

Technical Assistance to Strengthen Capabilities (TASC) Project

TRACKING DATA AND EVIDENCE ON THE INDIRECT IMPACT OF COVID- 19 ON SELECTED NUTRITION OUTCOMES, INTERVENTIONS AND POLICY RESPONSES

February 2021

SUBMITTED BY DAI IN ASSOCIATION WITH



About TASC

Technical Assistance to Strengthen Capabilities (TASC) is part of the broader Technical Assistance for Nutrition (TAN) Programme, funded by UK Aid, which is a mechanism to provide technical assistance to Scaling Up Nutrition (SUN) country governments and build capacities towards advancing multi-sector nutrition agendas, in line with the SUN Movement principles and roadmap.

The objective of the TASC Project is to provide:

- 1 Technical assistance to Governments in the SUN Movement and to the SUN Movement secretariat (SMS) to catalyse country efforts to scale up nutrition impact (Component 1) in 60+ SUN Movement countries.
- 2 Technical assistance to the Foreign, Commonwealth and Development Office (FCDO) to maximise the quality and effectiveness of its nutrition-related policy and programmes, to support evidence generation and lesson learning and to develop nutrition capacity (Component 2).

TASC Partners:

DAI
NutritionWorks
Development Initiatives

Contact

DAI Global UK Ltd | Registered in England and Wales No. 01858644 | **Address:** 3rd Floor Block C Westside, London Road, Apsley, HP3 9TD, United Kingdom

DAI Global Health Ltd | Registered in England and Wales No. 01858644 | **Address:** 3rd Floor Block C Westside, London Road, Apsley, HP3 9TD, United Kingdom

DAI Global Belgium SRL | Registered in Belgium No. 0659684132 | **Address:** Avenue de l'Yser 4, 1040 Brussels, Belgium

Project Director: Paula Quigley, Paula.Quigley@dai.com

Project Manager: Hanna Ivascu, Hanna.Ivascu@dai.com

About This Publication

This document was produced by the TASC project, to summarise new data, evidence and intelligence on the indirect impacts of COVID-19 on nutrition, as well as policy responses to address these impacts.

This document was produced through support provided by UK aid and the UK Government; however, the views expressed do not necessarily reflect the UK Government's official policies.

TASC makes all efforts to provide correct information and links to source documents; however, cannot take responsibility if links are changed or removed.



Contents

About TASC	2
Contents	3
Abbreviations	5
Glossary	6

Introduction	8
Document overview	10

1 Overarching synthesis	11
1.1 The indirect impact of COVID-19 on the nutritional status (women and children)	11
1.2 The indirect Impact of COVID-19 on breastfeeding practices	12
1.3 The indirect impacts of COVID-19 on dietary practices of women, adolescents and children	12
1.4 The indirect impacts of COVID-19 on availability and price of nutritious food	13
1.5 The indirect impacts of COVID-19 on the delivery and coverage of services	13
1.6 Gender, equity and social inclusion (GESI)	14

2 Summaries of Data and Evidence	16
2.1 Nutritional status	16
2.1.1 Summary overview	16
2.1.2 Most recent sources	17
2.1.3 Sources identified in previous months by TASC	18
2.1.4 Information collected under MQSUN+	20
2.2 Breastfeeding Practices	25
2.2.1 Summary overview	25
2.2.2 Most recent sources	26
2.2.3 Sources identified in previous months by TASC	26
2.2.4 Information collected under MQSUN+	29
2.3 Diet Diversity and Practices of women and children	31
2.3.1 Summary overview	31
2.3.2 Most recent sources	32
2.3.3 Sources identified in previous months by TASC	33
2.3.4 Information collected under MQSUN+	40
2.4 Availability and Price of Nutritious Foodstuffs	41
2.4.1 Summary overview	41
2.4.2 Most recent sources	43
2.4.3 Information collected in previous months by TASC	49
2.4.4 Information collected under MQSUN+	66
2.5 Intervention Delivery and Coverage	72
2.5.1 Summary overview	72
2.5.2 Most recent sources	74
2.5.3 Information collected in previous months by TASC	77
2.5.4 Information collected in previous months by MQSUN+	90

3 Global Policy and Related Responses	92
--	-----------

3.1	Summary overview	92
3.2	Most recent sources	94
3.3	Sources collected in previous months by TASC	95
3.4	Sources collected under MQSUN+	99

Annex 1: Key Resources and Repositories for Periodic Consultation	103
--	------------

Annex 2: References of Documents Used by TASC	109
--	------------

List of tables and figures

Table 1: the severity of the impact of COVID-19, by sector and value chain	45
Table 2: Availability of food and non-food products	55
Table 3: Projected number of people in acute food insecurity (in millions)	59
Table 4: Global Service Disruption in Child Nutrition Services up until late August (% of countries reporting drops in services, compared to the same time period the previous year).	89
Figure 1. Indirect impacts of COVID-19 on nutrition	10
Figure 2: COVID-19 impacts on diets, average effect for world (Percentage change in average global household consumption by product)	35
Figure 3. Trends in food insecurity and poor maternal dietary diversity from June to October 2020 in urban and peri-urban Yangon	39
Figure 4. Current and projected acute malnutrition	48
Figure 5. Number of days adults and children skipped a meal last week (January 18, 2021)	49
Figure 6: Proportions of different coping strategies adopted by the urban and rural households	54
Figure 7. Number of countries implementing adaptations	79
Figure 8. Food insecurity and food gap of poor households living in chronically food insecure districts where PSNP is implemented. Households participating in PSNP and those who do not	80
Figure 9. Results trend for four health and nutrition pillar indicators throughout the 8 months of COVID-19 pandemic (Numbers are from the beginning of the pandemic and should be read as in addition to UNICEF's regular programming)	85
Figure 10. Percentage of respondents reporting experiencing burdens and any received government assistance (Responding to COVID-19 in Africa: Using Data to Find a Balance, 2020).	86

Abbreviations

ANC	Antenatal Care
BMI	Body Mass Index
CHW	Community Health Worker
CMAM	Community-based Management of Acute Malnutrition
COVID-19	Corona Virus Disease of 2019
DAI	Development Alternatives, Inc.
DFID	Department for International Development
FAO	Food and Agriculture Organisation of the United Nations
FCAS	Fragile and Conflict Affected States
FCDO	Foreign, Commonwealth and Development Office
FEWSNET	Famine and Early Warning Systems Network
FOLU	Food and Land Use Coalition
GESI	Gender, Equity and Social Inclusion
ICDS	Integrated Child Development Services
IFAD	International Fund for Agricultural Development
IFPRI	International Food Policy Research Institute
IMAM	Integrated Management of Acute Malnutrition
IOM	International Office of Migration
IPC	Integrated Food Security Phase Classification
IYCF	Infant and Young Child Feeding
IYCF-E	Infant and Young Child Feeding in Emergencies
LMIC	Low and Middle-Income Countries
MAM	Moderate Acute Malnutrition
MAMI	Management of At-Risk Mothers and Infants under 6 Months
MENA	Middle East and North Africa
MIYCN	Maternal, Infant and Young Child Nutrition
MNCH	Maternal, Neonatal and Child Health
MQSUN (+)	Maximising the Quality of Scaling Up Nutrition (Plus)
MUAC	Mid-Upper Arm Circumference
NCD	Non-communicable Diseases
NGO	Non-Governmental Organisation
PERC	Partnership for Evidence-Based Response to COVID-19
PNC	Post-natal Care
RUTF	Ready to Use Therapeutic Food
SAM	Severe Acute Malnutrition
SBCC	Social Behaviour Change Communication
SDG	Sustainable Development Goals
SME	Small and Medium Enterprise
SMS	SUN Movement Secretariat
SSA	Sub Saharan Africa
SUN	Scaling up Nutrition
TAN	Technical Assistance for Nutrition
TASC	Technical Assistance to Strengthen Capabilities
Tech RRT	Technical Rapid Response Team
WASH	Water, Sanitation and Hygiene
WFP	World Food Programme
WHO	World Health Organisation
WHZ	Weight-for-Height Z-Score

Glossary¹

Malnutrition

Includes undernutrition (wasting, stunting, underweight), inadequate vitamins or minerals, overweight, obesity, and resulting diet-related noncommunicable diseases.

Micronutrient-related malnutrition

Includes micronutrient deficiencies (a lack of important vitamins and minerals in the diet) or micronutrient excess.

Overweight and obesity

A person is too heavy for his or her height. Body mass index (BMI) is an index of weight-for-height commonly used to classify overweight and obesity. It is defined as a person's weight in kilograms divided by the square of his/her height in meters (kg/m²). In adults, overweight is defined as a BMI of 25 or more, whereas obesity is a BMI of 30 or more. Definitions for overweight and obesity differ for children under 5 years and for children and adolescents age 5-19 years but are based on the same premise that a child or adolescent is too heavy for his or her age-related height.

Severe Acute Malnutrition (SAM)

Severe acute malnutrition is when a person is extremely thin and at risk of dying. They need immediate treatment. The response to acute malnutrition is broad and includes several elements such as medical, food, water and hygiene, and social services.

Stunting

Stunting refers to a child who is too short for his or her age (low height-for-age). Stunting is the result of chronic or recurrent undernutrition, usually associated with poor socioeconomic conditions, poor maternal health and nutrition, frequent illness, and/or inappropriate infant and young child feeding and care in early life.

Undernutrition

Includes wasting (low weight-for-height), stunting (low height-for-age) and underweight (low weight-for-age).

Underweight

Low weight-for-age. A child who is underweight can be stunted, wasted, or both.

Vertical Transmission through breastfeeding

This relates to risks of transmission of COVID-19 from an infected mother to her baby through direct breastfeeding.

Wasting

Wasting refers to a child who is too thin for his or her height (Low weight-for-height). Wasting is the result of recent rapid weight loss or the failure to gain weight. Usually indicates recent and severe weight loss, because a person has not had enough food to eat and/or they have had an infectious disease, such as diarrhoea, which has caused them to lose weight. Wasting is also known as acute malnutrition.

¹ Sources: (Fact sheets—Malnutrition. (n.d.). Retrieved December 15, 2020 <https://www.who.int/news-room/fact-sheets/detail/malnutrition> ;Malnutrition: Emergencies and disasters. (n.d.). Retrieved December 15, 2020, from <https://www.who.int/news-room/q-a-detail/malnutrition-emergencies-and-disasters> ; Obesity and overweight. (n.d.). Retrieved December 15, 2020, from <https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight>; Breastfeeding and COVID-19 23, June 2020; Years Lived with Disability, retrieved February 18, 2021 from WHO | DALYs / YLDs definition.

Years Lived with Disability

Years lived with disability is a component of Disability Adjusted Life Years, known as “DALYs” which is the sum of years of potential life lost due to premature mortality and the years of productive life lost due to disability.

Introduction

The COVID-19 pandemic can impact nutrition through multiple routes with implications for maternal and child morbidity and mortality. Indirect impacts² on nutrition are driven by a range of intermediate factors, such as: (1) deterioration in nutritional status, (2) disruptions to breastfeeding practices / infant and young child feeding and care practices, (3) disruptions to essential health and nutrition services, (4) reduced access to livelihoods, employment and incomes, (5) deterioration in dietary practices, and (6) weakened availability and/or increased prices of nutritious foodstuffs (see figure 1).

Poor nutrition outcomes can jeopardise investments in areas such as health and education, with serious long-term implications for a country's economic development. COVID-19 impacts on nutrition create a strain on country systems at a time where there are many competing challenges. Countries will therefore need support to understand the direct and indirect impacts of COVID-19 on nutrition and to determine the best courses of action to mitigate these.

Accurate and up-to-date data and information is essential in identifying and prioritising the support required. Currently there is limited real-time data and evidence available through traditional routes to monitor these impacts on nutrition services, relevant dietary practices or nutritional status which makes it challenging to understand the full extent of the impact of COVID-19 on nutrition and what is being done to address this through policy and programming.

