarian response and even the "barometer" of the severity of the impact of the conflict itself. In this sense, the findings are intensely political, and an unmanaged process of sharing the results presents very high organizational, reputational, and security risks to those managing the process. The best compromise might be to aim for maximum transparency within a carefully managed process that builds ownership of the results and minimizes the risks of full transparency. Such a process would allow for adequate time between the validation of the classification and the official dissemination of the findings. And it would require developing systems for recording the validation meetings where the rationale for excluding data and evidence is clear. One clearly identified good practice from South Sudan was that the chairman of NBS currently briefs political leaders before releasing the report, so they are not blindsided. But it is important to note that this is a briefing; it is not a consultation. The final IPC report is treated the same way any other statistical report would be. This system ensures that government knows that the donors are confidentially getting the same information that the government gets.

Technical recommendations

1. **Resource and revitalize the capacity building function of the IPC.** More opportunities for training should be provided for agency staff, and especially for GRSS staff, with an emphasis on GRSS staff at state level, and with particular attention to local NGOs. For UN and NGO staff, build in an expectation of training staff to participate in the IPC process. Foster a sense of excitement/commitment to the process and see it as value-added. This recommendation is related to the resourcing of a dedicated in-country leadership and management function for the IPC. Institute stronger joint supervision structures to validate and quality control data.

2. **Develop greater capacity in GRSS technical departments and engage them in TWG.** Several of the staff in GRSS technical departments are among the strongest food security analysts in South Sudan. A considered reinvestment in their capacity and resources to support the IPC process would be a positive investment in a better-quality, widely owned IPC analysis.

3. **Improve capacity not only for current status assessment but also in other areas.** This would include projections and early warning. IPC projections currently serve as the main source of early warning in South Sudan, and yet this procedure has proven inadequate. IPC current status assessments need to be combined with more traditional early warning (i.e., baseline knowledge combined with scenario-based tracking of predictive indicators). Perhaps a specialized early warning agency like FEWS NET could be charged with leading this and building the capacity of the TWG in this area. Some respondents thought IPC analysis should also help with program selection and

even modality selection. The IPC is not intended for this purpose, but this needs to be clarified.

4. **Negotiate an all-parties agreement on data-transparency and data-quality checks into the food-security data-analysis process.** This will require leadership from global level members of the IPC steering group, though some steps have already been taken locally in South Sudan. The approach used by the Nutrition AIMWG can provide valuable lessons for the nascent food security approach to transparency and data quality. Agreements on recording of data-cleaning steps and on the availability of cleaned data for independent or (preferably) joint analysis build trust and ownership in the IPC analysis. A transparent common data-quality scoring system has proven to be an extremely effective tool for nutrition stakeholders to present a united front in their analysis of nutrition status. For food security, statistical tests, as used in nutrition plausibility checks, may not be immediately possible in South Sudan but simple pre-agreed quality checks are possible and have already been discussed in South Sudan.[22]

5. **Build a better "rapid assessment" tool for instances in which security and access do not allow time for a full nutrition survey or food security assessment.** Lessons learned in South Sudan in particular have resulted in good progress in developing tools for these extreme circumstances at the global level. The soon-to-be-released IPC Manual V3.0 has already incorporated some of these tools and these should be made available as soon as possible to the IPC in South Sudan. Given the significant impact that access and security have on the availability and quality of data for IPC analysis in South Sudan, the TWG should request further technical support to prepare tools to fill gaps in methods to collect data in these extreme circumstances.

6. **Make better use of qualitative data in the analysis.** Practice should be reviewed to identify better ways to incorporate and fund this type of data collection and to maintain a consistent approach across various areas of South Sudan. Standardized guidance is needed on how to rate the reliability of qualitative data and how it can be used in an analysis. Failure to utilize qualitative information in past analyses has limited their ability to adequately assess the situation on the ground.

7. **Include a broader range of sectoral evidence including health and WASH.** Encouraging a greater involvement of the other relevant clusters in contributing qualitative and quantitative data to the analysis would strengthen IPC outcomes and relate them better to cluster response plans. Several respondents called for more discretion in the indicators used in the IPC to account for limited access (037).

8. **Recognize that this is a conflict emergency, and build conflict analysis into IPC analyses and especially IPC projections.** In the absence of conflict analysis, seasonally based assumptions predominate, but in many key areas of the country, critical levels of food insecurity are not strongly linked to seasonality (otherwise, the famine would have been in June/July, not February!). If "conflict analysis" is considered too politically charged, at least the analysis of protection needs should be included. (Protection needs are humanitarian outcomes and therefore in line with IPC's outcome-oriented analysis.)

9. **Develop a better way to identify "hotspots" to prioritize assessment resources for the periodic IPC analysis.** The lack of a pan-territorial early warning system is a major constraint on the analysis. Developing an early warning methodology would build on existing analyses as a kind of baseline understanding of pre-existing vulnerabilities and the ways in which various hazards would impact on vulnerabilities. What remains is the need for system to track the likely occurrence of those hazards. This inevitably means some degree of capacity in conflict analysis, but it can include less conventional means of information gathering. The point is, this needs to be systematic and pan-territorial, at least as far as the crisis-affected area is concerned—which is now the whole country. Note the footnote about the nascent early warning approach being led by REACH.

22 Progress appears to have been made in this area as well.

10. **Create a TWG coordination tool to monitor the timeliness, representativeness, and completeness of data for analyses.** Tracking these dimensions of the different sources of IPC data over time will allow the IPC stakeholders to identify positive lessons learned and bottlenecks to improving the availability and quality of data for the IPC analysis (efforts are already being made in this area).

