



THE EFFECTS OF COVID-19 ON FOOD EQUITY AND NUTRITION SECURITY IN SUB-SAHARAN AFRICA: LESSONS FROM A MULTI-PHASE ASSESSMENT

Leah Salm, Nick Nisbett and Alexandra Lulache

APRA COVID-19 Synthesis Report 4
April 2022

Acknowledgements

We would like to thank the APRA Country Teams in Ethiopia, Ghana, Malawi, Nigeria, Tanzania and Zimbabwe and APRA partners at the Tegemeo Institute of Agricultural Policy and Development in Kenya and the University of Zambia for collecting and providing the key informant interview data and multi-phase assessment reports on which this paper draws. We would also like to thank Dr John Thompson and Dr Amrita Saha from the APRA Directorate of Future Agricultures Consortium at the Institute of Development Studies for their input into the design of this study and the overall analysis. Finally, we would like to thank our external reviewer for very helpful comments and guidance.

Key findings

- This study examines the impact of COVID-19 on commercialising farmers across sub-Saharan Africa, with a deeper focus on Nigeria and Malawi, from a food equity perspective.
- The disruptions to livelihoods and daily life created by the pandemic pose greater challenges for people who were already exposed to drivers of inequity and insecurity, thereby deepening pre-existing vulnerabilities.
- Initial barriers to movement and trade led to job loss, revenue losses, disruptions to labour supply and agricultural inputs. These changes were experienced more severely by temporary and landless labourers, informal workers, and smallholder farmers, and affected their ability to grow and access food.
- Women are also more likely to be affected due to higher participation in the informal economy and a disproportionate care burden for children and other family members, which was worsened by some of the COVID-19 measures such as school closures.
- Smallholder farmers were more affected by the disruption in agricultural extension service delivery and fluctuations in demand and prices for their produce, as compared to large and established agricultural holdings.
- While domestic markets have opened, cross-border trade limitations persist and are reported to have the biggest impact on farmers' abilities to sell their produce and to obtain the necessary agricultural inputs, primarily fertiliser and pesticide. This has reverberations across the food supply chain, affecting traders, informal labourers, and agricultural producers, diminishing their incomes and their subsequent ability to afford healthy food choices.
- The unaffordability of food, due to reduced incomes and work opportunities, has been the main cause for rising food insecurity, as opposes to the unavailability of food at the market. This is compounded by rising food prices.
- Food of high nutritional quality such as fruits and vegetables were among the most inaccessible during restrictions due to their perishability. Consumption of these foods reduced in some instances, with implications for diet quality, particularly those in precarious financial situations.
- School closures are likely to affect the development of girls more than that of boys, as girls are more at risk of forced school abandonment. This has potential long-term nutrition implications throughout the life course.

1. Introduction

The COVID-19 pandemic in sub-Saharan Africa has elicited reactions that are also seen worldwide: widespread and indefinite health effects, and deep reverberations on almost all parts of daily life, from livelihoods, to freedom of movement and the availability of foods and services. As was seen in previous health crises such as that of HIV or Ebola, the effects of the pandemic are mediated by preexisting power structures, vulnerabilities, and systems of support, which lead to differentiated outcomes for people and communities, often to the detriment of the poorest groups (Gillespie and Whiteside, 2020; UNESCO Inclusive Policy Lab, 2020). The availability, accessibility, and stability of food has also been affected during this time, and people's differentiated ability to withstand, respond, and recover from COVID-19-related shocks and stresses has influenced immediate drivers of malnutrition, with the possibility that some effects will be long-lasting (FAO, 2020; Onuoha-Ogwe, 2020; FAO, 2021a; WFP, 2021a; Save the Children, 2021; Josephson, Kilic and Michler, 2020; Amankwah and Gourlay, 2021).

Alongside the impact of the disease itself, concerns have been raised that restrictions to mitigate the virus may have impacted people's livelihoods, incomes and purchasing power, which in turn has affected food security and food diversity, with implications for the nutritional adequacy of diets. Preliminary studies on the impact of COVID-19 on food systems' resilience reveal the people affected the most are those already suffering the greatest burdens of malnutrition and food insecurity, some of whom may be invisible to formal systems of support (Béné, 2020; Marmot et al., 2020). The measures taken to limit the spread of COVID-19 prompt the question 'whose resilience is prioritised?' in the management of the pandemic (Béné, 2020; Ebata, Nisbett and Gillespie, 2021).

This paper builds on the original work of the Agricultural Policy Research in Africa (APRA) study. Eight sub-Saharan African¹ countries were studied by local APRA teams to assess the response taken by governments, third-sector actors and local communities to the pandemic, and the impact on agricultural production, food trade, and ultimately, the livelihoods of rural households and their ability to secure a nutritious diet.

Here, we supplement the original study by using the APRA data sets in combination with a review of recent literature to explore the differential impacts

that COVID-19 has had on groups in relation to their food and nutrition security. The framework for analysis is shaped by the concept of 'food equity', which puts forward the notion that everybody should have the agency to realise their nutritional rights without being obstructed by unfair processes and systems that distribute resources and opportunities unevenly (Nisbett et al., 2022). For example, access to education, land, income and support structures affect peoples' coping strategies in moments of crisis, which can lead to compromised food and nutrition situations. The differentiated distribution of resources and capacities is usually to the detriment of people or groups who already face marginalisation on the basis of factors such as gender, location, ethnicity, age, labour inclusion, and more (Béné, 2020; Ebata, Nisbett and Gillespie, 2021; Howard and Dancer, 2021).

Two countries, Malawi and Nigeria, were studied in depth as they exhibited high rates of food insecurity directly related to the pandemic. The data was collected through household surveys and key informant interviews (KIs) carried out by local APRA country teams, namely Aromolaran et al. (2021) in Nigeria and Matita and Chibombo (2021) in Malawi. The data in the country reports was collected across three rounds: June-July 2020, October 2020 and February 2021. The APRA data was supplemented with a review of recent literature focusing on the two in-depth case-study countries and analysed, through a food equity lens, to check for the presence of discriminatory systems or processes that reduce the agency of individuals or households to access food that meets their nutritional needs.

This paper begins by presenting an overview of the main actors responding to the pandemic, their perceptions and actions across the study rounds in all eight countries, and how these institutional reactions influenced agricultural production, trade, and employment, which subsequently have an impact on access, and availability to food. The second section applies a food equity lens to dig deeper into the differentiated and precarious food and nutritional situations in Malawi and Nigeria using a combination of the APRA data and secondary literature.

2. Data and analysis

The primary data we utilised for this study is the qualitative data collected during the APRA rapid assessment of the COVID-19 impacts on food systems. This was part of a mixed-methods approach to data

1 Ethiopia, Ghana, Kenya, Malawi, Nigeria, Tanzania, Zambia and Zimbabwe.

collection undertaken by the APRA programme, with both household surveys and key informant telephone interviews repeated across three rounds, beginning in June 2020 and ending in April 2021.

2.1. APRA data collection

Households and informants for the initial APRA study were recruited from the areas previously surveyed as part of the APRA programme's panel studies and longitudinal studies of agricultural commercialisation and livelihood security during 2017-2020 in Ethiopia, Ghana, Malawi, Nigeria, Tanzania and Zimbabwe, with complementary studies from Kenya and Zambia also included. While there were small differences in the exact nature of original sampling methods used in these studies, the selection of villages and local informants for the APRA multi-phase assessment followed a rigorous approach using common guidelines, and was meant to be representative of the study areas that included highly commercialised households. A full description of the sampling process in every country can be found in the respective 2021 synthesis reports published on the APRA website.

In each country, in-depth interviews with key informants were conducted by local teams, in the local language, which were then transcribed and translated into English. The number of those interviewed, as well as the level of detail varies between countries.² The materials from Malawi and Nigeria in particular had a very high level of detail and consistency across rounds, an element that has partially contributed to their subsequent selection as in-depth case study countries. The key informants were those with high standing in the community, such as chiefs, local leaders, religious leaders, as well as those involved in the agricultural sector such as agricultural extension officers, farmer leaders, and agricultural office directors. Interviews with the aforementioned experts complemented the standardised surveys of farmer households and interrogated the same topics as the closed surveys.

The interviews were semi-structured, and the same questions were asked in each round (see Annex 1 for the full list of questions). The questions covered topics such as the community's awareness of COVID-19, the role of the state, the community, the private sector and external agencies such as non-governmental

organisations (NGOs) in response to COVID-19, as well as questions on the impacts on agricultural production, market access and the movement of people and goods.

2.2. Study locations of the APRA multi-phase assessment

The sample communities in Malawi are in the Mchinji and Ntchisi districts where groundnuts, tobacco and maize are grown and were selected based on their proximity to trading centres in Central Region. The Nigerian households are located in Ogun and Kaduna states in some of the wards most affected by COVID-19, where both small- and medium-scale producers are producing a variety of crops, including roots and tubers, maize and rice.

The Ethiopian study locations are spread across several communities (*kebeles*) in the Fogera Plain, where rice production and marketing are of primary importance. Communities in Ghana are based in the southwestern oil palm belt where there is a concentration of processing activities. The Kenya, study locations were drawn from the Tegemeo Institute's panel study³ and include diverse small-scale farming areas near the major urban markets of Mombasa and Nairobi. The sample households in Tanzania are in villages in Mngeta Division that rely on rice production and marketing. In Zambia, study locations are in the Mkushi Farm Block in the Central Province, some 170km south-east of the Copperbelt mining hub on the Great North Road linking Lusaka to Dar es Salaam. The area has attracted both small- and medium-scale satellite vegetable farms that have been established on customary land surrounding the farm block. Finally, in Zimbabwe, the field sites are in Mvurwi Farming Area in Mazowe District, Mashonaland Central, where small-scale and larger-scale farming models have emerged. The farms are producing maize and tobacco and are likely to experience disruptions to their production and marketing activities.

2.3. Analysis

The KIs were the primary data used for the food equity analysis in this working paper, and further supported by the quantitative findings of the household surveys in the APRA country reports, lead by Aromolaran et al. (2021) in Nigeria and Matita and Chibombo (2021) in Malawi,

- 2 Ethiopia 25 interviews in each round 1-3, Tanzania seven interviews in each round 1-3, Ghana five interviews in each round 1-3, Zimbabwe four interviews in each round 1-3, Nigeria six interviews in each round 1-3, Malawi eight interviews in each round 1-3, Zambia five interviews in rounds 2 and 3, Kenya three interviews in round 1, four interviews in round 2, and two interviews in round 3.
- 3 Tegemeo Institute of Agricultural Policy and Development has been collecting household-level data on various aspects of agriculture and rural livelihoods in Kenya for well over two decades. We have drawn on that panel for this study – <https://www.tegemeo.org/resources/data>.

as well as secondary literature on the two case-study countries. The analysis occurred in two phases.

The first phase of analysis focused on the KII data. All interviews were read in full to identify emerging issues of food inequity across all topics, such as agricultural production, markets and mobility, employment, and measures taken by different actors. This was guided by equity concepts of distribution, inclusion, and justice developed by Karlson et al. (2018), and utilised by others more directly related to food and nutrition (Salm et al., 2021). This occurred firstly after round 1 and was then repeated after rounds 2 and 3. We noted the changes in situations and flagged any emerging food equity issues as the pandemic unfolded.

Two researchers completed a predominantly inductive thematic analysis. Emerging themes and trends were discussed to create an overview of the dynamics and the potential food equity concerns. We triangulated our themes from the KII with the quantitative data collected through the household surveys, which are published in the APRA country reports and are available on the programme website.⁴

This first phase of analysis, and emerging themes, led to the development of the *Impact of COVID-19 on food and nutrition security in sub-Saharan Africa framework* (Figure 1). The framework builds on research describing how mediating equity factors impact food and nutrition outcomes (Salm et al., 2021), as well as understandings of immediate and underlying drivers of malnutrition (UNICEF, 1990; Black et al., 2013). This framework is a summary of the main themes and findings of the first phase of this analysis, and also provides a structure for the second phase of analysis.

Given the variation in the depth of data available across countries, we decided the most value would be generated if we 'drilled down' on a smaller number of countries to elaborate the situations in greater detail. We employed a systematic process of comparing countries in terms of: richness and consistency of interview data, availability of additional resources, the severity of food and nutrition concerns during the pandemic, and other key areas of interest such as the intensity of public responses, or gender and age dynamics (see Annex 2 for the country selection criteria). Nigeria and Malawi were selected for further analysis as we felt these were important country case studies given the continued unstable food and nutrition security situation, the challenges that the COVID-19 restrictions have brought, as well as the richness of data collected.

The second phase of analysis focuses on Nigeria and Malawi as case study countries. The qualitative data from the APRA KIIs were organised into the framework components (Figure 1). The ideal situation would have been to elaborate on these areas with further primary data collection with key informants and in particular, those facing marginalisation. This was not possible due to time and resource constraints. Therefore, we supplement the qualitative data with information from the APRA household survey findings reported in the round 1-3 country reports,⁵ as well as secondary data and literature taken from a variety of sources, such as the Food and Agriculture Organization (FAO), the United Nations World Food Programme (WFP), the World Bank, International Food Policy Research Institute reports and regional databases, peer-reviewed literature and grey literature. These were collected through a mixture of purposeful literature searching, snowballing from reference lists and expert input from the wider APRA team. The findings below, therefore, describe:

1. The framework of impacts of COVID-19 on food and nutrition security.
2. A summary of the evidence across all eight countries in sub-Saharan Africa.
3. An in-depth exploration of food equity challenges in Malawi and Nigeria.