As such, this evidence tracker identifies and summarises, on a monthly basis, the emerging data and evidence, including non-traditional data sources, to improve understanding of how COVID-19 is indirectly affecting nutrition in Low and Middle-Income Countries (LMICs) and of the global and national responses being employed to address this impact.

Objective and Scope

The evidence tracker identifies and summarises data and evidence made available since August 2020 relating to the indirect impacts of COVID-19 on nutrition and policy responses, including:

- Data to monitor the indirect impact of COVID-19 on nutrition in LMICs over time at (a) global and (b) country level.
- Key evidence being published on the impact of COVID-19 on nutrition in LMIC.
- Information on policy responses to address the impact of COVID-19 on nutrition.

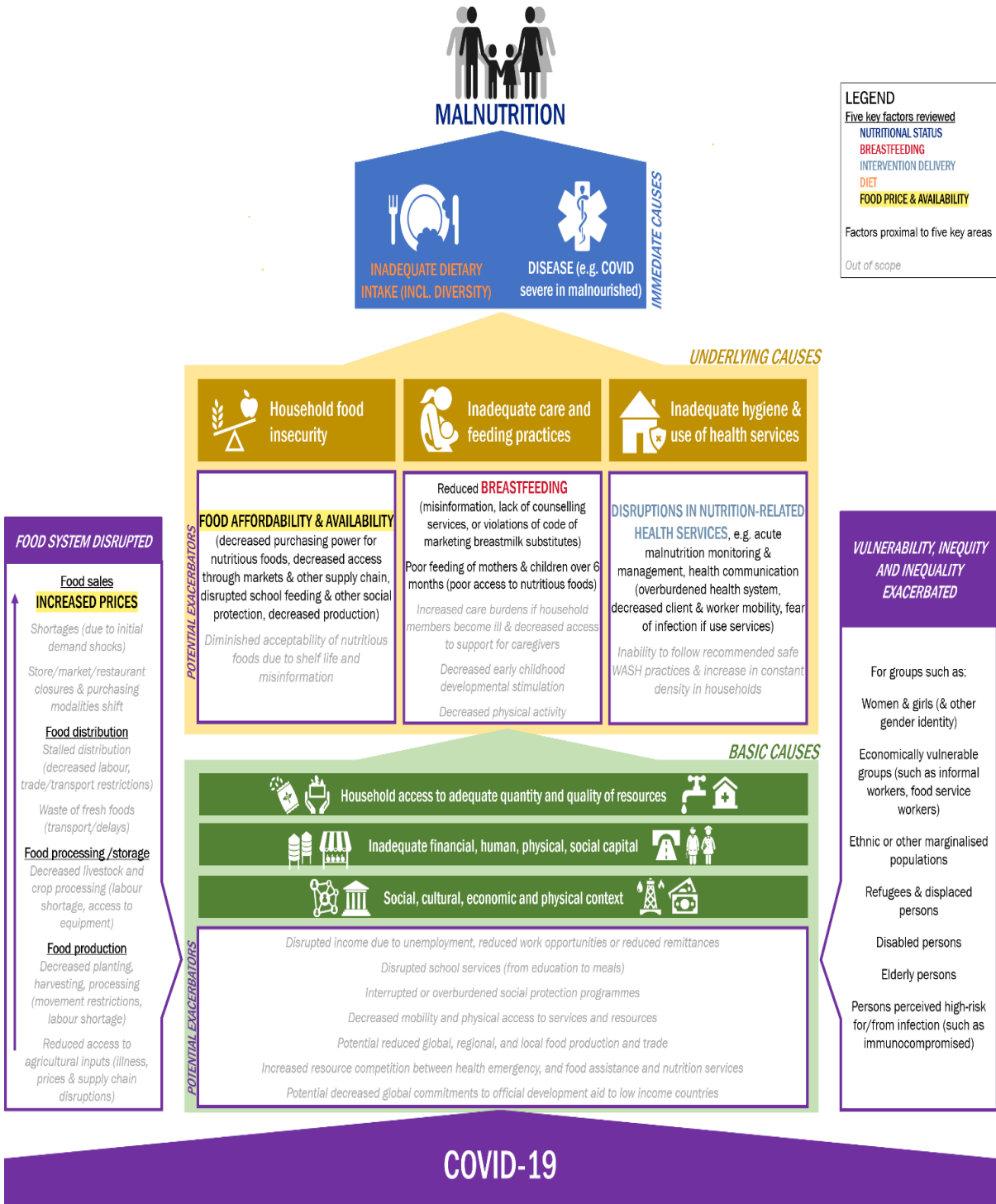
The evidence tracker only summarises data which are original to the source described.

The tracker is guided by the framework designed by PATH under the MQSUN+ project (see figure 1). Based on the UNICEF conceptual framework, this framework considers how COVID-19 and the measures to contain its spread can indirectly impact nutrition outcomes. In line with this framework, and the global nutrition priorities of the Foreign, Commonwealth and Development Office (FCDO), the evidence tracker zooms in on the following five key areas:

1. Nutrition intervention delivery and coverage
2. The availability and price of nutritious foodstuffs
3. Dietary diversity and dietary practices – particularly among women and children
4. Breastfeeding practices
5. Nutritional status (specifically undernutrition, but overnutrition may also be included where evidence is specific to LMIC)

² Direct impacts of COVID-19 are those such as cases of and deaths from the virus directly. Indirect impacts are the downstream effects of COVID-19 and trying to contain the virus.

Figure 1. Indirect impacts of COVID-19 on nutrition



Methodology

The core document, which includes the most recent data and source descriptions and an overarching synthesis, is updated monthly. It is accompanied by an email which provides an overview of some of the most recent evidence (relevant to evidence published in the previous month).

In order to ensure continuity with the earlier work carried out by MQSUN+, TASC has built further on their approach, using the following key steps:

1. Monthly updating of principal information sources, including data, evidence and COVID-19 information hubs, organisational websites with a strong nutrition focus.
2. Searching for new data, evidence and other information in the above sources; reviewing documents and newly identified sources for forward and backward citation.
3. Based on set criteria, screening documents and data sources for inclusion into Zotero referencing software. Inclusion and exclusion criteria are described in the process document and relate predominantly to the five key areas listed above and their relevance for LMICs.
4. Assessing the quality of the available data, reflecting on data provenance, coverage and timeliness; Where necessary, carry out fact-checking to ensure that the data is original to the source summarised.
5. Drafting summaries and source descriptions.
6. Updating the monthly tracker, including the synthesis.
7. Developing the Monthly Update, which contains key findings from the data and evidence collected this month.

Document overview

This document includes an overarching synthesis, containing findings collected since August 2020. This is followed by a source description of relevant information collected over time, organised chronologically according to the key area.

The document contains summaries developed by both TASC (published since beginning of October 2020) and MQSUN+ (from August to 21 October 2020). The most recent data captures information published in January 2021.

1 Overarching synthesis

This section considers the synthesis findings from sources reviewed since August 2020. For each key area, we reflect on what we know about the impact of COVID-19 on nutrition, what we don't know, and how international and national policies are attempting to address these impacts on nutrition.

Key findings

- Using several modelling tools, *Standing Together for Nutrition*, estimates that by the end of 2022, COVID-19 could result in an additional 9.3 million wasted and 2.6 million stunted children, 168,000 additional child-deaths, 2.1 million maternal anaemia cases, and 2.1 million children born to underweight women, mostly affecting South Asia and Sub-Saharan Africa.
- Information on the impact of COVID-19 on the breastfeeding practices remains scarce, but some studies have warned of potential disruptions in breastfeeding, linked to reduced access to prenatal, delivery and postnatal care, misconceptions on the risk of the transmission of COVID-19 from mother to child through breastfeeding, increased financial and time constraints on caregivers, and the marketing of Breast Milk Substitutes
- COVID-19 related disruptions have led to increased food prices in the entire agri-food system, particularly for perishable and high nutrient value food chains. As a result, food consumption and diet diversity of the urban and rural poor have been affected.
- Simulations assessing the impact of COVID-19 suggest that almost 150 million more people fell into extreme poverty and food insecurity in 2020. This is likely to result in substantial changes in food consumption patterns, with adverse nutritional consequences. Consumers may have shifted their food purchases, buying fewer nutrient-dense (and more expensive) products, and more calorie-rich and cheaper cereals and processed foods.
- With little real-time data available, the true impacts of reduced service delivery on the nutrition status of children are still unclear, but monitoring data suggests that the pandemic may have had important implications for the delivery and coverage of nutrition-specific and nutrition-sensitive services and interventions during the first months. As the pandemic continues, programme adaptations are being applied and alternative solutions found, particularly for the treatment of acute malnutrition and the provision of school meals.
- Women have been affected disproportionately by the COVID-19 and related restrictions, resulting in an increased food insecurity, a surge of unpaid work and often loss of livelihood, especially for those working in the informal sector, often putting affordable healthy diets out of reach.

1.1 The indirect impact of COVID-19 on the nutritional status (women and children)

Modelling and estimations show how COVID-19 and the measures to contain its spread might have important implications for nutrition, with impacts on both undernutrition and overweight. Using three modelling tools, in an article currently under review, *Standing Together for Nutrition* estimates that by the end of 2022, COVID-19 could result in an additional 9.3 million wasted and 2.6 million stunted children, 168,000 additional child-deaths, 2.1 million maternal anaemia cases, and 2.1 million children born to underweight women (under the moderate assumption scenario). Excess stunting and child mortality could lead to US\$29.7 billion future productivity losses ([Osendarp et al., 2021](#)).

There are no national level data available on how COVID-19 impacts the micronutrient status, but a policy brief of the [Food Fortification Initiative](#) warns that the poor might increasingly suffer from micronutrient deficiencies due to low quality diets, as market disruptions and reduced household income affect their access to nutrient rich-foods.

While individuals with obesity are at a higher risk of becoming seriously ill ([Popkin et al., 2020](#)), measures to curb the COVID-19 pandemic and resulting changes in food consumption and physical activity patterns, may also further increase overweight. For example, households in the MENA region have increased their food consumption during COVID-19 lockdowns, leading to increased weight gain ([Ismail et al., 2020](#)). In ten LMIC, population level malnutrition may be a driving factor in increasing country risk of severe or fatal COVID-19, as suggested by the coexistence of a high burden of malnutrition and elevated mortality among COVID-19 cases ([Mertens et al., 2021](#)).

Various advocacy efforts have been launched in recent months to highlight the potential effects of COVID-19 on nutrition outcomes. A report from [Save the Children](#) calls for urgent action and proposes a set of recommendations to accelerate progress on nutrition. A briefing note from the [SUN secretariat](#) highlights the importance of integrating a comprehensive, multisectoral approach to nutrition into the COVID-19 response and recovery effort, and provides detailed recommendations to countries on necessary actions in the areas of nutrition policies and programming, financing, and food systems.

The data on the impact of COVID-19 on nutritional status are defined through modelling and remain estimations, as nation-wide anthropometric and biomarker data have hardly been collected during 2020, and health monitoring systems have been disrupted ([GFF 2020](#)). Most national representative surveys which were planned in 2020, including the Demographic and Health surveys, were postponed ([DHS 2020](#)). In most cases, it is not yet clear when these surveys will resume. Guidelines were published in July 2020 to support the implementation of [nutrition surveillance and monitoring](#) or to resume population level surveys in [humanitarian contexts](#). Once this guidance will be implemented, emerging data might provide more real-time information.