11. **Review funding and survey mechanisms to include more flexible elements.** Mechanisms are needed to facilitate the requirement for rapid information when new hotspots emerge, so these can be quickly and accurately assessed—regardless of where they fall in the IPC seasonal assessment cycle. (An example of this mechanism is the Action Contre la Faim/UNICEF-led nutrition survey rapid-response mechanism. While the approach encountered several challenges, a thorough review of the successes and challenges could inform a future iteration of this approach.)

12. **Consider planning surveys and data collection based on population groups, not administrative areas.** For example, a number of respondents suggested that the population moving between Leer and Mayendit—or those on the move in Northern Jonglei—should be treated as the sample, rather than the geographical administrative area. Stratification and weighting can be done afterwards if necessary. In the longer term, new sampling frames are needed to reflect very different population dynamics and drivers of food insecurity.

13. **Develop a systematic and regular lessons-learned processes.** Trust between IPC stakeholders and confidence in the evidence-based process are both the essence and the most fragile part of the IPC. Formalized processes for discussing and incorporating lessons learned after each IPC analysis should be developed. With trust and confidence in the IPC the value of the analysis is increased many fold.[23]

14. **Use and present maps that show the actual geographic coverage of data collection used to extrapolate to county level.** These include, for example, map clusters or sampling frames of food security or nutrition surveys. Often due to security or access constraints, not all of an administrative area is actually surveyed. The methods used to extrapolate the results from the surveyed area to the non-surveyed parts of the administrative zone are not always clear or standardized. A reasonable expectation is that populations living in inaccessible areas are likely to be experiencing more challenges to their food or nutrition security status; thus, extrapolation possibly will underrepresent the severity of the situation in parts of the administrative area. Clearer explanations and standardization of the methods used together with an adapted maps protocol to represent this issue would make it easier for users of the IPC analysis to make response decisions.

15. **Consider using more flexibility in timing and sequencing of assessment rounds.** The high tempo of change in context, access, and security in South Sudan mean that in the time between collecting the data, disseminating the analysis, and adapting the response to the findings, the situation can drastically change and render the evidence out of date. The IPC currently produces a comprehensive countrywide analysis twice a year based on seasonal assessments. But future analyses might be managed in response to changing context (e.g., increased displacement in Jonglei or Unity, or renewed conflict in the Equatorias). For example, the IPC might produce a comprehensive countrywide analysis only once a year and for the rest of the year produce classifications for more-focused analysis rounds (e.g., specific data collection rounds for Unity or Jonglei States).

16. **Be aware that a simplistic view of the IPC theory of change can seriously distort the analysis of current state and, most importantly, the projections.** Many respondents recognize that a simplistic view of a theory of change (causal linkages of food insecurity to malnutrition, leading to weakened immune systems and mortality) is not borne out by the evidence in South Sudan. Deteriorating nutritional status has many more drivers than just food insecurity (although undoubtedly food insecurity is very important, especially in the

23 This recommendation is being taken up, with a "lessons learned" workshop having taken place in May 2018.

most extreme circumstances). Likewise, mortality and increases in mortality are driven by food insecurity and malnutrition but also by morbidity and the health status of the population, among other issues. None of the three outcome indicators have been shown to worsen in a linear fashion, especially in extreme circumstances. The outcome data used in an IPC analysis are just a snapshot of the situation. An analysis of contributing factors and trends must be prioritized alongside an appreciation of the non-linear and non-synchronous nature of the relationships between the three main outcome indicators the IPC projections.

17. **Clarify the mortality question.** If civilians are being killed in conflict, it is unclear why there is a need to distinguish what killing is related to food security and what killing is being accomplished by other means. The history of famine is rife with examples of death both from starvation and disease and from violence—all in one event and with many of the same causal factors. If the sum cause were related to bad weather and market failures, that approach might be acceptable, but the clear common denominator across all the famines reviewed in this study is conflict. And civilian loss of life is not just an unfortunate by-product. Much of it is directly attributable to the actions of belligerent parties, whether the actual cause of death was malnutrition and disease or was trauma. Saying that analysis is only concerned with food security is not only to ignore the major causal factor; it sort of "sanitizes" the whole analysis of political implications. The whole responsible group (Steering Committee, GSU, ERC, and in-country TWGs) should review this issue. Saying that the only mortality that "counts" is directly attributable to food/nutrition is to fundamentally make the claim that famine is purely an outcome (and apparently just an "unfortunate" one).

    This is a broader issue that concerns more than just South Sudan. However, at least in the current context, this issue was put on the table for IPC analysis by the mortality study by the ODHC in 2016. And repeatedly mortality surveys show that death from conflict-related causes is very high in South Sudan. This raises questions about accountability that recent work by de Waal (2018) and others suggests actually lies at the heart of understanding and analyzing—and preventing—famines.

The IPC is without doubt the best tool available for the analysis of food security status, and significant capacity for IPC analysis has been built and institutionalized in South Sudan. Since 2014, the analysis has at times been fraught with difficulties. However notable improvements have also been made. Mortality data are now more frequently available. An attempt has been made to identify current "hotspots" and to assess these particular areas in IPC updates. Although some consumers of the information and outcomes still consider the IPC process to be opaque, efforts have been made to make the process as participatory and as transparent as possible. And it has demonstrated the process of learning from its own experiences and implementing changes on the basis of this learning. Analyzing extreme food insecurity in conflict will never be an easy task, but much can be learned from the experience of South Sudan.

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