2.3.1. Framework

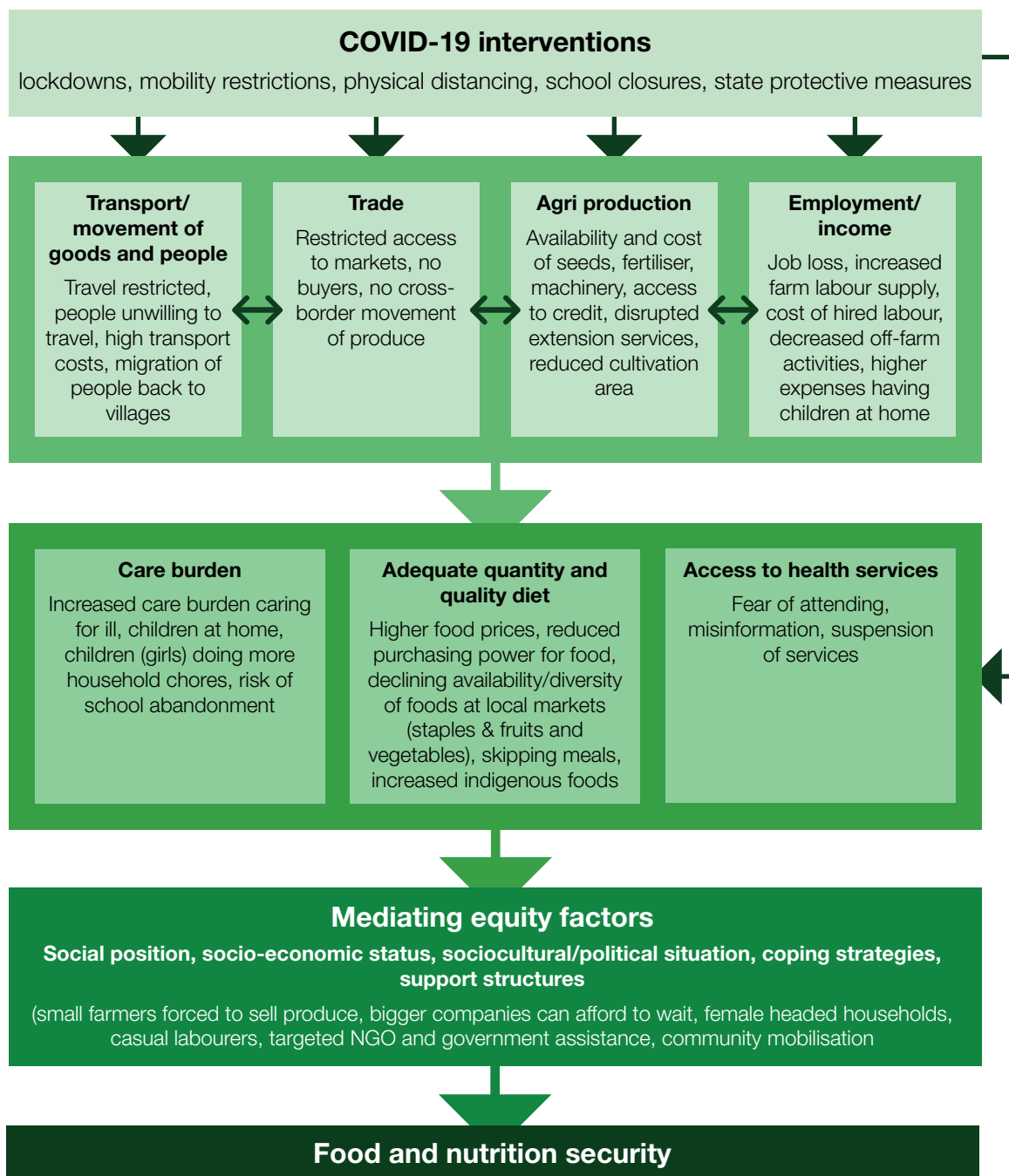
The Effects of COVID-19 on food and nutrition security in sub-Saharan Africa framework seeks to illustrate our findings of how COVID-19 response measures and the chain of events following these affect food and nutrition security in differentiated ways. Each of the eight countries has its own dynamic, which means that components of this framework are affected to a greater or lesser extent when considered individually. To note, there was very little discussion (and out of the scope of this study) to look at the direct impact of the disease on the nutrition status of individuals.

COVID-19 interventions have primarily affected four key areas: the transport and movement of people (due to travel restrictions, higher travel costs, and new migratory flows), trade (due to restricted access to markets and a smaller diversity of buyers and traders, both domestically and across borders), agricultural production (due to low availability of inputs and extension services) and employment and incomes (due to job loss, reduced profits, and higher living costs). There are of course relationships between

4 APRA COVID-19 publications: https://www.future-agricultures.org/covid-19/#apra_publications

5 APRA COVID-19 publications: https://www.future-agricultures.org/covid-19/#apra_publications

Figure 1 Effects of COVID-19 on food and nutrition security in sub-Saharan Africa framework



Source: Authors' own.

these key areas also. For example, the restrictions to trade impacting the availability of inputs for agricultural production, or restrictions on the movements of people such as stay at home policies limiting work opportunities for casual labourers.

These key areas influence more immediate and underlying drivers of food and nutrition security through the potential to increase care burdens, decrease access to health services, and disrupt access to quality diets.

These pathways of interaction between COVID-19 measures and different aspects of life that affect food security were not direct or uniform across countries,

nor were they experienced in the same way among different groups. There was a range of **mediating equity factors** that influence the extent to which food and nutrition security is compromised. We found these are related to social position in society, as well as the resilience and capacity of households to deal with the fall out of COVID-19 restrictions. Examples include social position, job status, socio-cultural beliefs, or availability of support structures, which can affect a person's response mechanisms, and end up creating higher care burdens, lower access to health, and less capacity to support an adequate diet in terms of quantity and quality.

The following sections will follow the logic of this framework and describe in more detail the COVID-19 situation in the eight sub-Saharan African countries, and then ‘drilling down’ into the situation in Nigeria and Malawi specifically with a focus on mediating equity factors that affect the food and nutrition situation. Mediating equity factors are presented within each section (transport, trade) etc, rather than separately, and are then summarised in the concluding section.

3. Findings

3.1 Overview of COVID-19 responses in sub-Saharan Africa

Across the eight countries studied, the pandemic was perceived in diverse ways, ranging from denial to high tolerance. The information circulated about COVID-19 by governments was met with mixed levels of trust, and adherence to safety measures has varied. According to the household surveys, in Ghana, Kenya and Zambia there was general trust in the official communication, which translated into overall compliance with the new regulations even if, according to the KIs, discursively the deadliness of the virus was downplayed. In time, however, less and less caution was observed, and currently, the three countries have minimal restrictions in place. In the case of Nigeria and Malawi, the initial distrust regarding the virus was revised as the number of COVID-19 deaths rose. On the opposite end of the spectrum, Ethiopia, Tanzania and Zimbabwe have shown a strong distrust in government information and low adoption of health and safety measures. Although the first wave of the pandemic was met with some cooperation, as time passed, COVID-19 responses were largely abandoned, and the Tanzanian government has explicitly denied the existence of the virus in the country. The common reasons why people are hesitant or dismissive of COVID-19 are the belief that it is an “elite” disease that will not affect rural areas, that it is a government ploy to distract attention from ongoing political and economic struggles, or an attempt to undermine the church. More often than not, pandemic restrictions have had such a drastic effect on livelihoods that people believe the measures are disproportionate to the perceived deadliness of the virus, especially as they compare it to past experiences of pandemics.

Government action partially reflected the attitudes of the population at large: the initial wave of commitment was oftentimes followed by relaxation, an underestimation of the impacts of the disease, or of the need for institutional assistance. There were a set of common measures adopted by all countries in the first round, namely school closures, restrictions

on large gatherings and transport capacities, closures of markets, the mandatory wearing of face masks, and a push to extend sanitary instruments (water buckets, disinfectant). Some countries also implemented curfews and movement restrictions between regions (Ghana, Nigeria), however, full lockdowns were strongly rejected by the populations of both countries. All of the measures above waned by round three, although the initial restrictions on movement and trade have had deep-felt effects on work and income that have persisted through all three rounds.

In all the countries assessed, barriers to transport, movement, and trade, especially those across borders, have seriously affected the availability and affordability of farming inputs and have contributed to disruptions in agricultural production. As trade restrictions reduced the buyer base and lowered sales, profits and incomes, farmers invested less in future production, and could not afford to hire as many temporary labourers as before. Local trade improved across rounds and is now slowly reverting back to normal. Markets have reopened and traders travel freely within borders, driving up farmgate sales (with the exception of Ethiopia and Nigeria where the northern regions are in conflict). However, cross-border trade is still restricted, either because of border closures or higher levels of bureaucracy and transportation costs. Overall, the availability and affordability of both farming inputs and diverse food groups was disrupted, food prices have fluctuated in all eight countries, and the incomes of both farmers and day labourers are likely to continue to be affected in the medium term, which in turn, affects dietary decisions and potentially, nutrition outcomes (e.g., reduced meals, lower consumption of fruits and vegetables).

Government aid was found to be uncommon, its absence justified by the pervasive discourse that rural areas can grow their own food, or that the effects of the pandemic are mild compared to past natural disasters or diseases. Nonetheless, out of all the industries, the food sector was the most protected, with strategies planning for special transport allowances and input subsidies for farmers. While these measures helped prevent food shortages, they were not always planned and implemented in a way that supported the resilience of vulnerable households. The Kenyan Government was particularly proactive, offering food aid to vulnerable households and an extensive subsidised agricultural inputs scheme; however, both programmes were short-lived. Zimbabwe also promised a support programme for both nutrition gardens and commercial farms, but only 6% of

respondents reported accessing the subsidies. Similarly, Nigeria promised government food aid and cash transfers, but it only delivered in the first stages of the pandemic, with only 13% of respondents reporting to have received assistance, although 41% were eligible. The governments of Ethiopia, Ghana, Malawi, Tanzania and Zambia offered no type of relief. Even in the cases where governments do offer assistance, it is not known to what extent informal workers are included in these mechanisms of social protection.

“We have not been given any support/aid from government, and we do not expect to get any. How can we get help while the country has not declared that there is Corona?”

Tanzania Kil

The pandemic disrupted the activity of agricultural extension officers in all countries as large gatherings and field days were no longer possible, and specialised information reached a smaller number of farmers. Farmers who were better connected or technologically savvy had more access to agricultural information, as they could benefit from alternative channels of information dissemination. Agricultural inputs were less available in the first wave of the pandemic due to trade restrictions, and while today, they can be found on the market, seeds, fertilisers and pesticides are much more expensive. Smallholders were more severely affected by the fluctuation in inputs as opposed to large estates, as they could not stock up on input supplies, and could not withhold produce sales until prices went back to normal. As a result, for a period of time, food became more expensive, and farmers started diversifying production to cultivate both for commercial purposes and for their own consumption. Fluctuations in farming participation differed between countries, with Zimbabwe reporting declines, while households in other countries changed their working arrangements. For example, some smallholder farmers stopped farming their own lands to sell their labour to larger employers, while others continued farming their lands but did not hire additional labour outside the family. Government-subsidised input programmes and the restocking of national food reserves have supported smallholder farmers as markets became more volatile (Kenya, Zambia, Zimbabwe), but they were absent or insufficiently implemented in many of the assessed countries.

The government services most affected by the pandemic were schools, health and agricultural extension services. In all responding countries, it was reported that agricultural extension services

were temporarily suspended or delivered at reduced capacity, and so fewer farmers benefited from information sessions that could have improved agricultural productivity. While hospitals and health centres remain open and were only affected for short periods of time at the start of the pandemic, doctor visits and health screenings were actively avoided for fear of infection or hospitalisation. A majority of countries closed down schools, both at the onset of the pandemic and in subsequent waves.

In all studied countries, temporary labourers struggled to find employment, and in Malawi, some have resorted to working in exchange for maize rather than money. If at the beginning of the pandemic labourers were not hired due to mobility restrictions, by round 3, low employment had become perpetuated because farmers did not have the financial resources to employ others. Since schools closed and work opportunities outside the village were greatly reduced, farmers rely upon family labour to substitute hiring strangers or migrant labourers. If children were not in school, this also increased the care burden of family members and restricted their participation in the labour market.

Non-state actors have had a minimal recovery response since the pandemic began. Almost no COVID-19-specific projects were set up, although some NGOs did supply sanitation equipment and contributed to spreading health information. The NGOs that did respond specifically to the pandemic slowly decreased their activity across rounds (Nigeria). International agencies provided aid in the form of food or livestock supplies, however, a majority of these projects were planned ahead of COVID-19 in areas at risk of famine, and have been adapted to the pandemic situation.

Forms of local community self-organisation took shape at the start of the pandemic when traditional leaders and religious leaders cooperated to provide sanitary supplies and disseminate health information. Some attempts were made at activating existing community structures that were set up to deal with previous crises, such as women-led community savings groups, however, all these initiatives were short-lived and quickly disappeared after the first round of data collection. Political parties had limited input in all countries, and when they did communicate about the virus, it was perceived as a mercantile attempt to secure political support. A more consistent actor was the church, which spread awareness about the virus and offered food aid to those in need. However, while in countries such as Nigeria, the church cooperated with public authorities to present information that was aligned with public health guidelines, in Ethiopia, the

church was at odds with authorities and promoted counter-protective behaviours, such as encouraging large gatherings for mass.

In the continuous destabilisation caused by COVID-19 measures, we see that accessibility is the most prominent problem plaguing food systems in sub-Saharan Africa. Accessibility refers both to changing access to customary food sources (change in shopping patterns, items, locations), and unaffordability (because of price increases or a loss in income). The APRA assessment has measured changes in price and incomes across all countries. Price fluctuations changed on a country-by-country basis and across assessment rounds, at times exhibiting huge price spikes and at other times sharp falls. The same goes for food availability, which was destabilised in round 1, but has shown recovery in subsequent rounds, and which depends on the food group in question; fish, fruits and vegetables, roots, pulses, sugar and tubers have shown more volatility in their availability as opposed to other food groups such as grains. What is constant, however, is that people struggle to afford the food they used to buy, and show higher food insecurity scores as compared to pre-pandemic periods (Kenya, Tanzania, Zambia, Zimbabwe). The most concerning food insecurity scores can be found in Malawi and Nigeria, which will be explored in more depth in the following section.