1.2 The indirect Impact of COVID-19 on breastfeeding practices

Information on the impact of COVID-19 on breastfeeding practices remains scarce, but some studies warn of potential disruptions in breastfeeding, linked to reduced access to prenatal, delivery and postnatal care, misconceptions on the risk of the transmission of COVID-19 from mother to child through breastfeeding, increased financial and time constraints on caregivers, and the marketing of Breast Milk Substitutes (BMS) ([Ashish, 2020](#); [Dodgson, 2020](#); [Tulleken et al., 2020](#)). In August 2020, [UNICEF](#) reported that 45% of the countries surveyed had experienced a disruption in programmes supporting breastfeeding during the previous quarter. Contrary to WHO recommendations, guidance notes in many countries advise mothers who are suspected or confirmed to be infected with COVID-19 against breastfeeding or keeping infants in close proximity ([Hoang et al., 2020](#)). Modelling estimates suggest that reductions in breastfeeding due to COVID-19 disruptions could result in 16,469 to 138,398 more child deaths across 129 LMICs in one year of time and additional morbidity ([Busch-Hallen et al., 2020](#)).

To counter the spread of false information and to promote and protect breastfeeding, UNICEF and the World Health Organisation (WHO) released the “[Global Breastfeeding Collective's Call To Action](#)” (May 2020). The WHO emphasised that existing data were insufficient to conclude the existence of vertical transmission of COVID-19 through breastfeeding, as the risk of COVID-19 infection in infants is low and infection is most often mild or asymptomatic, while consequences of not breastfeeding and separation of mother and child can be significant. Guidelines promoting breastfeeding for mothers with suspected or confirmed COVID-19 have been developed by WHO and UNICEF. More recently, programme implementers have adapted breastfeeding promotion activities through the use of mobile phones (tele-counselling), social media platforms, COVID-19-sensitive Social Behaviour Change Communication (SBCC) materials, as well as other forms of engagement where social distancing is maximised ([Alive & Thrive, 2020](#)). Challenges persist, however, especially in emergency settings, where availability of formula milk is not controlled during lockdowns and nutrition service delivery is curbed.

1.3 The indirect impacts of COVID-19 on dietary practices of women, adolescents and children

New data relating to dietary practices of women, adolescents and children is extremely limited, likely due to disruption to health and nutrition information management systems. While it is known that COVID-19 had a distinct negative impact on the dietary diversity of urban mothers in Myanmar ([D. Headey et al., 2020](#)), for most other countries there is only data available related to diets of households. These data are most often obtained through phone or online surveys, which have specific limitations, especially when recalling eating practices.

COVID-19 and associated government restrictions have resulted in a decrease in food consumption among the urban and rural poor as well as a reduction in diet diversity ([60 Decibels, 2021](#); [Arif et al., 2020](#); [Harris et al., 2020](#); [Swinnen & McDermott, 2020](#); [Tamru et al., 2020](#)). Simulations assessing the impact of COVID-19 suggest that almost 150 million more people could have fallen into extreme poverty and food insecurity in 2020. This is likely to result in substantial changes in patterns of food consumption, with adverse nutritional consequences, as consumers may have shifted their food

purchases, buying fewer nutrient-dense (and more expensive) products such as fruits and vegetables, meat and dairy products, and more calorie-rich and cheaper cereals and processed foods (Debuquet et al., 2020). These projections were echoed by various country studies in Ethiopia, Malawi, Nigeria, Uganda, Iran, Myanmar and Bangladesh (Abate et al., 2020; Josephson et al.; Pakravan-Charvadech et al., 2020; Kundu et al., 2020). Almost two-thirds of Save the Children's beneficiaries across 37 countries reported difficulties in providing their families with meat, dairy products, grains, fruits and vegetables. Even after easing restrictions, reduced consumption of nutritious foods continues, as has been the case in Ethiopia, for example (Hirvonen et al., 2020).

The importance of an adequate diet during the pandemic has been stressed through nutrition counselling and behaviour change communication campaigns associated with social protection or health programmes (see below). *Standing Together for Nutrition* calls for attention to the importance of access to nutritious, safe and affordable diets, and nutrition-related health and social protection services (Osendarp et al., 2021).

1.4 The indirect impacts of COVID-19 on availability and price of nutritious food

Real-time data on prices and affordability of nutritious food is scarce, and even less is known about resulting impacts on individual nutrition status. However, existing data suggests that availability and affordability of nutritious foods has decreased for many (FAO, 2020b; Harris et al., 2020).

The entire agri-food system has been hit by multiple shocks induced by the COVID-19 pandemic and the response (FAO, 2020; Global Network Against Food Crises, 2020; Boughton, 2021). This has led to increased food prices, particularly for perishable or high nutritive value food chains, which tend to be most vulnerable to disruptions (Swinnen & McDermott, 2020; Nordhagen et al., 2021).

In an assessment of the ongoing impacts of COVID-19 on food systems in ten countries (Bangladesh, Ethiopia, India, Indonesia, Kenya, Mozambique, Nigeria, Pakistan, Rwanda, and Tanzania), based largely on secondary data, GAIN finds Nigeria, Ethiopia, and Mozambique to be most at risk of food and nutrition insecurity. The pandemic has also led to rising poverty levels, with the most vulnerable disproportionately affected, putting them at increased risk of food insecurity and a declining dietary quality (FAO, 2020b; Headey et al., 2020b; Kansiime et al., 2021; Josephson et al., 2020). Increases in food costs impacts food consumption (60 Decibels, 2021, WFP 2020), and might ultimately also impact the micronutrient intake (Singh et al., 2020).

Researchers and coalitions have called on governments to: support food value chains, particularly for nutritious foods; find alternative ways to keep food markets open; focus more on the nutrition outcomes of vulnerable groups; and to specifically safeguard access to nutritious food, such as fruit and vegetables (D. Headey et al., 2020a; Laderchi et al., 2020; Swinnen & McDermott, 2020; Tamru et al., 2020). Social protection programmes, on the other hand, can address the impacts of rising food prices on the poor, and avoid severe food insecurity and malnutrition among vulnerable households (FAO, 2020b; Harris et al., 2020; Boughton et al., 2021). The Food Fortification Initiative, a consortium of international organisations, published a policy brief on the access to healthy food by vulnerable people, advocating large-scale food fortification as an important tool in fighting malnutrition and particularly in response to the COVID-19 pandemic, given the crucial role of micronutrients in immune system function and resilience to disease. The UN Asia and the Pacific Regional Overview of Food Security and Nutrition 2020 report calls for greater investment in primary data collection especially for the measurement of the impact of COVID-19 on food security and nutrition. In order to be better prepared and to build resilience to future disasters and pandemics, governments should invest in stronger disaster preparedness, early warning and response systems.

1.5 The indirect impacts of COVID-19 on the delivery and coverage of services

With little real-time data available, the true impacts of reduced service delivery on the nutrition status of children is still unclear, but early efforts to monitor programming indicates that the pandemic may have impacted the delivery and coverage of nutrition-related services and interventions. During the initial months of the pandemic, various multilateral organisations tracked the delivery of health services in

countries where they operate. The [World Health Organization](#) reported on health service disruptions between March and June 2020, and noted that more than half of the surveyed countries experienced disruptions in antenatal care, sick child services, and management of malnutrition. In August 2020, [UNICEF](#) reported on disruptions of several health and nutrition services during the previous quarter. Among the nutrition services, those mostly affected by disruptions related to iron and folic acid supplementation for adolescent girls, vitamin A supplementation, screening and treatment for child wasting. The [Global Financing Facility](#) supported countries to monitor the continuity of essential health services based on available data from the Health Management Information Systems and reported in September 2020 that childhood vaccination was the most disrupted service amongst the countries studied. A survey conducted among 18 African states in August 2020 shows that the pandemic and measures to contain its spread have had demonstrable (in some countries severe) effect on access to essential health services across the continent. Recent information on service delivery is rather anecdotal. [UNICEF](#) anticipates updating its dashboard on service delivery approximately in March 2021.

While data on the overall impact of school closures on children's nutrition in LMIC is limited, WFP reports regularly on the number of children missing out on school meals. As of mid-February 2021, WFP estimates that 267 million children are missing out on meals at school, of which 49% are girls. About 113 countries continue to implement school closures to curb the spread of COVID-19 ([WFP, 2021](#)). In 2020, an estimated 39 billion school meals have been missed globally during school closures by the children who were benefiting from school feeding programmes pre-crisis ([Borkowski et al., 2021](#)). An increasing number of countries have, however, found alternative solutions to providing school children with meals ([WFP, 2021](#)).

Several countries introduced adaptations to ensure the continued screening and treatment of acute malnutrition, including the introduction of MUAC (mid-upper-arm circumference) measurement by caregivers, modified admission criteria and adapted implementation and monitoring modalities of the treatment ([Action Against Hunger Tracker: Rana et al., 2020; Rahimov & Mustaphi, 2020, Wrabel, 2021](#)). Concerns have been raised around such adaptations to protocol, such as reduced frequency of appointments and the potential for deterioration of a child's health over the extended period between appointments. A recent review carried out in 36 countries identified the challenges in delivering treatment for acute malnutrition during the pandemic, but also describes how countries have addressed these, to ensure quality of services and makes programming recommendations going forward ([Wrabel, 2021](#)).

Studies and policy briefs have highlighted the value of having a well-functioning social protection programme in place prior to a pandemic to protect the food security and dietary quality of poor households ([Abay et al., 2020, Osendarp et al., 2021; Swinnen et al., 2020](#)) or through which to distribute fortified staple food ([The Food Fortification Network, 2020](#)). An UN report, tracking the progress on global development goals and assessing the impact of COVID-19 in [Asia and the Pacific](#), highlights examples where social protection has played an important role in response to meeting the needs of vulnerable populations, mitigating the damaging effects of COVID-19. Experiences from Ethiopia indicate that the participation of poor households in the Productive Safety Net Programme played a role in protecting their food security ([Abay et al., 2020](#)). As part of its efforts to monitor the socioeconomic impacts of COVID-19 on households and individuals, the [World Bank](#) collects data relating to 96 indicators and 14 topics (including access to safety nets and to health and medical services) in 48 countries across all developing regions.

1.6 Gender, equity and social inclusion (GESI)

Poor households have been particularly affected by food price increases, leading to a rise in food insecurity and changes in consumption patterns, with a resulting decrease in diet diversity ([Singh et al., 2020; Pakravan-Charvadeh et al., 2020; Kunda et al., 2020](#)), in both urban and rural areas ([Headey et al., 2020; Diao et al., 2020; Adewopo et al., 2020; Das et al., 2020](#)).

While little information is available on the impact of COVID-19 on nutritional status of women and adolescents, women have been disproportionately affected by COVID-19 related restrictions, resulting in an increased food insecurity ([60 Decibels, 2021](#)), a surge in unpaid work ([Fernandes, 2020](#)) and frequent loss of livelihood, especially for those working in the informal sector ([Jacob et al., 2020](#)), often putting affordable healthy diets out of reach. In Africa, food insecurity increased more in female-headed households than male-headed households ([Josephson et al., 2020; WFP, 2020e](#)). In terms of intra-

household food allocation, women and children suffered most ([Singh et al., 2020](#)). Diet diversity of urban women in Myanmar decreased dramatically, increasing the risk of micronutrient deficiencies ([Headey et al., 2020a](#)). Policy reports and briefs highlight difficulties in accessing health services, especially for women, children and other vulnerable groups, while previous work on protecting and empowering women and girls has been disrupted ([Inter-Sector Coordination Group et al., 2020](#); [UNICEF 2020](#)).

Children in conflict-affected countries are particularly hit by wasting, although this is not attributable to COVID-19 alone. Data estimations indicate that rates of extreme hunger and starvation of children and their families might be particularly concerning in countries suffering severe food crises, exacerbated by COVID-19, conflict and climate change. This is the case for Afghanistan, Yemen, South Sudan, Democratic Republic of Congo, the Central Sahel and Somalia ([Save the Children 2020](#); [UNICEF 2020](#), [WFP 2021](#), [IPC Somalia 2021](#)).