3.2 COVID-19 and food equity in Nigeria and Malawi

Nigeria and Malawi were chosen as in-depth case studies to delve into food equity concerns because they present major and ongoing struggles with food insecurity, and have tested out a range of measures and interventions to try and mitigate negative health outcomes. The section below triangulates APRA findings from the KIs and household surveys with secondary literature, to find how COVID-19 interventions intersect with mediating food equity factors to influence peoples' access to healthy diets. It will begin with a short overview of the measures taken in each country, followed by an exploration of how pandemic-induced changes in agricultural production, trade, employment, care burdens, access to health services and adequate food have influenced the nutritional status of vulnerable groups.

3.2.1 Situation overview: Nigeria and Malawi

Nigeria

The onset and continuation of the pandemic and the related government measures have caused economic shocks that affected 15 million Nigerian

households and are projected to push 5 million more people into poverty, according to World Bank household surveys (Josephson, Kilic and Michler, 2020; Amare et al., 2021). Government restrictions and measures included a full lockdown, phone-based extension services, federal government cash transfers and food supplies, free movement passes, awareness-raising campaigns and school closures.

Both the APRA household surveys and secondary literature report the most significant manifestations of these economic shocks have been on access to food, as Nigeria exhibited some of the most severe increases in food prices and in food insecurity in sub-Saharan Africa (Aromolaran et al., 2021; Madzorera et al., 2021.) Important to note is that the effects of the pandemic on actors in the informal sector remain hard to assess, but are anticipated to be great (Béné et al., 2021).

After more than 15 months, households in the APRA study are still dealing with the effects of COVID-19 measures on their income. In the latest round of data collection, food prices were still a major concern; as of February 2021, more than 80% of respondents reported increased prices for seven out of 11 food groups. APRA data is supported by findings from the Global Alliance for Improved Nutrition (GAIN), which show that from January to April 2021, 68% of Nigerian respondents continue to declare that food and living costs have increased (Aromolaran et al., 2021). Nigeria was one of the only countries in the APRA sample where increased food prices were reported to affect food consumption patterns, whereas in the other countries, it was mainly the drop in incomes that generated negative coping behaviours.

Negative impacts are magnified by conflict and insecurity, particularly in the Northern Region, which causes large-scale displacements, violence, and differential access to resources (FAO, 2021e; GAIN, 2021; iMMAP, 2021). According to WFP (2021b), there are over 2 million internally displaced persons in Nigeria, in states where 9.2 million people are in urgent need of food assistance. All these overlapping dynamics make Nigerian recovery delayed and difficult.

Assistance to the most vulnerable in Nigeria was provided by a more diverse pool of actors compared to other sub-Saharan African countries, including faith-based organisations or international agencies such as the United Nations Development Programme, WFP and FAO, who were already present and active in the country, and particularly in the northeast (FAO, 2021d). Government assistance,

however, was volatile, and only 14% of the APRA respondents who were promised assistance have actually received it (Aromolaran et al., 2021). A large share of government and humanitarian aid was directed to the north-eastern states to provide food assistance to 1.5 million people, attempting to cover 70% of their kilocalorie needs for the months of September and October 2020 (FAO, 2021e).

Malawi

The economy of Malawi was deeply affected by pandemic disruptions to supply chains at the level of production, processing, logistics, and retail (FAO, 2020), with a particularly negative effect on small- and medium-sized enterprises (AGRA, 2020). Matita and Chibombo (2021) cite positive economic projections by the World Bank in Malawi caused by a good harvest season, however, that does not override the fact that job loss, business closures, and barriers to participation in farming have been significant and that the effects of these economic shocks continue to play out. Strategies to cope with income loss can include living off savings, selling assets, receiving assistance from family or government, or reducing food consumption.

To respond to the pandemic and reduce the spread of the virus, the Government of Malawi declared a state of national disaster on 20 March 2020, after only four confirmed cases of COVID-19 infection, and proceeded to take early containment measures. These included closed land borders, restricted flights, exempting the transport of essential goods and services, for which three land borders remained open (Matita and Chibombo, 2021; AGRA, 2020; Vickers et al., 2020). Border restrictions caused labour shortages, input shortages, and disrupted food processing and distribution capacities. Trade restricting measures were short-lived, but included export restrictions, import barriers, and domestic restrictions on trade (FAO, 2021a). Schools and universities were closed at the end of March 2020, then subsequently opened in a phased approach in September (Vickers et al., 2020), and closed again for one month in January 2021 following the onset of the second wave. Transport capacity was reduced by 50% for private vehicles (Matita and Chibombo, 2021).

A full lockdown was never implemented after heated contestations arguing that the proposal did not account for the disproportionately negative impact a lockdown would have on the poor and vulnerable populations. A lockdown was perceived as a political move to avoid elections that would inadvertently risk causing starvation and destitution for the most vulnerable (Matita and Chibombo, 2021; Vickers

et al., 2020). This perspective is supported by International Food Policy Research Institute (IFPRI) simulations that used a social accounting matrix multiplier model, which estimated that the declines in gross domestic product (GDP) caused by a lockdown would have had more severe effects compared to an extended time of restrictions, and could have pushed an additional million people into temporary poverty (Baulch, Botha and Pauw, 2020).

In terms of direct assistance, the government has reached out to 30% of surveyed respondents of the APRA household surveys, in continuation of social safety net programmes established before the onset of the pandemic. Social protection payments were fast-tracked to cover a full four months, as a response to the COVID-19 situation (FAO, 2020).

Food insecurity in Malawi has been aggravated by COVID-19 – despite pre-existent threats of hunger and malnutrition. Increased living costs coupled with decreased incomes caused a third of APRA respondents to spend a whole day without eating, even if food was available in local markets (Matita and Chibombo, 2021). As diets become less healthy, diverse or frequent, the current disruptions in food markets drive up undernutrition, particularly for children from poor households (UNICEF Malawi, 2020). In line with APRA findings, the latest Integrated Phase Classification (IPC) Acute Food Insecurity analysis (2021) in Malawi identified 1 million people experiencing high levels of acute food insecurity despite its record-high level of maize production. According to World Bank estimates in January 2021, 70% of adults in Malawi suffer from moderate or severe food insecurity (Amankwah and Gourlay, 2021). The IPC (2021) attributes the rising food insecurity to the persisting effects of the COVID-19 pandemic and the reduced purchasing power due to job or income loss – particularly in the informal sector – and a fall in remittances. Despite a pre-existing background of food precarity, the World Bank estimated that 43% of households that were not in a situation of severe food insecurity in 2018, have found themselves in such a condition in June 2020 (Amankwah and Gourlay, 2021).

3.2.2 The impact of COVID-19 measures on agricultural production, trade, and incomes: food equity outcomes

The COVID-19 related measures have had very direct impacts on the state of agricultural production, trade, and peoples' incomes and employment opportunities. Therefore, these areas of interest were specifically targeted both in the qualitative interviews with key informants, and the household surveys of the

APRA multi-phase assessment. The present paper triangulated the APRA data with the wider literature and applied a food equity lens to identify potential differential impacts on food and nutrition security.

3.2.2.1 Agricultural production

COVID-19 restrictions, most prominently border restrictions and domestic trade impediments, have disrupted the agricultural sector significantly. Both in Malawi and Nigeria, interviews found that COVID-19 measures created labour and credit shortages, delayed harvests, slowed down trade, and increased crop loss and damage to perishable food in particular (fruits and vegetables) by increasing the necessity and cost of storage. Restrictions have also temporarily suspended agricultural extension service training which, once resumed, did not function at full capacity. Agricultural inputs were both harder to find and more expensive, affecting crop production and thereby, the income pathways farmers can rely on to afford nutritionally varied food. High production costs and disrupted market and sale avenues were met with falling incomes on behalf of end consumers, and have led to an overall loss of profits that puts pressure on the diets of farming households. In this stressful context, smallholder farmers and day labourers are less resilient, and more prone to appeal to negative dietary coping mechanisms, as confirmed by the wider literature (AGRA, 2020; CGIAR, 2021; IPC, 2021; Madzorera et al., 2021).

In Nigeria, due to rising costs, many farmers opted to reduce their cultivation area or delay planting, and participation in food production has declined drastically. The interview findings supported the household data, with as much as 78% of respondents reporting a decline in farming activities across all three study rounds. Agricultural extension services could not be accessed during the lockdown period according to KIIs. These disruptions outlived the lockdown period as access to land, labour, assets and inputs remains challenging, augmenting the looming threat of food insecurity (Aromolaran et al., 2021). This is particularly the case in Borno state which is experiencing violent conflicts and risk of famine (FAO, 2021e).

The FAO's (2021d) National Agrifood System in Nigeria report explains that a special task team led by the Ministry of Agriculture attempted to offset the negative effects of mobility restrictions by implementing free-movement permits for farmers, food, livestock, and agricultural inputs during the lockdown. However, informants declared the measure unsuccessful since the local administration worked reduced office hours and had very limited capacity to process permit

requests during the lockdown, while farmers still had to travel to other cities to obtain the certificates at a time when travel was expensive or restricted. Additionally, farmers were said to rely on informal traders for farmgate sales, who would not have been eligible for the said permits in the first place. In the Nigerian agricultural sector, temporary labourers and smallholders are more vulnerable to COVID-19 disruptions, and so farm size serves as a potential mediating food equity factor.

Throughout the three rounds of interviews, informants unanimously expressed that agricultural inputs and additional labour are more expensive and harder to find. In particular, poultry feed and inputs for cassava, yam, rice, and other staples were difficult to find on the market, a finding confirmed by the Food and Agriculture Organisation's report on Agrifood systems in Nigeria (FAO, 2021d). This is a serious concern for smaller farmers who rely on informal traders of fertilisers and pesticides and now have to switch to more expensive sources. Most importantly, informants unanimously declared that farmers could not afford to hire as many labourers as they would previously, and movement restrictions reduced the pool of available farm workers. Apart from the challenges this poses to farmers, it also means that farm labourers have gone several months with little employment, which is likely to create hardships to afford food. Many small farmers could not afford the rising costs and gave up cultivating their land commercially, seeking employment with large farms instead.

Smallholder farmers have less resilience to overcome market shocks and losses in the current season, which then affects the investments they can afford to make in the upcoming planting season. APRA findings from Nigeria showed that income losses have affected agricultural productivity, meaning that pandemic-induced stressors are likely to extend over a longer period of time. KIIs particularly stressed that disruptions in agricultural extension services were another major concern for farmers, a matter supported by previous literature arguing that small farmers are more dependent on agricultural extension services to increase their productivity (Ebata, Nisbett and Gillespie, 2021). Larger farming estates, by comparison, were able to stock up on inputs, withhold sales until prices recovered, and access the labour of small farmers who no longer found it financially viable to cultivate their own land commercially (Aromolaran et al., 2021).

“The outbreak is affecting service delivery that enhances agricultural production. Transportation is already a problem for extension services, now field officers have to

limit interactions with the community meaning they only reach out to few farmers which are usually closer to the field worker.”

Malawi Kil

However, agricultural production has seen improvements from the onset of the pandemic to early 2022. Household data shows that labour availability increased from 59% of respondents (round 1 June-July 2020) to 91% (round 3 February 2021), while the reported decreased access to farm inputs declined from 59% of respondents (round 1) to 23% (round 3). Nonetheless, 80% of farmers still reported increased prices of farming inputs, which places significant strain on agricultural production, food security, and on farmers' livelihoods (Aromolaran et al., 2021).

In Malawi, a productive agricultural system is essential as it employs 80% of the population and contributes 33% of national GDP (AGRA, 2020). While APRA household surveys have not observed unusual changes in farming participation, there are concerns as to how crop yields will be affected by blockages related to the pandemic restrictions. The ability of the Government of Malawi to provide assistance in these times has had mixed success.

A majority of informants expressed concerns about the unequal access to agricultural extension services. In order to manage capacity restrictions that banned events and gatherings of over 50 people, agricultural extension officers prioritised the participation of lead farmers, who were then asked to share the information with the rest of their farmer networks. Not all participating farmers took their role seriously, which led to an unequal distribution of valuable information. According to the FAO's (2020) assessment of the impact of COVID-19 on the national agri-food system of Malawi, only cotton, food transport, tobacco and veterinary services were categorised as essential and received targeted state protection. According to the same report, agricultural extension services were not categorised as essential services and part of their funding was rechannelled to the health system.

To compensate for the loss of training sessions, information was disseminated via radio (KULIMA programme)⁶ and mobile apps, but they have not

been well adopted by farmers, especially those with limited phone access. Alternative mediums to spread agricultural information were not mentioned by the key informants at all, confirming the FAO findings that the radio and digital campaigns were not very successful (Matita and Chibombo, 2021).

In the household surveys, 46% of respondents in Malawi declared having received government aid (a number that went down to 28% by round 3), and key informants explained that the biggest source of support was receiving subsidised seeds and fertiliser through the Affordable Inputs Programme (AIP), which was extended to include four times more people than previous years. As a result, interviewees reported a great year for maize production and no crop losses. The AIP introduced in 2020 allows farmers to buy agricultural inputs at 30% of the costs, while the Government of Malawi covers 70% of the cost. However, there were concerns as to the effectiveness of its implementation as suppliers faced difficulties entering markets, there were not enough local distribution points, the delivery of inputs was late, and the digital system that identified eligible beneficiaries was said not to work properly (Ragasa, Carillo and Balakasi, 2022). Moreover, the programme focuses mainly on maize, rice and sorghum production, ignoring other crops needed for dietary diversity (*ibid*).

Subsidised sales for the Strategic Grain Reserve have also been delayed as government funds to replenish food reserves are depleted, thereby diminishing crop sale incomes for farmers. In addition, the Agricultural Development and Marketing Corporation (ADMARC) has actually collapsed, which is a setback for smallholder farmers who rely on the corporation for inputs and guaranteed prices (Howard and Dancer, 2021; Matita and Chibombo, 2021). Another supportive scheme was the PROSPER⁷ programme, which funded the delivery of emergency inputs (seeds, minor equipment) and livestock to over 35,000 households, farmer field schools and care groups (FAO, 2020).

As traders were restricted in their travel – either by regulations or by being priced out of transportation options – smallholders were locked into unfruitful local markets (Matita and Chibombo, 2021). The Government of Malawi attempted to protect food

6 KULIMA is a EU-funded programme implemented by the Government of Malawi, Ministry of Agriculture that aims to promote sustainable agricultural growth in Malawi in the context of a changing climate.

7 PROSPER is supported by multiple development agents including the UK Department for International Development, the US Agency for International Development, and Irish Aid. The programme in Malawi seeks to improve vulnerable people's ability to adapt to climate change through various agricultural interventions and partnerships.

trade by signing an international agreement with Commonwealth countries agreeing not to impose trade barriers (Vickers et al., 2020), however, small producers are dependent on very local trade flows, such as visits from traders and input vendors from other regions or neighbouring countries, whose activity was not the subject of any policy or agreement. Government response pathways reveal power imbalances as they end up directing more resources and policy efforts to agribusinesses, to the neglect of small producers (Howard and Dancer 2021; Ebata, Nisbett and Gillespie, 2021).

In terms of disruptions to the agricultural system and ensuing government responses, small and remote farmers suffer the most from the loss of agricultural extension services. The attempt to meet these losses with an extended programme of subsidised inputs has been promising, and according to informants, it contributed a great deal to minimise damage for small farmers in a time when they would not have been able to afford the necessary inputs. However, even if agricultural production in Malawi has not been greatly affected, as small farmers struggle to sell their crops, poverty intensifies and subsequently affects diets. In Malawi, as well as in Nigeria, government support and the size of the farm constitute mediating food equity factors, as smallholders face more vulnerabilities and less support as poverty levels rise (AGRA, 2020).

An additional mediating food equity factor can be that of gender. Gender differences have not been directly questioned in the KII, but can be inferred if taking into account wider literature on the subject. In a period that tests peoples' resilience, female-headed households benefit from fewer productive assets, household endowments, or stable labour conditions to respond to shocks and stressors (FAO, 2021d). Moments of crisis often bring with them a reorganisation of resources that deepens mistreatment or marginalisation on the basis of social and gender stereotypes. Howard and Dancer (2021) point out that women in Nigeria are half as likely as men to buy land, their plots are smaller, less irrigated, and they have less of a say on how it is used. Additionally, FAO findings show that 39% of female-headed households missed out on assistance opportunities as they were not informed that these programmes existed, highlighting differentiated access to information and awareness to farming support programmes (FAO, 2021d).

To exemplify further, previous studies show that female farmers in Malawi are avoided and under-assisted by agricultural extension officers due to gender stereotypes, placing them in a marginalised position (Ebata, Nisbett and Gillespie, 2021). This

trend is likely to have strengthened during the pandemic, when service capacity was reduced and the participant base was restricted even more. As agricultural extension services downsized and officers selected a small number of lead farmers to participate in trainings, female farmers were more likely to have been marginalised from access to information and resources (Ebata, Nisbett and Gillespie, 2021).

The shocks and stresses represented by COVID-19 restrictions come on top of pre-existent structural issues that affect agricultural production; these include climate change and weather conditions, gender stereotypes, or access to infrastructure, services, and state support measures. This overlay of structural influences and immediate disturbances are mediated by factors that can generate food inequity by reinforcing power structures that affect peoples' responses and coping mechanisms in differentiated ways. In the case of agricultural production, important mediating food equity factors have been the scale of the farming enterprise (with hired farm labourers being the most vulnerable), the gender of the lead farmer, and the degree of access to viable state support programmes.

3.2.2.2 Trade, transport and sales

An FAO (2021a) analysis on global trade during the pandemic looking at all five regions of the world has shown that the African region has seen the highest and longest reductions in both the amount and diversity of exports and imports, globally. The worst months for trade in the year 2020 were April and May when restrictions peaked, but even as things start getting back to normal, deficits are still higher than the 2018-2019 period. It is concerning that import flows amongst countries in sub-Saharan Africa (intra-regional trade) appeared to be less resilient than imports sourced from other regions of the world, suggesting that farmers, traders, and buyers are reliant on shorter, more localised supply chains have been more distressed during the pandemic.

One estimate found that across African countries, there was a 39% drop in 'imported calories' of foodstuffs due to trade and transport restrictions (Ebata, Nisbett and Gillespie, 2021). Many nutrient-rich foods such as fish, fruits, meat, nuts, and vegetables, as well as sugar, were the food items most affected by trade blockages due to inefficient transport links (FAO, 2020; UNICEF Malawi, 2020; Alemu and Assaye, 2021; Aromolaran et al., 2021; Boniface and Magomba, 2021; Hodey and Dzanku, 2021; IPC, 2021; Matita and Chimombo, 2021; Mattenga and Hichaambwa, 2021; Mutyasira, 2021;

Olwande et al., 2021). Domestic trade is equally problematic, market closures in both countries were detrimental to food producers and end-consumers alike, as people struggle with storing food and accessing sale venues. At the onset of the pandemic, Nigeria closed all its borders for four weeks and only allowed in exceptions, such as cargo vessels that had been long at sea after being negatively tested for COVID-19. Restrictions continued for a duration of three months, delaying all shipments, reducing Nigeria's exports of cocoa, cashew and sesame. Furthermore, non-essential sea and air traffic was closed off with neighbouring countries for a period of five months (FAO, 2021d). As cross-border traders stopped travelling and the pool of accessible markets grew smaller, farm gate prices decreased. The incomes of farmers, intermediaries, and end consumers were all affected by how transport restrictions affected trade. While farmers had to sell cheaply to nearby local markets, traders lost jobs, and consumers paid high prices in under-stocked regional markets. APRA surveys in Nigeria showed that in round 1, 93% of households experienced movement restrictions, while 71% reported a decreased ability to sell their produce (Aromolaran et al., 2021).

The trade concern in Malawi, according to Klls, is that there was a scarcity of traders travelling to farms, either as a result of mobility restrictions or virus avoidance. With no intermediaries, farmers struggled to sell their produce. As informal export markets closed down and domestic transport costs rose, farmers found themselves restricted to unproductive local markets (Matita and Chimombo, 2021). Key informants argued that border closures were particularly worrying, as informal trade with Tanzania and Zambia is a significant outlet for produce. While there was talk of a price cap on fuel, that didn't stop bus fares doubling, and nearly 50% of APRA respondents reported restrictions of movement both within and outside their villages. Cross-border trade was affected the most, as 80% of respondents experienced rising costs in cross-border transportation in round 1, and 60% in round 2.

Market accessibility steadily resumed after the most stringent restrictions passed and by February 2021, only 33% of APRA survey respondents in Nigeria still experienced limitations to travel, and 29% reported a decreased ability to sell produce (Aromolaran et al., 2021). Nonetheless, the matter of food accessibility remains and poses serious food security concerns as high food prices persist despite the relaxation of COVID-19 measures.

Nigeria exhibited some of the most severe increases in food prices and food insecurity in sub-

Saharan Africa, with food trade still affected by depreciation of the Naira and further damaged by border restrictions. The prices of food items have remained high across APRA study rounds, with 95% of respondents reporting higher prices for grains in February 2021, which is even higher than the months of June-July (91%). The largest increase was for eggs, fish, grains, meat, milk, roots, plantains and tubers; in consequence, people shifted their purchase patterns to buy food for basic needs, fearing that they couldn't afford a healthy diet. This data is confirmed by World Bank rapid household phone surveys (2020), where 90% of households reported rises in food prices. An in-depth analysis of Lagos state showed the same thing, with 98% of the studied households in Lagos reporting difficulty to afford food (Madzorera et al., 2021).

Rising prices were not as big of a concern in Malawi, with the exception of round 2 where 60% of respondents paid more for grains – the results of which are mirrored in the World Bank Living Standards Measurement Study where 66% of households reported higher prices for key goods (Amankwah and Gourlay, 2021). Moreover, the cost of restocking supplies in October 2020 was 22% higher compared to February, before the onset of the pandemic (Aggarwal et al., 2020). While the major food security threat in Malawi may not be a rise in the cost of life, it is certainly lowered incomes that reduce food purchasing power. Market activity in Malawi was severely disrupted in response to COVID-19 measures, leaving market vendors and agricultural producers in economically precarious situations.

However, concerns about food security affect certain people more than others, and the main mediating food equity factor that was found to influence trade and livelihood outcomes was that of formality. Although a majority of food system actors have been negatively affected by mobility restrictions, small and informal actors were affected the most. Navigating permit requirements, border closures, custom clearance and higher transport costs is difficult for small enterprises or single traders, and almost impossible for informal traders (AGRA, 2020; FAO, 2021d).

While the perspectives of informal agents in the food system were not captured in the interviews or surveys, key informants in both Malawi and Nigeria often stated that their interactions and sales with informal traders have suffered a major decline and that the absence of informal peddlers, small traders, migrants and input vendors has driven down their sales. Other literature supports the view that the most affected segment of the food supply chain during the pandemic was “the invisible middle” (Béné, 2020; Ebata, Nisbett and Gillespie, 2021), namely street

vendors and peddlers who, unfortunately, are rarely captured in data collection.

Structural and administrative barriers imposed as a result of the pandemic affected informal traders the most. If informal vendors wanted to continue their sale activity, pandemic restrictions in both Malawi and Nigeria dictated that they had to do so in designated locations and by way of an official permit. By banning open air markets where small traders found a living, governments essentially transferred trade to large, established grocery stores. For vendors with a small stock, reduced storage capacities, and little financial reserves, this could prove catastrophic for their businesses (Béné, 2020; Onuoha-Ogwe, 2020; Amare et al., 2021; Howard and Dancer, 2021). For example, Nigeria has a very large informal fish industry and small fishers, fish processors and vendors were hit hard by mobility restrictions. Delayed movements, insufficient storage capacity, and complex bureaucratic requirements restricted fishers to nearby markets in fishing communities where they could rely on patrons and social relations (Samudra, 2020; Madzorera et al., 2021).

Trade measures and agreements tend to protect large, formal, and internationally oriented enterprises, while informal traders relying on exchanges with neighbouring countries and domestic routes are left with little avenues to support their livelihoods. For example, the World Trade Organisation encouraged members to “implement temporary trade facilitation measures, such as the use of scanned copies or electronic copies of certificates of origin to facilitate trade in agriculture and food products” (Vickers et al., 2020:22). The electronic facilitation measures are an additional step that lock-out small and informal traders who are less likely to be digitally literate. The activity of local, regional and inter-state traders, be they informal or simply small, has been greatly derailed by COVID-19 responses and excluded from state protection measures, even though informal trade accounts for almost 90% of food system actors in low-income countries (Béné, 2020; Vickers et al., 2020; Ebata, Nisbett and Gillespie, 2021; IPC, 2021).

3.2.2.3 Employment and income

Given the impact of COVID-19 measures on agricultural livelihoods, production, and trade, it is no surprise that employment and income opportunities were hugely affected in Nigeria and Malawi. The COVID-19 pandemic has been characterised by difficulties in accessing work outside one’s community, cross-border restrictions on labour mobility and a general hesitancy to employ people outside of one’s household.

Across the APRA survey rounds in Nigeria, the cost of both casual and seasonal labour continued to rise, from 47% reported increases in day labour costs in June-July to 74% by February. Farmers struggled to pay the workers they needed for the planting season, a matter made worse by low sales, restricted mobility and higher transportation costs. The effect of a full lockdown was clear in Nigeria, with as much as 79% of respondents reporting a decline in farm activities and 63% in non-farm business activities in round 1. However, the level of activity has been steadily rising across assessment rounds. Farmers adapted to declining profits by reducing the size of their cultivation parcel to be able to afford production costs and replacing hired labourers with family members. Informants reported that school closures are one of the main causes for reduced labour demand. In terms of food equity, however, disruptions in education can have long-term impacts on human capital and the nutritional decisions future adults will be able to make; as well as knock-on effects for female empowerment, sexual and reproductive health, family size and birth spacing, all of which can also affect nutritional status.

The APRA household survey in Malawi indicates that only one-third of households were able to find work opportunities inside their village, and only 20% were able to secure work outside of their villages, indicating a general contraction in economic activity and jobs. Chances to find employment did not improve across the assessment rounds, on the contrary, they declined (44% in round 1 to 30% in round 3). While survey respondents did not decline their own participation in farm work, they were not hiring temporary labour as in previous years: only 16% in round 1, 14% in round 2 and 22% in round 3. Farmers stopped hiring due to three main reasons: reduced investments, increased availability of family labour, and mobility restrictions. It was either too expensive to travel – thereby increasing labour costs – or it was illegal, as was the case with labour migrants from Mozambique (AGRA, 2020). Informants declared that both farmers and labourers were fearful of the virus and hesitated to work with strangers, which also contributed to a reduction in employment. As work opportunities, revenues, and remittances declined, 75% of Nigerian households reported a loss on income between May and July 2020 (Amare et al., 2021). According to World Bank High-Frequency Phone Surveys (2020), 72% of rural households and 53% of urban households in Malawi reported to be moderately or severely food insecure as a cause of income losses. This, therefore, results in a loss in purchasing power for basic necessities, including food. Informants report that food had become inaccessible to many as it is unaffordable due to reduced incomes and high food prices, rather

than unavailable at the market, or inflation. A loss in purchasing power poses risks to immediate and long-term nutritional outcomes, as people skip meals, buy food of lesser quality, and reduce the diversity of food items.

Kills indicate that households struggling with poverty used up their financial and food reserves during the lockdown and restriction periods, and now have to rely on purchased goods from the market. Market dependency comes at a time with increased food prices and overall living costs, a depreciation of the Naira, and reduced personal incomes, thereby pushing people into food insecurity (Aromolaran et al., 2021; Béné et al., 2020; GAIN, 2021; WFP, 2021b). In Malawi, the main cause of food insecurity relates to affordability rather than availability, since a majority of food items were available at similar prices, but purchasing power has declined. One informal safety net that people used to rely on were remittances, however, as family members worked abroad in 'lockdown countries', the sums they sent back were also significantly smaller (FAO, 2020; FAO, 2021d).