COVID-19 has had a significant impact on refugee populations, especially those resident in already congested camps ([Tech RRT, 2020a](#); [Inter-Sector Coordination Group et al., 2020](#)). Food insecurity has been increasing among displaced populations in countries such as the Syrian Arab Republic, Lebanon and Yemen ([WFP and IOM, 2020](#)). Providing nutrition interventions to households headed by persons with disabilities, pregnant and lactating women, the elderly and children in refugee camps has been particularly challenging ([ICGG 2020](#), [Tech RRT, 2020a](#)). Little is yet known about the impact on ethnic minorities, but tribal high-migration communities in Rajasthan experienced increasing food insecurity due to COVID-19 ([Saxena 2020](#)). Globally, loss of remittances due to migrant workers losing their jobs is estimated to put an additional 33 million people at risk of hunger during 2020 and 2021 ([WFP 2020](#)).

Several sources recommend prioritising access to nutritious food for vulnerable groups, who have also been most affected by COVID-19 ([Freudenreich, 2020](#); [Adewopo et al., 2020](#); [Inter-Sector Coordination Group et al., 2020](#)). The call for action by the Food Fortification Initiative stresses how large-scale staple food fortification programmes can boost nutrition in poor malnourished populations, especially those who benefit from social protection programmes. The [SUN Secretariat](#) states that national and global responses aiming to prevent a hunger crisis need to look at the role and status of women and girls in food systems. [Save the Children](#) argues that the COVID-19 response should prioritise actions to enhance gender equality, while available data should be disaggregated by age-group, sex and disability. Finally, it will be important to identify means by which those without cell phones can be included in surveys which collect (and analyse) sex- and age-disaggregated data for monitoring gender-related impacts and tailor socially relevant and inclusive responses to COVID-19.

2 Summaries of Data and Evidence

This chapter summarises new data and evidence relating to the indirect impacts of COVID-19 on nutrition in LMICs. It focuses specifically on selected outcomes and outputs, including nutritional status (stunting, wasting, overnutrition and micronutrient deficiencies); breastfeeding practices; dietary diversity and dietary practices – particularly among women, adolescents and children; the availability and price of nutritious foodstuffs; and nutrition intervention delivery and coverage.

Under each topic, the summaries are organised in chronological order, and include summaries compiled by the COVID-19 tracker since August 2020. The most recent sources cover publications from January 2021, and are highlighted in **yellow**.

2.1 Nutritional status

2.1.1 Summary overview

This section includes source descriptions of the data and evidence identified on the indirect impact of COVID-19 on nutritional status (undernutrition, overweight and obesity).

The source descriptions are organised in chronological order. An overview of the sources which have been summarised under this section can be found in box 1.

Box 1. List of sources on the impact of COVID-19 on the nutritional status)



Impact of COVID-19 on nutritional status

Most recent data and evidence (Added in February 2021)

- A peer reviewed article from [Frontiers in Nutrition](#) suggests that population-level malnutrition may be related to increased rates of severe and fatal COVID-19. Using data on the country-specific burden of malnutrition from the 2019 Global burden of disease study and fatal COVID-19, the study identified ten LMIC where malnutrition may have played a role in driving an increase in fatal cases of COVID-19, as suggested by the coexistence of high malnutrition burden and elevated mortality among COVID-19 cases.

Earlier data and evidence collected (August 2020 - January 2021)

- Using three modelling tools, [Standing Together for Nutrition](#) estimates that by 2022, COVID-19 could result in an additional 9.3 million wasted and 2.6 million stunted children, 168,000 additional child-deaths, 2.1 million maternal anaemia cases, and 2.1 million children born to underweight women, affecting mostly South Asia and Sub-Saharan Africa.
- [Save the Children](#) warns that an estimated 11 million children under five are facing extreme hunger across eleven countries.
- [Tackling Childhood Stunting in the Eastern Mediterranean Region in the Context of COVID-19](#) explores how the COVID-19 pandemic threatens to increase wasting and stunting in the Mediterranean Region.
- SMART has published an [Interim Guidance on Household Surveys during COVID-19](#), which provides guidance on resuming such data collection (rather than continuing to rely only on alternative methods).
- [Jacob, CM et al.](#) (September 2020) provides insights on how the COVID-19 pandemic and response may have short- to long-term effects on maternal, neonatal and child health (MNCH), based on data from the global financial crisis that started in 2008
- [The Bill and Melinda Gates Foundation Goalkeepers Report](#) (September 2020) incorporates COVID-19 impacts in its estimates of progress on the SDGs.
- [An Axios article](#) warns that the pandemic threatens a decade of progress in child mortality.
- Popkin et al. explored the relationship between overweight and COVID-19 ([August 2020](#)). Individuals with obesity were at a higher risk of being COVID-19 positive, being hospitalised, being admitted to intensive care units or dying.
- The World Food Programme (WFP) technical note and guidance on [Overweight and Obesity in the Context of COVID-19 \(August 2020\)](#) is a call to action for promoting nutritious diets.

- Modelled projections produced by [Headey et al.](#) (July 2020 in *The Lancet*), suggest that the global prevalence of child wasting could rise by 14.3% in 118 LMIC, translating to an estimated additional 6.7 million children with wasting and up to 178,510 additional child deaths in 2020.
- Correspondence from [Busch-Hallen et al.](#) suggests that early infant and child mortality estimates from [Roberton et al.](#) did not include breastfeeding impacts. They estimate that with a 5-50% reduction in breastfeeding prevalence due to COVID, child deaths would be an additional 16,469-138,398 in a year across 129 LMICs.

2.1.2 Most recent sources

Title: [The Burden of Malnutrition and Fatal COVID-19: A Global Burden of Disease Analysis](#)

Author or institution	Mertens and Peñalvo, <i>Frontiers in Nutrition</i>
Geographic focus	Global (172 Countries)
Population focus	General Population
Technical focus	Nutritional Status
Information type	Journal article (peer reviewed)
Date published	January 2021
Date added	February 2021

Purpose/objective of source

To identify the countries where prevalent malnutrition may be a driving factor for COVID-19 related fatalities.

Main nutrition-related findings

- This article suggest that population-level malnutrition may be related to increased rates of fatal COVID-19 in areas with an elevated burden of undernutrition.
- Using data on the country-specific burden of malnutrition and fatal COVID-19, the study identified ten countries where malnutrition might have played a role in increasing the country's vulnerability to fatal COVID-19 as suggested by the coexistence of a high burden of malnutrition and elevated mortality among COVID-19 cases.
- The most affected are low-income countries in sub-Saharan Africa, particularly in the Sahel strip, as well as Yemen in the Middle East and North African region.
- Countries with the highest burden of undernutrition, and particularly high "years lived with disability" rates for iron deficiency, also experience markedly higher COVID-19 fatality rates.
- No clear relationship between the burden of vitamin A deficiency and COVID-19 mortality was observed.

Quality of the data/ evidence (Method)

- The article uses estimates from the Global Burden of Disease 2019, with country-level burden of malnutrition quantified using four indicators: death rates for child growth failure (underweight, stunting, and/or wasting) and years lived with disability attributed to iron and vitamin A deficiencies and high body mass index (BMI).
- Global mortality descriptors of the ongoing COVID-19 pandemic were extracted from the European Centre for Disease Prevention and Control and case fatality ratios were calculated introducing a lag time of ten weeks after the first death of a confirmed case.
- The analysis included 172 countries where both data on malnutrition and case fatality rates could be extracted.

2.1.3 Sources identified in previous months by TASC

Title: The potential impacts of the COVID-19 crisis on maternal and child undernutrition in low and middle income countries

Author or institution	Osendarp et al., Nature Research
Geographic focus	LMIC
Population focus	Children under five and pregnant women
Technical focus	Nutrition Status
Information type	Journal Article
Date published	Forthcoming (Pre-print December 2020) – paper still under review
Date added	January 2021

Purpose/objective of source

- To present a multi-year picture for 2020-2022 of the potential consequences of economic, food and health systems crises triggered by COVID-19 for maternal and child undernutrition in 118 LMICs with a focus on 1) child stunting, wasting, and mortality, maternal anaemia and children born to women with low BMI; and 2) associated human productivity losses.

Main nutrition-related findings

Presented below are a range of potential assumption scenarios, ranging from optimistic to pessimistic, based on the mitigating impacts of extra financial resources for nutrition. Regardless of the scenario, the COVID-19 crisis is expected to have dramatic effects on maternal and child undernutrition and child mortality in the current generation, with massive long-term negative consequences on productivity.

- **Child wasting:** Compared to projections without COVID-19, it is estimated that an additional 6.4 to 13.6 million children will become wasted from 2020 to 2022, based on predicted Gross National Income declines in the 118 countries. Two-thirds of these additional wasted children in the moderate scenario (9.3 million children) would be in South Asia (6.2 million) and 1.9 million in sub-Saharan Africa.
- **Child stunting:** An estimated 1.5 to 3.6 million additional children will be stunted in 2022 compared to 2019 due to interruptions in nutrition services and deterioration in household poverty status. Under the moderate scenario (2.6 children stunted), almost 1.2 million would be in Sub-Saharan Africa and 790,00 in South Asia.
- **Under 5 mortality:** An estimated 47,000 to 283,000 additional under-5 deaths in the 118 countries over the three years, due to predicted increases in child wasting and declines in nutrition intervention coverage.
- **Maternal anaemia and low BMI:** An estimated additional 1.0 to 4.8 million pregnant women with any anaemia in the 118 countries in 2020-2022 compared to 2019 as well as 1.4 to 3.0 million children would be born to women with low BMI in 2020-2022.
- **Adverse birth outcomes:** In an optimistic scenario, two maternal nutrition interventions including multiple micronutrient supplementation in place of iron and folic acid supplementation and balanced energy protein supplementation for malnourished pregnant women would have a positive impact on small-for-gestational-age (SGA) and preterm births and stillbirths if introduced in 2022.

Quality of the data/ evidence (method)

- This report is still under review. It is written by a group of scientists, which come together as “Standing Together for Nutrition (STfN)” – which is a consortium of multidisciplinary nutrition, economics, food and health system experts, currently consisting of 51 individuals from 32 organisations in HIC and LMIC, working to address the scale and reach of COVID-related nutrition challenges.
- The authors used three modelling tools (MIRAGRODEP, Lives Saved Tool, and Optima Nutrition Tool) to estimate impacts on child stunting, wasting, and mortality, maternal anemia, children born to low BMI women, and future productivity losses for three assumption scenarios (pessimistic, moderate, optimistic) across 2020–2022 in 118 LMICs.

Title: 11m children under five at risk of extreme hunger or starvation across eleven countries

Author or institution	Save the Children
Geographic focus	Africa, the Caribbean, Middle East and Asia
Population focus	Poor, vulnerable
Technical focus	Nutritional status, Nutrition intervention delivery and coverage
Information type	Press release
Date published	November 2020
Date added	December 2020

Purpose/objective of source

To share findings on food security and nutrition from a new analysis by Save the Children and warn of a potential risk of famine.

Main nutrition-related findings

- Save the Children analysed populations facing food insecurity across eleven countries, using data from the WFP and the IPC . Using UN population data, they extrapolated the number of children under five considered to be at risk of hunger or starvation across all eleven countries, and estimate that a total of 11 million children under five are facing extreme hunger or starvation in these countries, with the potential risk of famine in Yemen and South Sudan.
- Issues are particularly concerning in countries where the food crisis is extremely serious, made worse by insecurity: Afghanistan, Yemen, South Sudan, Democratic Republic of Congo and the Central Sahel (Mali, Niger & Burkina Faso). COVID-19, conflict and climate change could tip millions of families over the edge.
- “Levels of acute hunger, which were already at record global highs before the pandemic, are continuing to rise. Left unchecked, this puts millions of children’s lives at risk. The global hunger crisis is caused by a persistent lack of access to nutritious food in some of the most vulnerable communities in the world and threatens to set countries back by years or even decades in their efforts to reduce child mortality and alleviate poverty. The situation is critical. We are looking at the very real possibility that thousands of children could die.”
- “Conflict, insecurity, a changing climate, extreme weather events, and recent invasions of desert locusts are all driving up levels of global hunger and malnutrition, leaving entire populations extremely vulnerable to additional shocks like COVID-19 and its secondary impacts, including lockdowns, school closures and economic recession.”
- People struggling to access healthy food, while there is also a widespread disruption to the life-saving services designed to treat malnutrition. Humanitarian access is shrinking at a time when it should be expanding.