Coping strategies can be seen as the buffer between the effects of the pandemic measures and peoples' ability to meet their needs. These strategies can act as a short-term cushion but can have damaging impacts in the long run; examples include selling assets and borrowing money. While this was not a subject that arose in interviews, remittances represent a reserve of income that help people withstand economic stressors. However, the pandemic also led a severe drop in money sent from abroad. In Malawi, remittances fell by US\$39 million compared to the previous year, as pandemic restrictions and lockdowns affected the livelihoods of Malawian migrants in their countries of residence (FAO, 2020). Nigerian remittances also rely on workers in EU countries that went through major lockdowns, and in consequence, the money sent back home reached a record bottom, the lowest since 2008 (FAO, 2021d).

Another coping strategy that can prevent a fall into poverty and malnutrition is the extension of social protection mechanisms and cash transfers. As it became clear by 2021, the food system did not experience major shortages or unavailability, but people suffered a significantly reduced ability to afford nutritious diets. Therefore, the focus of interventions should be on supporting the economic recovery of those most at risk. In both countries, however, government assistance was volatile and short of meeting the need. In Nigeria, only 14% of the APRA respondents who were promised assistance actually received it. APRA interviewees in Malawi did

not make mention of any extended social protection mechanisms, and the household surveys reported very low levels of government aid. However, according to Aggarwal et al. (2020) and FAO (2020), social cash transfers in Malawi had been accelerated for existing beneficiaries, and the amount for a four-month period was delivered before the onset of the crisis, a decision that was found to improve the dietary quantity and quality of recipients.

Other authors reiterate that informal sector workers are usually invisible to state interventions, not included in the taxpayer's scheme and formal financial arrangements that allow them to be targeted by state aid (Béné, 2020; Samurda, 2020; Béné et al., 2021). It is estimated that 60% of the Nigerian workforce participates in the informal sector, leaving a great deal of people at risk of livelihood and nutritional losses, with reduced positive coping mechanisms to bounce back (FAO, 2021d).

As described above, work stability and formality is a crucial food equity mediating factor. Salary workers have been the least affected by job loss, benefitting from formal employment contracts that are harder to break, and a larger possibility to transition to a home office. Casual labourers, on the other hand, were severely affected, suffering a loss in livelihoods which translated into lower dietary diversity scores and the untimely sale of livestock (Amare et al., 2021; Béné et al., 2021; Madzorera et al., 2021).

Day labourers, often working in the informal sector and for small businesses, have been hit hard by business closures and mobility restrictions according to key informants. In an FAO survey 30% of the employers questioned reported having to lay off 25% of their workforce or more (FAO, 2021d). Many petty traders and small processors spent as much as four months not being able to earn, as markets closed and employment was scarce. The biggest livelihood losses were experienced by food vendors, whose monthly profits declined by 42% in April 2020. To add fuel to the fire, informal food vendors had very little assets to rely on, minor cash savings and pending debts to repay (Aggarwal et al., 2020).

Gender is another mediating factor at the intersection of employment and food security. Women statistically occupy more informal and temporary jobs in low-income activities, which were the first to be lost to pandemic restrictions (GAIN, 2021). Unemployment concerns were accentuated for Nigerian women both in the farming and non-farming sector (FAO, 2021d). Moreover, their assets and forms of capitals to withstand economic shocks are reduced compared to those of men (iMMAP,

2021). Chinsinga and Matita (2021) show that in the Malawi groundnut sector, technological innovations are more easily accessible by men, who own and operate machinery, while women are responsible for low-paying processing activities.

These two main mediating factors, namely informality and gender, are generating food inequity as they place people in more precarious financial situations. Farm labourers, petty traders and vendors have suffered major economic losses during the pandemic, and women often occupy both of these positions. In times of economic crisis, people are more likely to adopt negative dietary behaviours such as reducing or skipping meals.

3.2.3 The impact of COVID-19 measures on care burdens, access to health services and quality diets

The previous section has shown how COVID-19 responses have generated shifts in agriculture, trade, mobility, and employment, potentially placing smallholders and temporary or informal workers in more compromised or vulnerable positions. These immediate/direct impacts combine to influence what are known to be immediate and underlying drivers of malnutrition, namely changing care burdens, access to health services, and access to quality diets (Figure 1). These areas are also influenced by a range of mediating equity factors, which can determine the extent to which these areas impact the food and nutrition security situation of households or individuals.

3.2.3.1 Gender and care dynamics

Overall, APRA data does not show very large discrepancies in food insecurity between male and female-headed households. However, in WFP (2021a) and World Bank data (Josephson, Kilic and Michler, 2020), fewer female-headed households reported to have acceptable food consumption, and they employed slightly more emergency and crisis coping strategies as compared to men. The most gender-differentiated impact, however, is the increased care burden for children, the sick and elderly which is usually attributed to women. This increased care burden creates a tension between care and income responsibilities, as it reduces women's ability to return to work and make up for the livelihood losses caused by the pandemic.

Female-lead households and farming enterprises have faced structural challenges in recovering from pandemic stressors, which is reflected in the quality of their diets. The Malawi WFP 2021 Household Food Security Bulletin found that fewer female-

headed households are reported to have acceptable food consumption and that they employed more emergency and crisis coping strategies compared to men (WFP, 2021a). Since the global pandemic began, female-headed households have shown a significantly higher prevalence of moderate and/or severe food insecurity than male-headed households. World Bank data (Josephson, Kilic and Michler, 2020) similarly found that female-headed households have shown a much higher prevalence of moderate and/or severe food insecurity compared to male-headed households since the pandemic began, making gender a mediating food equity factor.

In Nigeria, the pandemic increased the burden of care for children for 69% of APRA households and that of household chores for 71%. By February 2021, these rates reduced to 47% and 43%, respectively. However, while this is an improvement, it still signifies that women and girls deal with greater care burdens. This is coupled with reports from KIIs that the home environment may not be a safe place, with reports of increases in gender-based violence. In Malawi and Nigeria alike, APRA KIIs have reported a higher incidence of domestic violence, and in Nigeria, UN Nigeria (2020) found a 56% increase in abuse incidents in the first two weeks of lockdown. In a period where one has limited pathways to bounce back economically and state services and NGO assistance are limited, women and girls are more vulnerable to early marriage, domestic abuse, and school abandonment, which have a direct impact on their future growth, development, and nutritional outcomes (Onuoha-Ogwe, 2020; Ebata, Nisbett and Gillespie, 2021; Howard and Dancer, 2021).

It is crucial to note the implications for children's long-term wellbeing posed by the recent shifts in labour supply and demand. As schools closed and children stayed at home, they started replacing school work with labour activities. While boys were more engaged in paid farm work, girls were more involved in house work. Only one-third of the children surveyed in the APRA Malawi study continued to do school work at home across the three rounds. This data is supported by World Bank findings that the student-teacher contact rate in Malawi dropped from 96% to 17% (Amankwah and Gourlay, 2021). While e-learning has been introduced to mitigate educational losses, more than half of Malawian children are digitally marginalised (ibid). Reduced learning opportunities has increased the expected school dropout rates (FAO, 2020). Most of all, school abandonment is more likely to affect young girls – one reason for this, as described during KIIS, is the higher teenage pregnancy rates since schools closed.

Current educational losses raise concerns for future food security, as educational attainment can have long-term impacts on human capital and nutrition. However, nutritional losses are noticed in the immediate term as well, as children stopped accessing meals through school programmes. School meals are important to secure baseline nutritional needs for children living in poverty and at risk of malnutrition. With the support of the WFP, the Ministry of Education of Malawi distributed take-home rations to nearly 560,000 students (UN Malawi, 2020; WFP, 2021a). In Nigeria, to compensate for the loss of school meals, the federal government delivered one-time packages of food ration vouchers, reaching 28% of school children. While these initiatives are much welcomed, they might not be enough to manage the immediate and long-term forms of food inequity that are starting to develop as school closures threaten women's economic independence, the immediate food needs of vulnerable children, and the long-term nutritional and developmental needs of children, with an accentuated risk for young girls to fall into poverty and food insecurity.

3.2.3.2 Health services

Disruptions in the food system are directly linked to the health system, as hunger and malnutrition thwart health outcomes and long-term development gains (IPES, 2017; Béné, 2020; Ebata, Nisbett and Gillespie, 2021). In reverse, the current health crisis and the management of the pandemic can inadvertently affect interventions and services that are essential in closing the gap in health and nutrition inequalities. Infant and young children feeding practices have a direct effect on future health and development. However, the pandemic has posed serious challenges to children's nutrition, mainly as a result of disruptions in health programmes and access to health services (Onuoha-Ogwe, 2020).

In Nigeria (Onuoha-Ogwe, 2020), misinformation has been circulating that linked breastfeeding with the spread of COVID-19, or proposed that it is not safe to breastfeed if vaccinated. These myths risk diminishing early breastfeeding behaviours which are important to support infant immune system. Early infant feeding practices are likely to be disrupted if women don't deliver their baby in a hospital where they can receive advice and information; hospital deliveries can decline because health centres are closed, difficult to reach considering the mobility restrictions, or they are simply avoided to prevent infection (UNICEF Malawi, 2020), but so far, it is not clear whether hospital deliveries have been affected. A public campaign led by UNICEF has been launched

to dispel the rumours, and breastfeeding messages were disseminated via mobile vans that travelled to communities and radio broadcasts.

Moreover, as incomes drop and dietary choices change, women who are pregnant or breastfeeding may struggle to meet their required intake of energy, micro and macronutrients, which can cause health problems and malnutrition both for themselves and their baby. According to projections by Save the Children (2021), the daily cost of diet rises by 20-22% for women who are pregnant and 37-40% for women who are breastfeeding.

If we are to consider the general access to health services reported by APRA respondents in Malawi, 90% have been able to access clinics and hospitals during the pandemic (Matita and Chimombo, 2021). However, people tended to avoid hospitals and medical workers for fear of catching COVID-19 or being placed under isolation, and informants reported major clashes and conflicts between medical staff and the general population. Health service avoidance also affects the roll-out of other programmes that target malnutrition. In Malawi, for example, Vitamin A supplementation is given when people come for routine health checks, which have been discouraged and derailed by the COVID-19 crisis, as both patients and health professionals have reduced mobility and capacity to provide or receive health services (Onuoha-Ogwe, 2020). Community programmes for the early detection of malnutrition and information campaigns on healthy feeding have also been suspended or disrupted.

Pregnant women, breastfeeding mothers, and young children are those most vulnerable to the disruptions to health system services from a nutritional perspective as this can have implications not only for the women or child, but create an intergenerational cycle of adverse nutrition outcomes. This can potentially create an embodied disadvantage with long-term implications for achieving growth, health, and well-being potential.

3.2.3.3 Availability and diversity of food

As a consequence of different government response pathways (e.g., restrictions on transport and exclusion of informal actors from assistance), food options for end-consumers became less affordable. In Nigeria, for example, protein-rich foods were consistently more expensive because small farmers could not access chicken feed, which is usually imported, and maize prices reached a record high as a repercussion of the ban on maize imports (GAIN, 2021). Other factors such as a rise in petrol prices and pre-pandemic border closures also served to

reduce local response and recovery mechanisms. In a Delta State study, 91% of respondents reported that market closures and movement restrictions affected their ability to access markets, and that the entire lockdown period was characterised by reduced agricultural productivity and subsequent food shortages (Aromolaran et al., 2021). On a more positive note, APRA survey results find that, from round 1 (81%) to round 3 (68%), 13% less Nigerian households were reducing the kinds of foods they eat because of a lack of money; nonetheless, these numbers are still worrisome.

One of the reasons why the nutrition situation in Nigeria is so much more acute compared to other sample countries in sub-Saharan Africa is because the pandemic overlaps with dangerous insurgent attacks in the northeast of the country, causing not only a breakdown in resource flows in the area, but also over 2 million internally displaced persons in need of assistance, and a high risk of famine (FAO, 2021d; WFP, 2021b). A large share of government and humanitarian aid was directed to the north-eastern states, in an attempt to provide food assistance to 1.5 million people, to cover 70% of their energy needs for the months of September and October 2020. The Nigerian Federal Government delivered food relief to 30,000 households (maize, millet, and sorghum) released from strategic reserves and FAO, UN Women and WFP set up a livestock restocking campaign (goat, poultry, bulls) in the north-eastern region. However, many such programmes, alongside other government cash transfer initiatives were planned before the onset of COVID-19, and it is not clear whether they were scaled up to meet the needs arising from the pandemic, or if implementation times simply coincided (FAO, 2021d). The KIs and household surveys indicated that international agencies and NGOs have kept a low profile during the period in which the APRA multi-phase assessment was conducted.

Regional differences have also been noticed in Malawi, where the highest reliance on own-food production is in the Central Region. Maize prices reached an all-time low and farmers' incomes have decreased too much to rely on purchased food, forcing 80% of FAO respondents in the Central Region in Malawi in April 2021 to rely on home-grown food for consumption (FAO, 2021b).

Rural-urban differences also exist but they manifest differently depending on the country context. While rural and urban residents may have suffered similar income losses, they are affected in different ways. In Malawi, for example, rural households are more likely to sell assets to manage rising livelihood costs, while

urban households will likely reduce food consumption (Josephson, Kilic and Michler, 2020). In Malawi, rural households have been more gravely affected with a 33% reported rate of severe food insecurity, as compared to 23% of urban adults. In Nigeria on the other hand 35% of people who became newly food insecure as a result of the pandemic reside in cities (Amankwah and Gourlay, 2021).

In Malawi, grains were unavailable to an average of 40% of APRA survey respondents across all rounds, while pulses, nuts and seeds saw a 40% reduction in availability for rounds 1 and 2, and vegetables in round 3. At the onset of the pandemic, fluctuations in availability were higher for a larger number of food groups (dairy products, fruit, roots and tubers), perhaps as a cause of the more severe initial trade disruptions. By October 2020, 82% of respondents reported that their regular food purchases were more expensive. IFPRI and CGIAR phone surveys carried out in August and November 2020 show a more volatile food picture, reporting that 56% (August) and 69% (November) of respondents could not find their usual products in the markets they usually go to (Ambler et al., 2021). Highly perishable food items are even more vulnerable to disruptions in the supply chain. Trade barriers that lengthen transport time and small traders' reduced capacity to store fresh produce can lead to more waste of fish, fruits, and vegetables, and thereby raising the likelihood of micronutrient deficiencies in diets (UNICEF Malawi, 2020).

Nigeria has shown the highest rates of food insecurity and price hikes from all the APRA sampled countries. More than 70% of APRA respondents mentioned a rise in living costs, and between June 2020 and February 2021, 80% to 54% of respondents did not have enough food to eat. While food availability was not a consistent problem, large increases in the cost of food put 80% of APRA respondents under stress to afford eggs, fish, grains, meat, milk, , plantains, roots and tubers. According to a World Bank comparative study (Amankwah and Gourlay, 2021), by 2020, 43% of households that were not identified to be food insecure in 2018 were now skipping meals, running out of food, or going without eating. Overall, the COVID-19 crisis has brought an additional 2 million Nigerians into precarity and hunger (FAO, 2020).

In Malawi, food insecurity remains at very high levels. More than 80% of APRA respondents indicated that they ate less, consumed less healthy and diverse food items, and that the food they ate was not adequate for the whole family; additionally, more than 30% of households reported not eating for a whole day (Matita and Chibombo, 2021). Worryingly,

we recorded that households were adopting more negative coping strategies across the assessment periods. Over the course of the three rounds of assessments, from June 2020 to February 2021 by APRA teams, the proportion of respondents skipping meals rose from 57% to 76%. The WFP (2021a) also found that 19% of households surveyed presented very severe food coping strategies, and 47% presented moderately severe strategies. According to the FAO (2021b), the number of households relying on the crops they cultivated for their food consumption rose from 35% in March to 75% in April 2021.

Long-term effects of COVID-19's exacerbation of undernutrition can include wasting in young children which, if current projections come true, could mean 6.7 million more children could experience wasting as compared to past projections that don't account for the pandemic (Béné et al., 2020). Severe Acute Malnutrition rates in June 2020 were 20% higher than the previous year, and more likely to occur in very young children (iMMAP, 2021). Both in Nigeria and Malawi, food insecurity was already a problem before the COVID-19 pandemic. Therefore, a share of the people who struggled to afford food in round 1 were experiencing an ongoing struggle with food precarity. Results of the round 3 assessments which show the continuation of high food insecurity levels can also be partially explained by factors unrelated to the pandemic – this round was carried out in February, which is a naturally lean period when less food is available. However, the sudden rise in food insecurity levels since 2020 is shocking, and has persisted despite 2020 being a year of good harvests. The current food security situation cannot be explained without bringing into the conversation the effects of the pandemic on income and livelihoods. By looking at mediating equity factors, we can see how food precarity plays out at a local level as the pandemic distorted access to nutritious diets for some people more than for others.

In response to food insecurity, governments and aid providers tend to advance initiatives that focus on staple grains instead of diet diversification. This can be seen in Malawi, where input subsidies were targeted solely at maize. While some positive opinions draw attention to the fact that cereal production and utilisation in Malawi has been steadily growing since 2019, a trend which is projected to continue (FAO, 2020) it is important to keep in mind that in precarious food environments, a higher-than-normal consumption of staple grains can signal a less-than-normal consumption of fruits and vegetables, to the detriment of nutritional diversity (Ebata, Nisbett and Gillespie, 2021).

4. Conclusion

Overall, this working paper has looked at how the food system integrates many different types of agents, response pathways, and structural drivers that ultimately affect food and nutrition security in commercialising agricultural households in sub-Saharan Africa. We see how the capacities in a food system, be they human, financial, natural, or physical, combine to respond to shocks and stresses which have differentiated outcomes for people with less power in this system.

The restrictions imposed to prevent the spread of COVID-19, such as lockdowns of business and services, mobility restrictions, the closure of schools and physical distancing, had an **immediate** and **direct** impact on livelihoods and daily life, including people's employment and income situation. The pandemic has led to job loss, an increased supply of farm labourers in the context of reduced demand, higher household expenditures due to migration from cities to villages and children being out of school. Agricultural production was disrupted due to reduced availability of labour and inputs such as seeds, fertiliser and machinery. Opportunities to trade agricultural produce were greatly reduced by national border closures, limiting access to markets to sell and buy goods, buyers not coming to villages to purchase produce, movement restrictions that were both institutionally mandated and self-imposed, as well as an increased price for transport.

These restrictions, in turn, have had an **indirect** impact on factors which affect food and nutrition security, such as accessibility to adequate quantities and quality of foods (influenced by higher prices, reduced purchasing power of food, availability and diversity of foods at the market), access to health services (due to temporary closing of facilities, or fear of attending) and increased care burdens (due to having more family members at home, increased household chores for girls at home, and caring for the ill).

The extent to which this poses a threat to food and nutrition security is influenced by **mediating equity factors**, that we have listed throughout the thematic sections above. These influence people's resilience in the face of uncertainty and restrictions. In this analysis we have focused on those groups we identify as being in more precarious or vulnerable situations, such as smallholder farmers, female-headed households, and casual labourers. Institutional decisions that were made to navigate and manage the COVID-19 pandemic have left deep marks on food systems, potentially leading to inequitable food

and nutrition security outcomes for more vulnerable and disadvantaged groups.

Individual capacity to respond to these decisions is influenced by the food equity mediating factors outlined throughout the text, which in turn affect people's capacity to secure sufficient and diverse foods and to live a healthy life. The support structures within countries are seen as a protective (when they exist), but often there wasn't any COVID-19 specific support provided from government, NGOs, or the private sector. Traditional and religious leaders are seen in some countries as people who could offer assistance to those most in need, although this was not universal. Community mobilisation tends to build on already established community structures, e.g., religious and traditional leaders, and community support schemes established for previous public health crises.

Specific factors that were observed in the cases of Nigeria and Malawi include preexisting poverty levels and current threats to livelihoods, geographical location, government interventions and support systems, work status and size of enterprise, gender, age, or special health and food needs. It is not a surprise that people who already faced intersecting vulnerabilities are the most threatened by food insecurity and inequity. People who are not reached by national support systems and government aid are at a particularly high risk of nutritional losses in a time of job loss and constricted incomes; this includes informal workers, small farmers, and persons who are in greater need of health services. Women are more likely than men to find themselves in the aforementioned situations. Children and young girls in particular are more likely to be at risk of long-term nutritional losses as the pandemic threatens their access to education and healthy meals, by encouraging early entry into the labour force.

The resulting impact on the **food and nutrition security** varies across countries. For most countries, the lockdown and restrictions came during the harvest season, when food was relatively plentiful. There was fear for the lean season, and how further

restriction measures would impact inputs, production and the availability of food. The availability of some staple foods reduced in many countries and perishables, such as fruits and vegetables, were a hard hit market. This has meant that, in some cases, they were sold at lower prices at local markets (due to lack of access to regional/ cross border markets) but this did not guarantee higher consumption at the local level, as household incomes were also reduced due to unemployment and having children at home from school. In Nigeria and Malawi in particular, these combined factors led to a rise in the number of people reducing their meals or going hungry. Even in situations where people had enough food, the nutritional variety of that food decreased as people consumed only a few types of food, and their nutritional health is under question.

A key point to make is that this paper has drawn mainly from KIIs of the APRA study. Those interviewed were people with high social standing (such as community leaders, agricultural extension workers, political figures), and the context of this study is food systems that are undergoing commercialisation. Therefore, this does not describe the situation of those who are most vulnerable in society. Our aim has been to utilise the data available to highlight potential food inequities. Where the information to hand has been thin, we have tried to supplement this with secondary resources to elaborate the situation in greater detail. There is room for a deeper analysis of issues of food inequities, from the perspectives of those experiencing them. This is essential to capture a more nuanced and detailed picture of the many compounded areas that interrelate to produce inequitable access to healthy diets and a secure life. Lived experience, and life history methodologies are recommended in this instance and will be a valuable contribution from future work that looks back at the COVID-19 pandemic as a particular type of socio-biological shock. The pandemic has combined with existing food system inequities to mediate and shape people's food and nutrition security in significant ways.

References

- Aggarwal, S., Jeong, D., Kumar, N., Park, D.S., Robinson J. and Spearot, A. (2020) *Did COVID-19 Market Disruptions Disrupt Food Security? Evidence from Households in Rural Liberia and Malawi*. National Bureau of Economic Research, Working Paper 27932. Cambridge MA: National Bureau of Economic Research.
- AGRA (Alliance for Green Revolution in Africa) (2020) *COVID-19 Pandemic and its Impact on Agriculture and Food Security. Policy Response for Malawi*. Nairobi: AGRA.
- Alemu, D. and Assaye, A. (2021) *A Multi-Phase Assessment of the Effects of COVID-19 on Food Systems and Rural Livelihoods in Ethiopia: The Case of Fogera Plain*. APRA COVID-19 Country Report. Brighton: Future Agricultures Consortium. Available at: <https://opendocs.ids.ac.uk/opendocs/handle/20.500.12413/16941> (Accessed: 4 December 2021).
- Amankwah, A. and Gourlay, S., (2021) *Food Security in the Face of COVID-19: Evidence from Africa*. Washington, DC: World Bank Group LSMS (Living Standards Measurement Study).
- Amare, M., Abay, K.A., Tiberti, L. and Chamberlin, J. (2021) 'COVID-19 and food security: Panel data evidence from Nigeria', *Food Policy* 101: 102099. <https://doi.org/10.1016/j.foodpol.2021.102099>.
- Ambler, K., Herskowitz S., Maredia, M. and Mockshell, J. (2021) *COVID-19 in Rural Malawi: Perceived Risks and Economic Impacts*. International Food Policy Research Institute (IFPRI) Project Note. Washington DC: IFPRI.
- Aromolaran, A.B., Muyanga, M., Issa, F.O. and Oladeji, O. (2021) *A Multi-Phase Assessment of the Effects of COVID-19 on Food Systems and Rural Livelihoods in Nigeria*. APRA COVID-19 Country Report. Brighton: Future Agricultures Consortium. Available at: <https://opendocs.ids.ac.uk/opendocs/handle/20.500.12413/17001> (Accessed: 4 December 2021).
- Baulch, B., Botha, R. and Pauw, K. (2020) *Short-term Impacts of COVID-19 on the Malawian Economy: Initial Results*. Washington DC: International Food Policy Research Institute (IFPRI).
- Bellwood-Howard, I. and Dancer, H. (2021) *Politics, Power and Social Differentiation in African Agricultural Value Chains: The Effects of COVID-19*. APRA Working Paper 69. Brighton: Future Agricultures Consortium. Available at: <https://opendocs.ids.ac.uk/opendocs/handle/20.500.12413/16866> (Accessed: 15 December 2021).
- Béné, C. (2020) 'Resilience of local food systems and links to food security – A review of some important concepts in the context of COVID-19 and other shocks', *Food Security* 12: 805-822. <https://doi.org/10.1007/s12571-020-01076-1>.
- Béné, C., Bakker, D., Chavarro, M.J., Even, B., Melo, J. and Sonneveld, A. (2021) 'Global assessment of the impacts of COVID-19 on food security', *Global Food Security* 31: 100575. <https://doi.org/10.1016/j.gfs.2021.100575>.
- Black, R. E., Victora, C. G., Walker, S. P., Bhutta, Z. A., Christian, P., de Onis, M. and Uauy, R. (2013) 'Maternal and Child Nutrition Study Group. Maternal and child undernutrition and overweight in low-income and middle-income countries', *Lancet* 382: 427-451. [https://doi.org/10.1016/S0140-6736\(13\)60937-X](https://doi.org/10.1016/S0140-6736(13)60937-X).
- Boniface, G. and Magomba, C. (2021) *A Multi-Phase Assessment of the Effects of COVID-19 on Food Systems and Rural Livelihoods in Tanzania*. APRA COVID-19 Country Report. Brighton: Future Agricultures Consortium. Available at: <https://opendocs.ids.ac.uk/opendocs/handle/20.500.12413/17005> (Accessed: 4 December 2021).
- Carreras, M., Saha, A. and Thompson, J. (2020) *Rapid Assessment of the Impact of COVID-19 on Food Systems and Rural Livelihoods in Sub-Saharan Africa*. APRA COVID-19 Synthesis Report 1. Brighton: Future Agricultures Consortium. Available at: <https://opendocs.ids.ac.uk/opendocs/handle/20.500.12413/15715> (Accessed: 30 November 2021).
- Carreras, M., Saha, A. and Thompson, J. (2020) *Rapid Assessment of the Impact of COVID-19 on Food Systems and Rural Livelihoods in Sub-Saharan Africa*. APRA COVID-19 Synthesis Report 2. Brighton: Future Agricultures Consortium. Available at: <https://opendocs.ids.ac.uk/opendocs/handle/20.500.12413/16450> (Accessed: 30 November 2021).