Method

- Save the Children analysed populations facing food insecurity across eleven of the worst-affected countries, using data from the World Food Programme and the Integrated Phase Classification, famine early-warning system. Then, using UN population data, the agency extrapolated the estimated number of children under five considered to be at risk of hunger or starvation across all eleven countries.

Title: Tackling Childhood Stunting in the Eastern Mediterranean Region in the Context of COVID-19

Author or institution	Jawaldeh et al. Children
Geographic focus	Eastern Mediterranean region
Population focus	Children
Technical focus	Nutritional status
Information type	Journal article (peer reviewed, literature review)
Date published	November 2020
Date added	December 2020

Purpose/objective of source

To present an up-to-date picture of child stunting in the countries of the Eastern Mediterranean Region.

Main nutrition-related findings

- This review analysed data from the UNICEF, WHO and the World Bank malnutrition estimates to present an overall picture of childhood stunting in the region. It is estimated that the number of children under 5 in the region who are affected by stunting has dropped from 24.5 million (40%) in 1990 to 20.6 million (24.2%) in 2019, but more efforts are needed to reach the regional and global targets (UNICEF, WHO and World Bank, 2020).
- The COVID-19 pandemic threatens to undermine efforts to reduce malnutrition and to implement the planned nutrition actions.
- In the short term, this might lead to increased prevalence of food insecurity and acute malnutrition. Regional modelling conducted by UNICEF and the Regional Office for the Eastern Mediterranean and published in June (UNICEF MENA, 2020) estimated that between 2000 and 12,000 children under 5 could die in six months in 2020 in Near East and North Africa Region due to wasting caused by the impact of the COVID-19 pandemic on food access and healthcare.

The combined effects of COVID-19 and the measures taken to mitigate its impact, along with the emerging global recession, might also increase stunting, through their effects on access and affordability of safe and nutritious foods and access to essential health services.

Method

- This review is not based on original research but extracted and analysed data from the UNICEF, WHO and the World Bank malnutrition estimates Levels and Trends in Child Malnutrition: Key Findings of the 2020 Edition of the Joint Child Malnutrition Estimates) to present an overall picture of childhood stunting in the region (UNICEF, WHO, and World Bank, 2020).

2.1.4 Information collected under MQSUN+

Building Resilient Societies after COVID-19: The Case for Investing in Maternal, Neonatal and Child Health

Author or institution:	Jacob, CM et al. / The Lancet
Geographic focus:	Global
Technical focus:	Nutritional status, Breastfeeding, Diet, Nutrition intervention delivery, Food price and availability
Information type:	Peer-reviewed journal
Date published:	21 September 2020
Date added:	29 September 2020

This viewpoint emphasises short to long term effects on maternal, neonatal and child health (MNCH) and highlights how the COVID-19 pandemic could impact MNCH, based on the effect of previous socio-economic crises, particularly the global financial crisis that started in 2008:

- A 10% reduction in gross domestic product (GDP) was associated with a 9% increase in maternal mortality, disproportionately affecting adolescent mothers.
- In [Portugal](#) during 2007-14, a 25% increase in low birthweight accompanied the reduction in GDP (growth rate -1%), health expenditure and social protection, especially for migrant children.
- In [Greece](#) (one of the European countries most affected by the 2008 financial crisis), GDP fell by at least 15% between 2008 and 2014, unemployment increased from 8% to 27%, stillbirths to women younger than 25 years increased by 42% and low birthweight increased from 7% to 12%.
- The COVID-19 pandemic, by disproportionately affecting multiple pathways, threatens to undermine the future population's physical and mental health and economic resilience.
- From data on 30 high-income countries and LMICs, [Fernandes](#) (March 2020) suggests that each additional month of lockdown will reduce GDP by 2.5-3% (varying by country, but potentially as high as 10-15% with extended lockdown). However, these data underestimate the effect, as GDP does not include unpaid work, such as breastfeeding, providing care, domestic chores and food production, which are exclusively or predominantly done by women. Furthermore, the informal economy (which offers workers little protection in an economic downturn) is 61% of the global workforce, and in many LMICs, almost half of these workers are women.
- Based on other estimates (e.g. [Roberton](#)), there will be reduced investment in MNCH, reductions in service and coverage, increases in malnutrition and other effects later impacting nutrition.
- The authors call for priority actions for policies to invest in MNCH to improve population health and resilience to respond to the COVID-19 pandemic.

Goalkeepers Report 2020

Author or institution:	Bill and Melinda Gates Foundation
Geographic focus:	Global & Regional
Technical focus:	Nutritional status and related outcomes
Information type:	Informal
Date published:	September 2020
Date added:	23 September 2020

This year's report examines the impact of COVID-19 to estimate the world's progress toward the Sustainable Development Goals (SDGs).

- Globally, the prevalence of [stunting](#) amongst children under five is estimated to fall short of meeting the 2030 target of 15% (20% best case scenario / 26% worst case scenario).
- [Maternal mortality](#) is also estimated to decrease from 2019 to 2030 but be above the 2030 target of 70 maternal deaths per 100,000 live births (93 better scenario / 137 worse scenario)
- Unlike stunting and maternal mortality, in the best-case scenario, [under-five mortality](#) may reach the 2030 target of 25 under-five deaths per 1,000 live births due to a potential decrease in a new pneumonia vaccine and increased investments due to COVID-19 to treat respiratory conditions. However, it may increase from 37 deaths per 1,000 live births in 2019 to 40 deaths per 1,000 live births based on models ([Roberton 2020](#)) that predict a dramatic increase in acute malnutrition.

Pandemic is Threatening a Decade of Progress in Child Mortality Rates

Author or institution:	Eileen Drage O'Reilly/Axios
Geographic focus:	Global

Technical focus:	Nutritional status and related outcomes
Information type:	Informal
Date published:	5 September 2020
Date added:	23 September 2020

This short article warns that COVID-19 has undone potentially a decade of progress in education, access to utilities, gender equity, and health services (antenatal care, facility births, and immunisations, amongst others). There will be long- and short-term ramifications for health. Based on PATH's estimates (building on Robertson et al), under-five mortality may be as high as 48 deaths per 1000 live births (where we were in 2010), whereas the pre-COVID-19 trend was more along the lines of 36 deaths per 1000 live births. This means a loss of 2.3 million children (the population of Houston, TX) just from service disruptions due to COVID-19. The article also mentioned the WHO survey and other resources mentioned in this core document.

Individuals with Obesity and COVID-19: A Global Perspective on the Epidemiology and Biological Relationships

Author or institution:	Popkin et al. / Obesity Reviews
Geographic focus:	Global & Regional
Technical focus:	Nutritional status, Diet
Information type:	Peer-reviewed journal
Date published:	26 August 2020
Date added:	08 September 2020

This pooled analysis published in Wiley Online Library analysed 75 studies (conducted from January to June 2020) on the relationship of individuals with obesity and COVID-19 from risk to mortality. This is relevant to LMICs given that >70% of individuals with overweight/obesity live in low- or middle-income countries, and as economies grow, the burden of obesity shifts to the poor. All were conducted between January and June 2020, including five case-control studies, 33 retrospective or prospective cohort studies and 37 observational cross-sectional studies. Sample sizes varied from 24 to 109,367 diagnosed patients in more than 10 countries in Asia, Europe and North and South America. In total, 399,461 diagnosed patients are included (55% male). Highlights include:

- Individuals with obesity were at higher risk of being COVID-19 positive (>46%), hospitalised (113%), admitted to ICU (74%) and for mortality (48%)
- Despite little evidence published as of that date, the article speculates how the pandemic may shift diets to increase consumption of refined carbohydrates and increased highly ultra-processed foods leading to increased prevalence of individuals with obesity. The current pandemic could unintentionally worsen noncommunicable diseases. Poor people around much of the globe also face increased hunger and with it the potential for elevated stunting and its consequences, including the long-term risks of central visceral adiposity and many non-communicable diseases.
- Most low- and middle-income countries do not have resources for providing fresh vegetables and fruits. It is important to carefully monitor and regulate the consumption of ultra-processed foods and beverages through fiscal policies such as taxation and regulating the marketing of such foods.

Early Estimates of the Indirect Effects of the COVID-19 Pandemic on Maternal and Child Mortality in Low-income and Middle-Income Countries: A Modelling Study

Author or institution:	Robertson et al. / The Lancet
Geographic focus:	Global
Technical focus:	Nutritional status

Information type:	Peer-reviewed journal
Date published:	12 May 2020
Date added:	25 August 2020

Provides modelling estimates of the effects of COVID-19 pandemic on child wasting and maternal and child mortality in LMIC. Modelling suggested the potential impact of COVID-19-related service disruptions and reduced Gross National Income (GNI) suggests that the prevalence of wasting could increase by 10-50% (an excess of 40,000-2,000,000 child deaths). Summary of evidence:

- Modelling of reduced maternal and child health coverage and increased prevalence of wasting shows that an additional under-5 child and maternal deaths could increase by 10-45% per month and 8-39% per month respectively across the 118 countries.
- This equates to an additional 253,500 to 1.2M additional child deaths and 12,200-56,700 additional maternal deaths.
- Modelled three scenarios in which the coverage of essential maternal and child health interventions is reduced by 10-52% and the prevalence of wasting is increased by 10-50%.
- Across three scenarios, the reduced coverage of four childbirth interventions (parenteral administration of uterotonics, antibiotics and anticonvulsants, and clean birth environments) would account for approximately 60% of additional maternal deaths. The increase in wasting prevalence would account for 18-23% of additional child deaths and reduced coverage of antibiotics for pneumonia and neonatal sepsis and of oral rehydration solution for diarrhoea would together account for around 41% of additional child deaths.

Impacts of COVID-19 on Childhood Malnutrition and Nutrition-Related Mortality

Author or institution:	Headey et al. / The Lancet
Geographic focus:	Global
Technical focus:	Nutritional status, Nutrition intervention delivery
Information type:	Peer-reviewed journal
Date published:	27 July 2020
Date added:	25 August 2020

As above, this paper provides modelling estimates of the effects of COVID-19 pandemic on child wasting and maternal and child mortality in LMIC. A more recent modelling estimated a 14% increase (an additional 6.7 million children in 2020 in the prevalence of wasting amongst children under 5 based on losses in GNI per capita alone). Summary of evidence:

- MIRAGRODEP projections suggest that even a fairly short lockdown, combined with severe mobility disruptions and moderate food systems disruptions, result in LMICs having an estimated average 8% (SD 2.4%) decrease in GNI per capita relative to pre-COVID-19 projections.
- A model projection showed that 118 LMICs could result in a **14.3% increase in the prevalence of moderate or severe wasting amongst children younger than 5 years** due to COVID-19-related predicted country-specific losses in GNI per capita. This would translate to an **additional estimated 6.7 million children** with wasting in 2020 compared with projections for 2020 without COVID-19: an estimated 58% in South Asia and 22% in sub-Saharan Africa.
- The projected increase in wasting in each country is combined with a projected year average of 25% reduction in coverage of nutrition and health services; there would be an estimated 128,605 (ranging from 111,193 to 178,510 for best and worst-case scenarios) additional deaths in children younger than 5 years during 2020, with an estimated 52% of these deaths in sub-Saharan Africa.

This is based on Robertson and colleagues' coverage scenarios, using a low of 15% and high of 50% disruption in vitamin A supplementation, treatment of severe wasting, promotion of improved young child feeding and provision of micronutrient supplements to pregnant women.