- CGIAR (2021) *Malawi: The impact of COVID-19 and food system responses*. COVID-19 HUB Country Note. Washington, DC: International Food Policy Research Institute.
- Dasgupta, S. and Robinson, E.J.Z. (2021) 'Food Insecurity, Safety Nets, and Coping Strategies during the COVID-19 Pandemic: Multi-Country Evidence from sub-Saharan Africa', *International Journal of Environmental Research and Public Health* 18(19): 9997. <https://doi.org/10.3390/ijerph18199997>.
- Ebata, A., Nisbett, N. and Gillespie, S. (2021) 'Food Systems After COVID-19', *IDS Bulletin* 52(1). <https://doi.org/10.19088/1968-2021.107>.
- Fakoya, K., Akintola, S.L. (2020) *Nigeria COVID-19 A Heavy Blow. Samudra Report No. 83*. Nigeria: The International Collective in Support of Fishworkers.
- FAO (Food and Agriculture Organization of the United Nations) (2020) *National agrifood systems and COVID-19 in Malawi. Effects, policy responses and long term implications*. Rome: FAO. Available at: <https://www.fao.org/documents/card/en/c/cb1601en/> (Accessed: 15 December 2021).
- FAO (Food and Agriculture Organization of the United Nations) (2021a) *Agricultural trade & policy responses during the first wave of the COVID-19 pandemic in 2020*. Rome: FAO
- FAO (Food and Agriculture Organization of the United Nations) (2021b) *Emergency Agriculture Food Surveillance System: April 2021 Highlights*. Lilongwe: FAO Malawi.
- FAO (Food and Agriculture Organization of the United Nations) (2021c) *Emergency Agriculture Food Surveillance System: June 2021 Highlights*. Lilongwe: FAO Malawi.
- FAO (Food and Agriculture Organization of the United Nations) (2021d) *National agrifood systems and COVID-19 in Nigeria: Effects, policy responses and long term implications*. Rome: FAO. Available at: <https://www.fao.org/documents/card/en/c/cb3631en/> (Accessed: 15 December 2021).
- FAO (Food and Agriculture Organization of the United Nations) (2021e) *Northeastern Nigeria Adamawa, Borno and Yobe states Response overview*. Rome: FAO.
- GAIN (Global Alliance for Improved Nutrition) (2021) *Impact of COVID-19 on Nigeria's Food Systems*. Situation Report – Edition 3. Geneva: GAIN.
- Gillespie, S. and Whiteside, A. (2020) 'Lessons from the AIDS epidemic on how COVID-19 may impact food and nutrition security', *IFPRI Blog* [online], 30 March. Available at: <https://www.ifpri.org/blog/lessons-aids-epidemic-how-covid-19-may-impact-food-and-nutrition-security> (Accessed: 20 December 2021).
- Hodey, L.S. and Dzanku, F.M. (2021) *A Multi-Phase Assessment of the Effects of COVID-19 on Food Systems and Rural Livelihoods in Ghana*. APRA COVID-19 Country Report. Brighton: Future Agricultures Consortium. Available at: <https://opendocs.ids.ac.uk/opendocs/handle/20.500.12413/16990> (Accessed: 4 December 2021).
- iMMAP (2021) *Covid 19 Situation Analysis Nigeria. Sectorial Analysis Annual Review: Food Security, Livelihood and Nutrition*. Washington, DC: iMMAP.
- IPC (Integrated Food Security Phase Classification) (2021) *Malawi IPC Acute Food Insecurity November 2020-March 2021*. Rome: IPC. Available at: https://reliefweb.int/sites/reliefweb.int/files/resources/IPC_Malawi_Acute_Food_Insecurity_2021July2022Mar_Report.pdf (Accessed: 4 December 2021).
- IPES (International Panel of Experts on Sustainable Food Systems) (2017) *Unravelling the Food–Health Nexus: Addressing practices, political economy, and power relations to build healthier food systems*. Brussels: IPES.
- Jiang, X., Chen, Y. and Wang, J. (2021) 'Global Food Security under COVID-19: Comparison and Enlightenment of Policy Responses in Different Countries', *Foods* 10(11): 2850. <https://doi.org/10.3390/foods10112850>.
- Josephson, A., Kilic, T. and Michler, J.D. (2020) *Socioeconomic Impacts of COVID-19 in Four African Countries*. World Bank Policy Research Working Paper 9466. Washington DC: World Bank.
- Karlsson, L., Naess, L. O., Nightingale, A. and Thompson, J. (2018) "'Triple wins" or "triple faults"? Analysing the equity implications of policy discourses on climate-smart agriculture (CSA)', *Journal of Peasant Studies* 45: 150-174. <https://doi.org/10.1080/03066150.2017.1351433>.

- Madzorera, I., Ismail, A., Hemler, E., Korte, M., Olufemi, A.A., Wang, D., Assefa, N., Workneh, F., Lankoande, B., Chukwu, A., Ouhire, M., Mattei, J., Soura, A., Berhane, Y., Sie, A., Oduola, A. and Fawzi, W.W. (2021) 'Impact of COVID-19 on Nutrition, Food Security, and Dietary Diversity and Quality in Burkina Faso, Ethiopia and Nigeria', *The American Journal of Tropical Medicine and Hygiene* 105(2): 295-309. <https://doi.org/10.4269/ajtmh.20-1617>.
- Marmot, M., Allen, J., Goldblatt, P., Herd, E. and Morrison, J. (2020) *Build Back Fairer: The COVID-19 Marmot Review. The Pandemic, Socioeconomic and Health Inequalities in England*. London: Institute of Health Equity.
- Matenga, C. and Hichaambwa, M. (2021) *A Multi-Phase Assessment of the Effects of COVID-19 on Food Systems and Rural Livelihoods in Zambia*. APRA COVID-19 Country Report, Brighton: Future Agricultures Consortium. Available at: <https://opendocs.ids.ac.uk/opendocs/handle/20.500.12413/17004> (Accessed: 4 December 2021).
- Matita, M. and Chimombo, M. (2021) *A Multi-Phase Assessment of the Effects of COVID-19 on Food Systems and Rural Livelihoods in Malawi*. APRA COVID-19 Country Report. Brighton: Future Agricultures Consortium. Available at: <https://opendocs.ids.ac.uk/opendocs/handle/20.500.12413/16948> (Accessed: 6 December 2021).
- Mutyasira, V. (2021) *A Multi-Phase Assessment of the Effects of COVID-19 on Food Systems and Rural Livelihoods in Zimbabwe*. APRA COVID-19 Country Report. Brighton: Future Agricultures Consortium. Available at: <https://opendocs.ids.ac.uk/opendocs/handle/20.500.12413/16931> (Accessed: 5 December 2021).
- Nisbett, N., Harris, J., Backholer, K., Baker, P., Jernigan, V.B.B. and Friel, S. (2022) 'Holding no-one back: The Nutrition Equity Framework in theory and practice', *Global Food Security* 32: 1000605. <https://doi.org/10.1016/j.gfs.2021.100605>.
- Olwande, J., Ayieko, M., Mukundi, J. and Odhiambo, N. (2021) *A Multi-Phase Assessment of the Effects of COVID-19 on Food Systems and Rural Livelihoods in Kenya*. APRA COVID-19 Country Report. Brighton: Future Agricultures Consortium. Available at: <https://opendocs.ids.ac.uk/opendocs/handle/20.500.12413/16980> (Accessed: 5 December 2021).
- Onuoha-Ogwe, I. (2020) 'Going mobile to combat misinformation, including on breastfeeding', *UNICEF Nigeria* [online], 3 August. Available at: <https://www.unicef.org/nigeria/stories/COVID-19-going-mobile-combat-misinformation-including-breastfeeding> (Accessed: 120 December 2021).
- Saha, A., Carreras, M. and Thompson, J. (2022) *A Multi-Phase Assessment of the Effects of COVID-19 on Food Systems and Rural Livelihoods in sub-Saharan Africa*. APRA COVID-19 Synthesis Report 3, Brighton: Future Agricultures Consortium. <https://doi.org/10.19088/APRA.2022.011>
- Salm, L., Nisbett, N., Cramer, L., Gillespie, S. and Thornton, P. (2021) 'How climate change interacts with inequity to affect nutrition', *WIREs Climate Change* 12(2): e696. <https://doi.org/10.1002/wcc.696>.
- Save the Children (2021) *Monitoring the impacts of COVID19 on affordable diets: Real-Time Cost of the Diet and Household Economic Analysis pilot Malawi*. Results Brief. London: Save the Children.
- UNESCO (United Nations Educational, Scientific and Cultural Organization) Inclusive Policy Lab (2020) 'COVID-19 Lessons from the past', *UNESCO Inclusive Policy Lab* [online], 17 April. Available at: <https://en.unesco.org/inclusivepolicylab/news/COVID-19-lessons-past> (Accessed: 20 December 2021).
- UNICEF (United Nations Children's Fund) (1990) *Strategy for improved nutrition of children and women in developing countries*. New York: UNICEF.
- UNICEF (United Nations Children's Fund) Malawi (2020) *Scope of food crises as COVID-19 poses new risks to Nutrition needs of Children of Malawi*. Lilongwe: UNICEF Malawi.
- UN Malawi (2020) *COVID-19 Update Situation Update No. 14*. Lilongwe: UN Malawi. Available at: <https://reliefweb.int/report/malawi/un-malawi-covid-19-update-situation-update-no-14-updated-19-june-2020> (Accessed: 15 December 2021).

UN Nigeria (2020) *Gender-based violence in Nigeria during the COVID-19 Crisis: The Shadow Pandemic*. Abuja: United Nations Nigeria. Available at: <https://nigeria.un.org/en/45324-gender-based-violence-nigeria-during-covid-19-crisis-shadow-pandemic-brief-4-may-2020> (Accessed: 20 December 2021).

Vickers, B., Ali, S., Zhuawu, C., Zimmermann, A., Attaallah, H. and Dervisholli, E. (2020) *International Trade Working Paper 2020/15*. London: Commonwealth Secretariat and the Food and Agriculture Organization of the United Nations.

World Bank Group (2020) *COVID-19 impact monitoring. Round 2 of the Malawi high-frequency phone survey on COVID-19*. Washington, DC. Available at: <http://documents1.worldbank.org/curated/en/698511600850566665/pdf/Findings-from-the-Second-Round-of-the-High-Frequency-Phone-Survey.pdf> (Accessed: 10 December 2021).

WFP (United Nations World Food Programme) (2021a) *Mobile Vulnerability Analysis and Mapping (mVAM) on the Effects of COVID-19 in Malawi Round 15: 10th July – 9th August 2021*. WFP Malawi Household Food Security Bulletin, 22 September 2021. Available at: <https://reliefweb.int/report/malawi/malawi-household-food-security-bulletin-mobile-vulnerability-analysis-and-mapping-12> (Accessed: 10 December 2021).

WFP (United Nations World Food Programme) (2021b) *WFP Nigeria Operational Update*. WFP Country Brief, April 2021. Abuja: WFP

Annexes

Annex 1

Table A1 APRA key informant interview questions

Topics and questions
<p>Awareness and information</p> <ul style="list-style-type: none"> • What do people understand about COVID-19, Corona virus, Corona [use local expression]? • What are the local sayings, interpretations, explanations – about its origins? About its impacts? • Where do people get information on the virus and the health measures required? • Do people trust these sources?
<p>Role of the state</p> <ul style="list-style-type: none"> • What role does the state have now during corona virus time? Is the state implementing lockdown measures or imposing restrictions. If so, how/by whom? • How do people gain access to state services during lockdown? • How are people gaining access to health care? Agricultural extension? Veterinary care? • What happens when people get ill with COVID-19? • If people are in real trouble (no food, no jobs etc.) what do they do and who do they turn to (state, NGOs, others)? • What forms of technical support and/or humanitarian relief is the government providing? • What support, if any, is being provided to the agriculture sector? • What support, if any, is being provided in the form of humanitarian relief / food aid / other?
<p>Role of the community</p> <ul style="list-style-type: none"> • What sort of community support mechanisms have emerged around corona virus (traditional village institutions; religious organisations; other)? • What are these for and how are these organised? • Are these new or are they building on what was there before? • Are there any tensions, conflicts or exclusions that have arisen as a result of COVID-19? • Is the community more integrated together or less as a result and why? • How are different religious groups ex. churches/mosques responding to the crisis? • What is the role of traditional leaders and other local leaders during this time? • What is the role of political parties [if applicable] at this time? • How are people managing important events, such as weddings and funerals?
<p>Role of the private sector</p> <ul style="list-style-type: none"> • How has the private sector (formal and informal) responded? • Which businesses are still operating and provide goods and services to the local community? Which are not? • What impact are these changes having on local jobs and employment? In the formal sector? In the informal sector?
<p>Role of external agencies</p> <ul style="list-style-type: none"> • How have external agencies, such as NGOs and humanitarian organisations, responded? • Are these new, or building on what was there before? • What forms of technical support and/or humanitarian relief are they providing? • What support, if any, is being provided to the food and agriculture sector? • What support, if any, is being provided in the form of humanitarian relief/food aid/other?
<p>Agricultural production</p> <ul style="list-style-type: none"> • How is the outbreak affecting agricultural production – e.g. availability of land, labour, inputs, credit, etc.? • Are controls on 'staying at home' affecting who can go to fields, herd animals, etc.? • How is it affecting key agricultural activities – e.g. land preparation, planting, weeding, harvesting? • What are people's biggest concerns about the forthcoming agricultural season?

Markets

- How is the crisis affecting the sale of farm produce? In local markets? Regional markets?
- How is this affecting the ability to buy food and other things?
- What things are not available?
- How have prices changed as a result of corona virus (which commodities)?
- How are transactions being conducted (cash, electronic, barter)?

Movement of people and goods

- Are people able to go to town?
- Are people from town coming to the rural areas to stay/get food?
- Are transport services running?
- What about cross-border trade?
- What are people's attitudes to these movement restrictions?
- What is the impact of these changes on rural livelihoods?

Coronavirus stories – challenges and innovations

- Document some stories that you hear about how things have changed during corona virus?
- What unexpected challenges have arisen because of the COVID-19 crisis?
- What new local/external ideas or innovations have emerged to help people respond to the crisis?

Any other comments/observations

- Capture any other information that does not fit elsewhere
- Ask the respondent to suggest any other Key Informant they think you should speak to about the COVID-19 crisis and its impacts (get their contact details)

Source: APRA programme

Table A2 Country summaries

Areas of interest	Nigeria	Malawi	Ghana	Tanzania	Zimbabwe	Zambia	Ethiopia	Kenya
COVID response approach (light/medium/strong measures)? (examples)	MEDIUM/STRONG – full lockdown that now eased, government is spreading information but is not taking up other aid measures	LIGHT/MEDIUM– no restrictions anymore, people somewhat respect safety measures, but less so compared to round 1. No government aid despite it being needed	MEDIUM/STRONG – people still adhere to safety protocols, no lockdown but the virus was taken seriously	VERY LIGHT – no restrictions or awareness campaigns, covid declared gone	LIGHT/WEAK – people stopped following safety protocols; gave agricultural support packages	LIGHT – no lockdown or restrictions, but people had to wear masks and were encouraged to sanitise more often and avoid large gatherings. Schools were closed for 5 months	LIGHT – mobility restrictions lifted, people don't follow safety protocols, still skeptical about the virus	MEDIUM – gradual relaxation, government agricultural support stopped. People and the church were distrustful of the virus. Incidence of virus infections on the rise
Impact on nutrition and food security (manageable/serious disruption)? (examples)	Serious disruption. Severe hunger is experienced in round 1, which persists in round 2 and is expected to continue in the future, as agricultural production is deeply affected. Most households experienced a decline in consumption of healthy and nutritious food in terms of frequency, quantity and quality	Serious disruption. Already-stressed households reported facing food and nutrition insecurity, with over a third reporting spending a whole day without food. Even if food availability and prices remained unaltered, the cost of living increased. Low crop yield predicts food insecurity will continue in the future	In round 1, food security issues were reported due to increased cost of living. Decreased purchasing power continued in round 2, but no serious food security challenges were reported (in Kils). Agricultural activities are almost back to normal, so the problem lies with the affordability, not the availability of food items	In round 1, a majority of respondents experienced a food security reduction, and more than half were eating less diverse and nutritious food; in round 2, food insecurity persists due to reduced purchasing power, but it seems to be more manageable than before. Costs of living increased, but food prices and availability of food items is the same	In round 1, 74% stated that they were unable to eat healthy and nutritious food, while 82% resorted to eating only a few kinds of foods, due to a lack of money and other resources. In round 2, purchasing power, farming and trade are recovering, the food and nutrition situation is similar to round 1	Food prices are higher and farmers' incomes are lower. Moreover, it is more difficult to go to markets, and some shops are closed. Therefore people are struggling with food. Farmers had their own millet to eat, but it was hard to find cooking oil and relish	In round 1, food availability was only moderately affected. Now, food shortages are expected, but they are caused by severe flooding, not by pandemic-related restrictions. Overall food shortages reduced because of flood-related government aid	In round 1: over 40% reported reduced availability of fruits, vegetables, pulses, nuts, seeds, and white roots and tubers in local markets; over one-third observed a decrease in the supply of grains, processed foods and fish and seafood. Nearly 90% of households did not have adequate food. In round 2, the number of people in a food insecure status decreased, but overall, it's still a concern. Price increases for food remain the same

<p>Key points of interest (reports and Kills)</p> <p>(political context, gender, youth)</p>	<p>Religious organisations are active in providing aid.</p> <p>An increase in domestic violence was highlighted.</p> <p>Only half of the children were engaged in schoolwork during the lockdown.</p>	<p>Very few children were doing schoolwork, girls assigned more housework, and boys more paid work.</p> <p>Labourers are more likely to go hungry.</p>	<p>No reported gender or youth disparities in round 2, but in round 1 there are differences in how young boys and girls spend their time. Community and government support were low to begin with and have decreased further.</p>	<p>Female-headed households are twice as likely to be food insecure</p> <p>Government and NGOs do not take actions, unemployment for temporary labourers and many young people, gendered nutritional outcomes reported in round 1 - 50% of female headed households are food insecure.</p>	<p>Government agricultural support packages. No reports of gender/age related outcomes.</p>	<p>Traditional leaders seemed more active in encouraging compliance with health measures.</p>	<p>In Round 1, female-headed households were twice as likely to face food shortages than male-headed households.</p>	<p>Burden of COVID-19 falling on women, need for care and household management.</p> <p>Government was more supportive than others.</p>
<p>Important baseline info - APRA Work Stream 1 (WS1) countries only^a</p>	<p>Largest sample size, in the south and north of the country, consisting of both small and medium-scale farmers - mostly cultivate maize and cassava.</p> <p>Nigeria affected a lot, directly as a result of COVID-19 restrictions.</p> <p>There is need for assistance, this sparked protests. Food shortages persist and the situation is not improving.</p>	<p>Not available.</p>	<p>Contract-based oil palm producers.</p> <p>So far households are coping ok nutritionally, considering that they are dependent on local markets.</p> <p>Shows resilience of food system.</p> <p>Sample has assets and some savings, but also those 'hanging in'.</p>	<p>Rice growers that were previously part of SRI projects, households produce rice both for subsistence and commercialisation. Varied reliance on food markets, good storage of rice which can improve food security. Even if movement was not restricted much, the country experienced big fallouts due to knock-on effect of trade restrictions with neighbouring countries.</p>	<p>Maize and tobacco farmers. Tobacco is heavily commercialised, for maize there is a mix. There was an initial shock from COVID-19, but the situation is picking up. However, food crises are still going on, caused mainly by price surges. Exchange rate is out of sync, suffering high inflation and instability, which is passed onto farmers.</p>	<p>Not available.</p>	<p>Not available. Mention that effects on food security were exacerbated by other factors, including civil unrest.</p>	<p>Not available. The only mention is that the initial shock was devastating, but they are now over that initial shock.</p>

8 APRA conducted research in several 'Work Streams'. Work Stream 1 (WS1) countries included Ghana, Nigeria, Tanzania and Zimbabwe, where in-depth, multidimensional, mixed-methods panel studies were carried out over two phases examining agricultural commercialisation pathways and selection choices.

<p>Livelihoods-income-nutrition nexus (income challenges and adaptation strategies that impact nutrition/food affordability)</p>	<p>Purchasing power is still very low, leading to food poverty and hunger. Need for food aid, but NGO and government measures are lacking. The country faces significant financial hardships.</p>	<p>Farmers did not make large profits and cannot afford inputs for the next crops; they need govt subsidies/loans or credit, which are not available. harder to find other jobs - farmers still don't employ many extra workers, and business activities declined.</p>	<p>There are challenges in obtaining inputs and selling products, farming incomes are lower, this poses livelihood challenges. Business and trading activities were also affected, and many people face financial hardships. But farmer participation in economic activities improved.</p>	<p>Climate conditions caused low yields, low incomes, lower pay for labourers, and lower investments in future crops, signaling that hardship will continue in the next season. This precarious condition was exacerbated by cross-border trade barriers due to COVID-19 - less sales, lower incomes. People adapted to new livelihoods opportunities: maize, selling soap, fishing, etc. Price and availability of inputs largely unchanged.</p>	<p>Financial challenges as the local currency is pegged to the US\$, but trading, travel, and markets are recovering and, with it, so are farmers' incomes and livelihoods. However, there are still challenges ahead - increased costs of production, difficulties in selling, limited access to off-farm work.</p>	<p>Livelihoods were affected as farmers stopped hiring additional labour, there was some closure of businesses, and farmers' incomes decreased while the cost of living increased. Decrease in availability of agricultural inputs.</p>	<p>Agricultural activities and business activities were minimally affected by Covid, and trading resumed after mobility restrictions were lifted. Agricultural activities are currently affected by the floods.</p>	<p>Round 1: 97% reported that their cost of living had gone up, casual work stopped. Round 2: farm activity and labour demand picking up, but still not at full capacity.</p>
<p>Notable changes in context (bet round 1 and 2) Situation improving, deteriorating, new resilience, new challenges?</p>	<p>The lift of transportation bans improved food availability, but purchasing power is still very low, leading to food poverty and hunger. Businesses are slowly recovering.</p>	<p>Markets recovered but farmers have no produce to sell. Travel resumed but farmers cannot afford it. The situation is not improving much.</p>	<p>Slowly improving, goods are more available, but prices are higher. Travel and trading are back to normal. But they are still facing food and nutrition insecurity and overall decline in the standard of living.</p>	<p>No more scarcity of equipment or inputs, trade is back to normal, but rains gravely affected food production. The government seemed to have a 180 change, in round 1 they implemented COVID-19 measures but by round 2 they stopped completely.</p>	<p>Government started to provide agricultural aid. Labour shortages/constraints have gone away. Trade (including cross-border trade) and incomes are improving. Overall, people think their situation is improving</p>	<p>Not available</p>	<p>The situation was generally improving - in terms of mobility, access to services, business activity - but the floods greatly affected harvests, and consequently the availability and affordability of food.</p>	<p>Situation is normalising as farm activity and market trade is picking up, transport fares are back to normal, and food prices are stabilising.</p>

<p>National context</p>	<p>FAO GIEWS Nigeria Country Brief</p> <p>FEWS NET Nigeria Food Security Outlook</p> <p>OCHA Nigeria Flash Update</p> <p>OCHA Nigeria Situation Report</p> <p>UNICEF Nigeria COVID-19 Situation Report</p>	<p>FAO COVID-19 Rapid Response-Emergency Agriculture Food Surveillance System</p> <p>FAO GIEWS Malawi Country Brief</p> <p>UN Malawi COVID-19 Update</p> <p>UNICEF Malawi COVID-19 Situation Report</p> <p>WFP Minimum Expenditure Basket in Malawi</p> <p>WB Malawi COVID-19 Impact Monitoring</p>	<p>FAO GIEWS Ghana Country Brief</p> <p>UNICEF Ghana COVID-19 Situation Report</p> <p>UNICEF Ghana Humanitarian Action for Children 2021</p> <p>WFP Ghana Country Brief</p>	<p>FAO GIEWS Tanzania Country Brief</p> <p>WFP Tanzania Country Brief</p> <p>WFP Market Functionality Assessment amid COVID-19</p> <p>WFP Tanzania Food Security Overview</p> <p>WB Tanzania Economic Update: Assessing the impact of COVID-19</p>	<p>FAO GIEWS Zimbabwe Country Brief</p> <p>OCHA Zimbabwe Situation Report</p> <p>WFP Food Security Situation Update</p>	<p>FAO GIEWS Zambia Country Brief</p> <p>OCHA Zambia Situation Report 2020</p> <p>WFP Zambia Country Brief 2020</p>	<p>Ethiopia Flood Emergency Response Plan 2020 – Joint Government-Humanitarian Partners</p> <p>Response Plan</p> <p>FAO GIEWS Ethiopia Country Brief</p> <p>OCHA Ethiopia COVID-19 Humanitarian Impact Situation Update</p> <p>UNICEF Ethiopia COVID-19 Situation Report</p> <p>WB Phone Survey Data-Monitoring effects of COVID-19 on households and firms</p>	<p>FAO GIEWS Country Brief Oct 2020</p> <p>OCHA Situation Report Oct 2020</p> <p>UNICEF Emergency Appeal July 2020</p> <p>WFP Supply Chains & Markets Update Nov 2020</p> <p>WB Kenya COVID-19 Economic Tracker (household)</p>
<p>Richness of available data</p> <ul style="list-style-type: none"> • Is it an APRA Work Stream 1 (WS1) country? • Richness of KIIS (qual vs quant) • Country research capacity 	<p>Rich KIIs, with in-depth information from a variety of stakeholders. The sample is larger than in other countries.</p> <p>It is an APRA WS1 country.</p>	<p>It is not an APRA WS1 country.</p> <p>The answers are rich but they do not cover all the questions (e.g. information on the private sector is missing).</p>	<p>Rich KIIs, answering all questions in-depth, but there is not a lot of information about what type of stakeholder each interviewee was (most are just 'opinion leader'). It is an APRA WS1 country.</p>	<p>The KIIs are rich, answering all questions in-depth and from different stakeholders: it is an APRA WS1 country.</p>	<p>KII information was not as rich as in other countries (less answers, but less depth), but still suitable. It is a WS1 country.</p>	<p>It is not an APRA WS1 country.</p> <p>While the current KIIs are rich, Zambia was just added to the study, so there is only 1 round of data available.</p>	<p>KIIs are in-depth, rich, and from a variety of stakeholders, but several answers are repetitive (seem copied).</p>	<p>It is not an APRA WS1 country.</p> <p>KIIs are not very rich, with only summaries of interviews, which don't answer all of the question categories.</p>

Source: Authors' own summary based on APRA and other sources noted in table, including FAO, FEWS-NET, OCHA, UNICEF, WFP and World Bank.

Salm, L., Nisbett, N. and Lulache, A. (2022) *The Effects of COVID-19 on Food Equity and Nutrition Security in Sub-Saharan Africa: Lessons from a Multi-Phase Assessment*. APRA COVID-19 Synthesis Report 4. Brighton: Future Agricultures Consortium

© APRA 2022

ISBN: 978-1-78118-957-3

DOI: 10.19088/APRA.2022.012



This is an Open Access report distributed under the terms of the Creative Commons Attribution Non Commercial No Derivatives 4.0 International licence (CC BY-NC-ND), which permits use and distribution in any medium, provided the original authors and source are credited, the work is not used for commercial purposes, and no modifications or adaptations are made.
<https://creativecommons.org/licenses/by-nc-nd/4.0/legalcode>

If you use the work, we ask that you reference the APRA website (www.future-agricultures.org/apra/) and send a copy of the work or a link to its use online to the following address: APRA, Future Agricultures Consortium, University of Sussex, Brighton BN1 9RE, UK (apra@ids.ac.uk)

Agricultural Policy Research in Africa (APRA) is a programme of the Future Agricultures Consortium (FAC) which is generating new evidence and policy-relevant insights on more inclusive pathways to agricultural commercialisation in Sub-Saharan Africa. APRA is funded with UK aid from the UK Foreign, Commonwealth & Development Office (FCDO) and will run from 2016-2022.

The APRA Directorate is based at the Institute of Development Studies (IDS), UK (www.ids.ac.uk), with regional hubs at the Centre for African Bio-Entrepreneurship (CABE), Kenya, the Institute for Poverty, Land and Agrarian Studies (PLAAS), South Africa, and the University of Ghana, Legon. It builds on more than a decade of research and policy engagement work by the Future Agricultures Consortium (www.future-agricultures.org) and involves more than 100 researchers and communications professionals in Africa, UK, Sweden and USA

Funded by the UK Foreign, Commonwealth & Development Office



Foreign, Commonwealth
& Development Office



This report is funded with UK aid from the UK government (Foreign, Commonwealth & Development Office – FCDO, formerly DFID). The opinions are the authors and do not necessarily reflect the views or policies of IDS or the UK government