COVID-19 Pandemic and Mitigation Strategies: Implications for Maternal and Child Health and Nutrition

Author or institution:	Askeer et al. / The American Journal of Clinical Nutrition
Geographic focus:	Global
Technical focus:	Nutritional status, Nutrition intervention delivery
Information type:	Peer-reviewed journal
Date published:	19 June 2020
Date added:	25 August 2020

This article suggests that [Robertson's](#) modelling likely underestimates, failing to account for the potential effect on maternal nutrition, micronutrient deficiencies and intrauterine growth as well as downstream impacts on maternal and child health programmes that can impact linear growth and childhood stunting. Provides risk factors for undernutrition in the context of COVID-19 and approaches to prevent exacerbating maternal and child nutrition. Highlights that COVID-19 will likely affect all forms of malnutrition. Summary of evidence:

- Coronavirus disease 2019 (COVID-19) continues to ravage health and economic metrics globally, including progress in maternal and child nutrition. Although there has been a focus on rising rates of childhood wasting in the short term, maternal and child undernutrition rates are also likely to increase as a consequence of COVID-19 and its impacts on poverty, coverage of essential interventions and access to appropriate nutritious foods.
- Key drivers at particular risk of collapse or reduced efficiency in the wake of COVID-19 include food systems, incomes and social protection, health care services for women and children and services and access to clean water and sanitation.

Impact of COVID-19 on Maternal and Child Health

Author or institution:	Busch-Hallen et al. / The Lancet
Geographic focus:	Global
Technical focus:	Nutritional status, Breastfeeding, Nutrition intervention delivery
Information type:	Peer-reviewed journal
Date published:	3 August 2020
Date added:	25 August 2020

This correspondence added further commentary on the estimates shared by Robertson's article, modelling (based on Alive and Thrive programme work) the effect of reduced breastfeeding from COVID-19 on child mortality. It reports anecdotal evidence suggesting that some health facilities are inappropriately separating new-born babies from mothers and discouraging breastfeeding because of unfounded fears of transmission of COVID-19 through breastmilk. Using the Alive & Thrive, it modelled a hypothetical effect of small (5%), moderate (10%), medium (25%), or severe (50%) relative reductions in the prevalence of breastfeeding due to COVID-19 disruptions would result in 16,469 (small reduction), 32,139 (moderate reduction), 75,455 (medium reduction) and up to 138 398 (severe reduction) child deaths across 129 LMICs over a one-year period, plus additional morbidity.

Biblical, on Steroids, and Across Generations: The Coming Food and Nutrition Crash Can Be Averted if We Act Now to Counter the COVID-19 Crisis

Author or institution:	Haddad / IFPRI Blog
Geographic focus:	Global

Technical focus:	Nutritional status, Breastfeeding, Nutrition intervention delivery, Diet, Food price and availability
Information type:	Informal
Date published:	28 April 2020
Date added:	25 August 2020

This blog published stunting estimates as a result of COVID-19 based on reduced Gross Domestic Product (GDP) alone. It also raised that the UNU WIDER group, a research centre of the United Nations University, modelled the [short-term economic impact of COVID-19](#) on global monetary poverty. Based on a 10% decline in global GDP (as reported by UNU WIDER) there will be an increase of 5% in stunting rates globally.

2.2 Breastfeeding Practices

2.2.1 Summary overview

This section includes source descriptions of the data and evidence identified on the indirect impact of COVID-19 on breastfeeding practices.

The source descriptions are organised in chronological order. An overview of all the sources which have been summarised under this section can be found in box 2.

Box 2. List of sources on the impact of COVID-19 on breastfeeding



Impact of COVID-19 on breastfeeding

Most recent data and evidence (Added in February 2021)

- The TASC team has not identified new evidence and data related to the impact of COVID-19 on breastfeeding practices in LMIC, published in January 2021.

Earlier data and evidence collected (August 2020 - January 2021)

- In BMJ Nutrition, Prevention and Health, [Hoang et al.](#) reviewed guidance documents from 33 countries (12 of which are LMICs) on the care of infants whose mothers were suspected or confirmed as COVID-19 positive and assessed for alignment with WHO recommendations on breastfeeding and COVID-19. The review found that most countries did not recommend keeping mothers and infants in close proximity or continuation of direct breastfeeding, and that overall, recommendations against practices supportive of breastfeeding were common.
- In Maternal and Child Nutrition, [Haiek et al.](#) provide guidance on how parents and healthcare providers can be involved in shared decision-making processes for infant feeding and care during the COVID-19 pandemic, proposing a structure and rationale to guide the process which shifts the conversation from giving patient education to exchanging information to help the parents reach their goals.
- The Lancet Regional Health-Western Pacific article from China on [breastfeeding practices, SARS-CoV-2 and its antibodies in the breast milk of mothers confirmed with COVID-19](#) (November 2020) confirmed that there is currently no evidence on the transmission of COVID-19 through breastmilk.
- Technical Rapid Response Team's (Tech RRT) [third](#) and [fourth Learning and Sharing Café](#) webinars enabled countries (Jordan, Kyrgyz Republic, Lebanon, Nepal, Syria, and Sierra Leone) to share their experiences in adapting IYCF programme s in emergency contexts and in the context of COVID-19 (October 2020). Using mobile phones, social media, COVID-19-informed SBCC materials and job aids, and other innovative approaches, the programme s quickly and creatively assessed and addressed emerging IYCF programme barriers.
- [Correspondence](#) in the Lancet highlights violations (e.g. in India, Pakistan, and the Philippines) of the Code of Marketing of Breastmilk Substitutes and calls for urgent action to improve Code implementation and enforcement in every country, with severe sanctions for any violations.
- [Lubbe, W, et al.](#) reviewed publications on breastfeeding during the COVID-19 pandemic. The authors conclude that breastfeeding should be encouraged with skin-to-skin contact and mothers and infants should be cared for together.

- The newly updated UNICEF database [Tracking the Situation of Children During COVID-19](#) includes reports from 43 countries on violations of the International Code on Marketing of Breastmilk Substitutes (BMS).
- [John Hopkins University](#) is regularly updating a literature repository on “COVID-19, Breastfeeding, Infant Feeding, Breast Milk”, largely focused on the potential for COVID-19 transmission, with a few LMIC-based studies examining changes in breastfeeding rates or knowledge, attitudes or practices.
- [Commentary on breastfeeding in the Journal of Human Lactation \(Dodgson, July 2020\)](#) highlighted the struggle to ensure the [International Code of Marketing Breast-Milk Substitutes \(BMS\)](#) compliance during the crisis.
- A [living systematic review published in the Annals of the New York Academy of Sciences](#) suggests there is no evidence of SARS-CoV-2 transmission through breast milk.
- An article in the BMJ ([Bhatt, August 2020](#)) compiled anecdotal evidence on the potential impact—on breastfeeding practices in India—of government guidance on isolating new-borns from their mothers with COVID-19. It finds that doctors rather than families are making the decisions regarding child separation.
- The WHO’s June 2020 [scientific brief on COVID-19 and breastfeeding](#) advises that recommendations on initiation and continued breastfeeding continue to apply, regardless of mothers having suspected or confirmed COVID-19.
- UNICEF conducted an [online survey](#) (results published August 2020) in which 88 country offices in 7 regions reported that most countries (84-91%) have adopted global guidelines for breastfeeding in the context of COVID-19 but noting reports of overburdened health systems unable to continue providing breastfeeding services and of increased promotion of breast milk substitutes.

2.2.2 Most recent sources

The TASC team has not identified evidence and data related to the impact of COVID-19 on breastfeeding practices in LMIC, published in January 2021.

2.2.3 Sources identified in previous months by TASC

Title: [A study of breastfeeding practices, SARS-CoV-2 and its antibodies in the breast milk of mothers confirmed with COVID-19](#)

Author or institution	Peng et al. (The Lancet Regional Health-Western Pacific)
Geographic focus	China
Population focus	Infants
Technical focus	Breastfeeding practices
Information type	Journal article (peer reviewed)
Date published	November 2020
Date added	December 2020

Purpose/objective of source

To investigate possibility of SAR-CoV-2 transmission through breast milk and its antibodies in breast milk of mothers confirmed with COVID-19, as well as the impacts of prolonged mother-child separation on breastfeeding practices due to quarantine control measures.

Main nutrition-related findings

- The 44 breast milk samples tested negative for the SARS-CoV-2 nucleic acid (i.e. no trace of the coronavirus through breastmilk). There were no IgG antibodies for SARS-CoV-2 in the breast milk samples even several weeks post infection. IgG is one of many antibodies that are primarily expressed in breast milk after recovery from an infectious disease and last for months or years. Testing for other antibodies may have yielded different results.

- Mothers with confirmed and suspected COVID-19 delayed initiation of breastfeeding or feeding of expressed breast milk to infants until three weeks, and one and half weeks after delivery, respectively, as compared with the control group who initiated breastfeeding in the first week after delivery. While all the confirmed and suspected mothers were guided on expressing breast milk after delivery, they were unable to initiate feeding breastmilk to their baby primarily due to strict isolation and quarantine measures, especially during the first three months of the COVID-19 outbreak.

Knowledge gaps

The lack of IgG antibodies for SARS-CoV-2 in the breast milk samples is a finding inconsistent with previous studies and needs further investigation.

Method

This paper presents the interim results of a longitudinal study carried out in Hubei province, China. In total, 44 breast milk samples were collected from 16 of the 24 mothers with confirmed COVID-19 for COVID-19.

Title: IYCF Programming Adaptations in the Context of COVID-19 (third Learning and Sharing Café)

Author or institution	Technical Rapid Response Team (Tech RRT) and Infant Feeding in Emergencies Core Group (IFE, Core)
Geographic focus	Jordan, Nepal, Kyrgyz Republic
Population focus	Children <5
Technical focus	Breastfeeding practices (IYCF-E)
Information type	Webinar
Date published	October 2020
Date added	December 2020

Purpose/objective of source

This webinar is designed as a platform for countries to share their experiences in adapting IYCF programmes in emergency contexts and in the context of Covid-19.

Main nutrition-related findings

Infant and Young Child Feeding in Emergencies (IYCF-E) to strengthen IYCF practices during Covid-19 in Nepal (Helen Keller International)

- Challenges related to Covid-19 include a nationwide lockdown affecting on-going in-person IYCF/SBCC interventions; reduced access to markets; disruption of nutrition and health services; and fear of mother/child infection. To address some of these issues, the *Suaahara* programme adapted IYCF guidelines to the country context; adapted SBCC materials and developed job aids for frontline workers; conducted tele-counselling; accelerated social and mass media; and conducted virtual in-person capacity building.

IYCF activities in response to Covid-19 in Jordan (UNHCR/International Medical Corps)

- Challenges related to Covid-19 include the requirement of special permits for nutrition counsellors to enter the camps; the availability of local pharmacies selling milk formula inside the camps (uncontrolled during lock down); primary health centres operating at zero to minimum capacity, responding only to emergencies; and children have no access to MUAC screening. To adapt to these conditions, primary health centres changed their schedules and location of follow-ups; there was increased cooperation with medical teams and pharmacists selling milk formula; community nutrition volunteers were redistributed to primary health centres and also trained on remote working; and families were trained in MUAC screening.

Kyrgyz Republic adaptation of nutrition programming for Covid-19 (USAID)

- Quarantine and lockdowns led to loss of income for daily-income seekers, limited access to food for vulnerable groups, and limited access and reduced availability of health services provision. Additionally, health providers lack knowledge of IYCF best practices in relation to Covid-19 and mothers are concerned about breastfeeding during the pandemic. To address these issues, the programme adapted community activities for online/digital engagement and distribution; updated health facility activities by integrating Covid-19 guidance into IYCF counselling and providing remote training for and supportive supervision to health providers.

Method

- This information was shared in the form of a webinar, mostly by development partners working in the field of IYCF in several LMIC .

Title: IYCF Programming Adaptations in the Context of COVID-19 (fourth Learning and Sharing “Café”)

Author or institution	Technical Rapid Response Team (Tech RRT) and Infant Feeding in Emergencies Core Group (IFE, Core)
Geographic focus	Syria, Sierra Leone, Lebanon
Population focus	Infant and small children
Technical focus	Breastfeeding practices (IYCF-E)
Information type	Webinar
Date published	October 2020
Date added	December 2020

Purpose/objective of source

This webinar is designed as a platform for countries to share their experiences in adapting IYCF programmes in emergency contexts and in the context of Covid-19.

Main nutrition-related findings

IYCF-E response in Syria during COVID-19 (UNICEF)

- Due to children needing healthcare outside of camp, mother child dyads were separated and required services to help establish re-lactation, especially as donated breastmilk substitutes were available. The programme adapted by using simplified IYCF measures including group counselling sessions rather than individual counselling (where criteria such as the need for use of cup feeding, tube feeding integration with breastfeeding had to be met first), all while applying a strong Communication for Development and intersectoral approach.

IYCF programming during COVID-19 in Sierra Leone (Action Against Hunger)

- Individual counselling sessions stopped, mother and father support groups were suspended, community education and awareness sessions ended, and there was also confusion over Covid-19 precautionary measures. To adjust to these realities, the programme implemented a rapid behaviour assessment in communities, adapted USAID pictorial IYCF counselling cards, trained lead mothers and fathers as peer educators, held community Q&A sessions, and conducted mass media campaigns on IYCF and care practices.

IYCF-E interventions in Lebanon (UNICEF and International Orthodox Christian Charities)

- Some of the challenges resulting from Covid-19 included the inability to conduct group sessions, the need to ensure appropriate infection, prevention and control measures, and the inappropriate distribution of breastmilk substitutes. To address these challenges, the programme mobilized volunteers to increase the frequency of socially distanced awareness sessions, trained staff on personal protection measures, and built the capacity of formula milk providers on IYCF and national and international guidelines on IYCF-E.

Method

- This information was shared in the form of a webinar, mostly by development partners working in the field of IYCF in several LMIC .

2.2.4 Information collected under MQSUN+

Marketing of Breastmilk Substitutes during the COVID-19 Pandemic

Author or institution:	Van Tulleken et al.
Publication:	The Lancet
Geographic focus:	Global
Technical focus:	Breastfeeding
Information type:	Peer-reviewed journal
Date published:	8 October 2020
Date added:	15 October 2020

This feature outlines how India's efforts to promote breastfeeding are threatened by COVID-19, as misguided fears of infection see new-borns separated from mothers and formula milk promoted. It notes that doctors are allowed to make the decision to separate on a case-by-case basis depending on the clinical condition of the mother and new-born and outlines likely negative impact on breastfeeding, although no firm estimates are provided. It notes a number of anecdotes of breastfeeding having become stigmatised during the pandemic.

Breastfeeding during the COVID-19 Pandemic – A Literature Review for Clinical Practice

Author or institution:	Lubbe W. et al. / International Breastfeeding Journal
Geographic focus:	Global
Technical focus:	Breastfeeding
Information type:	Peer-reviewed journal
Date published:	14 September 2020
Date added:	30 September 2020

This review summarises how to manage breastfeeding during COVID-19 and uses this evidence to create guidelines for healthcare professionals and mothers, available as a chart for quick clinical reference. Based on current evidence indicating no risk of SARS-CoV-2 transmission via breastmilk, the authors conclude that breastfeeding should be encouraged with skin-to-skin contact, and mothers and infants should be cared for together. It mentions that if mothers are actually too ill to breastfeed, they should be supported to express their milk, and the infant should be fed by a healthy individual.

Transmission of SARS-CoV-2 through Breast Milk and Breastfeeding: A Living Systematic Review

Author or institution:	Centeno-Tablante et al. / Annals of the New York Academy of Sciences
Geographic focus:	Global
Technical focus:	Breastfeeding
Information type:	Peer-reviewed journal

Date published:	28 August 2020
Date added:	08 September 2020 (living document, regularly updated)

This living systematic review of the transmission of the infection from mother to child (particularly through breastmilk and breastfeeding) aims to capture information that might necessitate changes to the guidance on breastmilk and breastfeeding, given the uncertainty in this area. The current review includes 340 records with 37 breastmilk samples and 303 without. Highlights include:

- There is currently no evidence of SARS-CoV-2 transmission through breast milk.
- Studies are needed with longer follow-up periods that collect data on infant feeding practices and presence in breastmilk.

Breastfeeding in India is Disrupted as Mothers and Babies are Separated in the Pandemic

Author or institution:	Bhatt
Publication:	The BMJ
Geographic focus:	India
Technical focus:	Breastfeeding
Information type:	Peer-reviewed journal
Date published:	25 August 2020
Date added:	08 September 2020

This feature outlines how India's efforts to promote breastfeeding are threatened by COVID-19, as misguided fears of infection see new-borns separated from mothers and formula milk promoted. It notes that doctors are allowed to make the decision to separate on a case-by-case basis depending on the clinical condition of the mother and new-born and outlines likely negative impact on breastfeeding, although no firm estimates of the impact are provided. It notes a number of anecdotes of breastfeeding having become stigmatised during the pandemic.

Breastfeeding and COVID-19 Scientific Brief

Author or institution:	WHO
Geographic focus:	Global
Technical focus:	Breastfeeding
Information type:	Informal
Date published:	23 June 2020
Date added:	25 August 2020

This WHO-published a scientific brief on the evidence of the risks of transmission of COVID-19 from an infected mother to her baby through breastfeeding and evidence on the risks to child health from not breastfeeding. It provides recommendations on breastfeeding and COVID-19. Highlights include:

- At present, data are not sufficient to conclude vertical transmission of COVID-19 through breastfeeding.
- Based on available evidence, WHO recommendations on the initiation and continued breastfeeding of infants and young children also apply to mothers with suspected or confirmed COVID-19.

Adoption of Breastfeeding Recommendations in the Context of COVID-19: Key Findings from an Online Survey in Low- and Middle-Income Countries

Author or institution:	UNICEF
Geographic focus:	Global
Technical focus:	Breastfeeding, Policy
Information type:	Informal
Date published:	August 2020
Date added:	25 August 2020

UNICEF conducted an online survey in seven regions in June 2020 to collect information from country offices on the adoption of breastfeeding recommendations in the context of COVID-19 (88 country offices completed the survey). Highlights include:

- Many countries adopted global guidelines on breastfeeding in the context of COVID-19 with little or no changes to existing guidance. Of the few exceptions were Bhutan, Malaysia and El Salvador, which did not recommend breastfeeding.
 - 82% (72 countries) adopted recommendation for skin-to-skin contact,
 - 91% (80 countries) promoted optimal breastfeeding practices,
 - 90% (79 countries) provided breastfeeding counselling and practical support,
 - 84% (74 countries) adopted room-in.
- 41% of responses mentioned infant formula as one of the only alternative feeding options when the mother is too unwell to breastfeed.
- Continuation of routine breastfeeding services is negatively impacted by the health system managing COVID-19 cases. Few settings explored the use of mobile phones for counselling.
- Misconceptions about breastfeeding in the context of COVID-19 are widely reported by most countries. This includes fear of transmission despite infection control measures.
- There are reports of increased promotion of breast milk substitute and donations by infant formula companies are found in new countries.

2.3 Diet Diversity and Practices of women and children

2.3.1 Summary overview

This section includes source descriptions related to data and evidence on the indirect impact of COVID-19 on the diet diversity and dietary practices of women and children.

While the focus remains on women and children, evidence and data relating to diet diversity and practices of households, as well as information on food security have been considered, as this is likely to impact the quality of the diets of women and children.

The source descriptions are organised in chronological order. An overview of all the sources which have been summarised under this section can be found in box 3.

Box 3. List of sources on the impact of COVID-19 on diet diversity and practices



Impact of COVID-19 on diet diversity and practices

Most recent data and evidence (Added in February 2021)

- [As assessment in Uganda and Kenya](#) presents results from a rapid phone survey carried out in April 2020 which show that food security and dietary quality had worsened as a result of COVID-19. The proportion of food insecure respondents increased by 38% and 44% in Kenya and Uganda respectively as a result of COVID-19, while regular consumption of fruits decreased by about 30% during the COVID-19 pandemic, when compared with the pre-pandemic situation in both countries.

Earlier data and evidence collected (August 2020 - January 2021)

- An IFPRI modelling exercise projects that 150 million more people could have fallen into extreme poverty in 2020 due to COVID-19 (an increase of 20% from pre-pandemic levels). This will likely drive food insecurity and result in some substantial changes in patterns of food consumption, with adverse nutritional consequences. It is projected that consumers may shift their food purchases, buying fewer nutrient-dense (but more expensive) products and more calorie-rich and cheaper cereals and processed foods.
- In Public Health Nutrition, Kundu et al. aimed to determine the associated factors of household food security (HFS) and household dietary diversity (HDD) during the COVID-19 pandemic in urban and rural Bangladesh and found that households whose monthly income decreased as a result of the COVID-19 pandemic had lower HDD scores and HFS scores. Households reporting that they faced increased food prices due to COVID-19 had significant negative associations with HDD and HFS.
- Assessing the socioeconomic impacts of and responses to the pandemic among households and individuals in Sub-Saharan Africa (Ethiopia, Malawi, Nigeria and Uganda), World Bank research (November 2020) found that 61% of the adult population suffer moderate or severe food insecurity.
- IFPRI research found that COVID-19 is having a distinct negative impact on the dietary diversity of mothers in Myanmar (November 2020).
- A study of eating habits and lifestyle behaviours among residents of the MENA region during the lockdown found that 6.2% consumed five or more meals per day compared to 2.2% before the pandemic, with 30% of the respondents reporting weight gain (November 2020).
- Pakravan-Charvadeh examined the association of socio-economic factors with food security and dietary diversity before and during the COVID-19 pandemic in Iran (October 2020) and found that food security improved during the initial COVID-19 pandemic period while consumption of certain food groups decreased among poorer households.
- A rapid snapshot of adolescents' experience of COVID-19 in Jordan found that 30% of adolescents reporting being hungry at least once in the past four weeks and 46% reported that their meals were less likely to contain protein compared to before the pandemic (September 2020).
- An IFPRI time-series phone survey in Addis Ababa, Ethiopia (N=600) found improvement in overall consumption but reduction in vegetable consumption continued into September 2020.
- An online cross-sectional survey (N=995) conducted in August 2020 across several localities in India assessed the impact of COVID-19 on behaviours using consumption scores. There was marginal improvement in healthy eating in terms of increased frequency of fruit and vegetable intake and consumption of pulses, egg or meat. The intake of unhealthy food items declined during COVID-19.
- Food crises and COVID-19 (September 2020) triangulated information from 15 country profiles between May and July 2020.
- Save the Children interviewed children and adults across 37 countries. Almost two-thirds (62%) of respondents said that they are finding it difficult to obtain meat, dairy products, grains, fruits and vegetables. The primary reason noted was cost. Per self-report, 89% of respondents find that COVID-19 has impacted their access to healthcare, medicine and medical supplies.
- The New York Times piece "The Other Way COVID Will Kill: Hunger", explores how and where the pandemic is likely driving increased malnutrition and food insecurity, e.g. "COVID has been yet another shock in what has been a terrible year in this region."
- The FAO food price index shows prices were up 2% in June year-on-year from 2019. Prices of coarse grains in August were generally in line with year-on-year averages.
- The International Food Policy Research Institute (IFPRI) August 2020 book COVID-19 & Global Food Security includes country-specific modelling and survey-based research findings and offers particularly pertinent chapters for nutrition: diets and nutrition, food security, gender, policy responses, and the future of pandemics and food systems. It emphasises that COVID-19 is likely to cause a dangerous decline in diet quality in LMIC countries.

2.3.2 Most recent sources

Title: COVID-19 implications on household income and food security in Kenya and Uganda: Findings from a rapid assessment

Author or institution Monica K. Kansime et al.

Geographic focus	Uganda and Kenya
Population focus	Households
Technical focus	Diets, food security
Information type	Article (peer reviewed)
Date published	January 2021
Date added	February 2021

Purpose/objective of source

To assess implications of the COVID-19 pandemic on household income and food security in Kenya and Uganda

Most important nutrition findings

- Over two-thirds of the respondents experienced income shocks due to the COVID-19 crisis in March and April 2020. Food security and dietary quality worsened, as measured by the food insecurity experience scale and the frequency of consumption of nutritionally-rich foods.
- The proportion of food insecure respondents increased during the same period by 38% and 44% in Kenya and Uganda respectively as a result of COVID-19.
- The regular consumption of fruits decreased by about 30% during the COVID-19 pandemic, compared to the pre-pandemic situation in both countries.
- Farmers were less likely to experience worsened food security compared to other respondent categories who depended to a greater extent on market sources for food.
- Participation in national social security schemes was less likely to mitigate income shock during the COVID-19 period in both countries, while participation in savings groups was correlated with less likelihood of suffering income shocks and reduction in food consumption. Social networks were found to play a supportive role to family and friends, although this increased expenses and food consumption.
- Formal social protection mechanisms are highlighted as a means to smooth incomes and restore livelihoods in such situations.

GESI

- Income-poor households and those dependent on labour income were more vulnerable to income shocks, and had poorer food consumption during the COVID-19 pandemic compared to other respondent categories.

Quality of the data/ evidence (method)

- This study is using online survey data from 442 respondents, and is based on information collected in April 2020.
- Data were collected using an online questionnaire launched via google forms. The questionnaire was sent to random respondents in Kenya and Uganda using social media (WhatsApp, Facebook, Telegram, and Twitter), and via email. The online questionnaire was open for 10 days from 18th to 27th April 2020 and focused on experiences since lockdown, which was approximately five weeks for both countries at the time the study was launched.
- The authors caution that “Given that we used a rapid online survey approach to obtain the data, it should be stressed that the sample is not representative of the two countries, and there is a possible bias towards the highly educated persons with access to the internet and smartphones. Nonetheless, it provides useful information for understanding the food security implications of the ongoing COVID-19 pandemic that is wreaking havoc worldwide.”

2.3.3 Sources identified in previous months by TASC

Title: Impacts of COVID-19 on Global Poverty, Food Security and Diets

Author or institution	IFPRI, Laborde et al.
Geographic focus	Global
Population focus	All

Technical focus	Diet diversity and practices AND availability and price of nutritious food stuff
Information type	Discussion paper
Date published	December 2020
Date added	January 2021

Purpose/objective of source

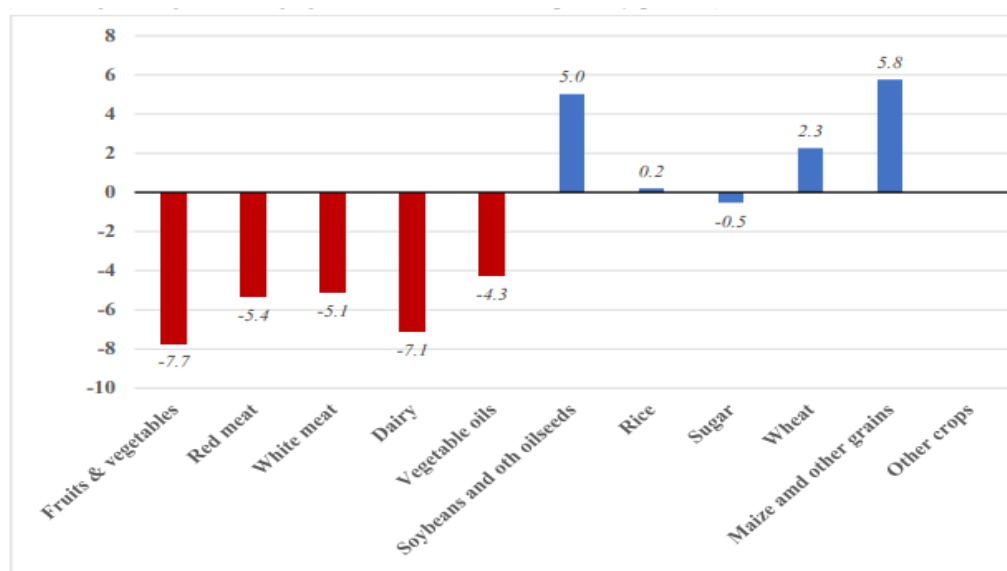
This study assesses the impact of COVID-19 on poverty, food insecurity and diets, accounting for the complex links between the crisis and the incomes and living costs of vulnerable households

Main nutrition-related findings

The simulations on poverty outcomes suggest the global recession caused by COVID-19 will be much deeper than that of the 2008-2009 financial crisis. Almost 150 million people might fall into extreme poverty and food insecurity, is an increase of 20% from pre-pandemic levels, which might also drive up food insecurity. Increases in poverty are projected to be concentrated in South Asia and Sub-Saharan Africa, with more severe impacts in urban areas than in rural.

The scenario modelled by this report shows that at a global level, average household consumption of nutrient-dense, more expensive products may decrease, and the consumption of more calorie-rich and cheaper cereals and processed foods will increase.

Figure 2: COVID-19 impacts on diets, average effect for world (Percentage change in average global household consumption by product)



Quality of the data/ evidence (method)

- This report uses a global modelling framework, combining two economic modelling frameworks: IFPRI's global computable general equilibrium (CGE) model, MIRAGRODEP, and the POVANA household dataset and model. This allows for a focus on lower income countries and on people on lower wages within these countries.
- As part of the modelling a number of assumptions are made, such as that unskilled workers are harder hit than skilled workers by social distancing measures, and that governments in high-income countries have put in place economic stimulus measures, though these are all well disclosed.

Title: Determinants of household food security and dietary diversity during the COVID-19 pandemic in Bangladesh

Author or institution Kundu et al., Public Health Nutrition

Geographic focus	Bangladesh
Population focus	Households
Technical focus	Diet diversity and practices AND availability and price of nutritious food stuffs
Information type	Peer reviewed article
Date published	December 2020
Date added	January 2020

Purpose/objective of source

The study aimed to determine the associated factors of household food security (HFS) and household dietary diversity (HDD) during the COVID-19 pandemic in Bangladesh.

Main nutrition-related findings

HDD and HFS

- 41.5% of households reported high dietary diversity, 44.9% of households had medium dietary diversity and 13.6% of households had low dietary diversity.
- The households whose monthly income decreased as a result of the COVID-19 pandemic had lower HDD scores and HFS scores.
- Households who reported that they faced increased food prices due to COVID-19 had significant negative associations with HDD and HFS.

GESI/Social and demographic determinants of HDD and HFS

- Households from rural areas had lower HDD scores and HFS scores compared to households from urban areas.
- Respondents from lower socio-economic status groups (e.g. day labourers, farmers) and households that do not have a refrigerator had lower food security scores compared to their counterparts.
- Overall, the findings suggest that households with lower socio-economic status have fewer capabilities and resources to produce their food, which can lead to an increase in food insecurity and decrease in dietary diversity. This points to the importance of tracking diet-related policies and practices (e.g. access to a variety of foods) during times where households are under additional strain.

Methodology

The results represented here were based on a data collected through an online survey and face-to-face interviews. For this cross-sectional study, 1876 households have been recruited. The Household Food Security Scale and Household Dietary Diversity Score were used to assess HFS and HDD, respectively. The HDD scores were derived from a 24-h recall of food intake from 12 groups.

Title: Socioeconomic Impacts of COVID-19 in Four African Countries

Author or institution	Josephson et al. (World Bank)
Geographic focus	Ethiopia, Malawi, Nigeria, and Uganda
Population focus	Adults
Technical focus	Dietary Diversity and Practices (including Food Security)
Information type	Policy Research Working Paper
Date published	November 2020

Date added

December 2020

Purpose/objective of source

To assess the socioeconomic impacts of and responses to the pandemic among households and individuals in Sub-Saharan Africa.

Main nutrition-related findings**Estimates of food insecurity**

- Estimates of food insecurity were based on the Food Insecurity Experience Scale (FIES) used the standard survey model which asks about whether respondent or adult household members (i) were worried they would not have enough to eat, (ii) were unable to eat healthy and nutritious food, (iii) ate only a few kinds of foods, (iv) had to skip a meal, (v) ate less than they thought they should, (vi) ran out of food, (vii) were hungry but did not eat, and (viii) went without eating for a whole day. The FIES is one of two indicators used for measuring progress toward achieving Sustainable Development Goals 2.1 (which relates to ending hunger and ensuring food access).
- 61% of the adult population, representing more than 100 million adults across all four countries, are estimated to suffer moderate or severe food insecurity. Severe food insecurity alone affects an estimated 38 million adults, or 23% of the adult population. Poorer households (in lower quintiles) suffer significantly greater prevalence of food insecurity. Since the pandemic began, female-headed households have significantly higher prevalence of moderate and/or severe food insecurity than male-headed households, though food insecurity is decreasing over time at an equal rate for adults in both types of households.

Estimates of moderate or severe food insecurity by country during the pandemic

- Nigeria: 76% of adults (63 million)
- Malawi: 68% of adults (6.2 million)
- Ethiopia: 47% of adults (24 million)
- Uganda: 33% of adults (6.9 million)

Estimates of income Loss (affecting household economy, particularly food security)

- 77% of the population across the four countries are estimated to live in households that have lost income due to the pandemic. Female-headed households are significantly more likely to lose income from remittances while male-headed households are significantly more likely to lose income from other sources, including from investments, savings, pensions, and government assistance. Attempts to cope with this lost income are exacerbated by an inability to access medicine and staple foods for an estimated 20% to 25% of households who need these items

Quality of data

- These findings are based on the longitudinal data from the high-frequency phone surveys conducted in Ethiopia, Malawi, Nigeria, and Uganda with support from the World Bank. Starting monthly in May 2020, the phone surveys aim to interview a national sample of households that had been interviewed face-to-face prior to the COVID-19 pandemic as part of the national longitudinal household surveys that have been supported under the World Bank Living Standards Measurement Study – Integrated Surveys on Agriculture (LSMS-ISA) initiative.
- The authors directly measured the effects of the pandemic on 8,603 households across the four countries, as well as how households attempt to cope with these effects. They subsequently used a reduced-form econometric techniques (10 which are common to the field), in order to estimate heterogeneity in effects across 1) countries, 2) rural and urban sectors, 3) pre-COVID-19 wealth, 4) gender, and 5) time.

Title: [Poverty, food insecurity, and social protection during COVID-19 in Myanmar: Combined evidence from a household telephone survey and micro-simulations](#)

Author or institution	Headey et al. (IFPRI)
Geographic focus	Myanmar
Population focus	Young children and pregnant mothers

Technical focus	Dietary Diversity and Practices, Social Protection
Information type	Research Study/Policy Note
Date published	November 2020
Date added	December 2020

Purpose

To assess the welfare impacts of COVID-19 on households in Myanmar by combining recent high-frequency telephone survey evidence on incomes, coping strategies, and food security with national-level survey-based simulations that were designed to assess ex-ante impacts on poverty with differing amounts of targeted cash transfers to poor households.

Main nutrition-related findings

- *Income-based poverty* rose at an alarming rate between August and October 2020. Income losses were generally higher in urban households compared to the rural Dry Zone household due to the stricter prevention measures in cities; the greater dependence of urban households on non-farm livelihoods which were more affected by prevention measures; and the significant number of mothers in this sample who had recently given birth. The poor continue to cope with declining incomes mainly by resorting to loans or other credit sources, while better off households draw down on their savings.
- *Food insecurity and inadequate maternal dietary diversity* are rising sharply in the urban households raising serious concerns for the nutritional status of mothers and young children. In the wake of the first wave, 28% of mothers in June reported not eating enough healthy food, and 30% had inadequately diverse diets. Food insecurity indicators improved somewhat in July and August, but deteriorated sharply again in September and October, while the share of urban mothers with inadequate diverse diets rose from 30% in June to around 50% from August to October. As dietary diversity metrics are strong predictors of micronutrient adequacy, the data trends suggest rising risks of micronutrient deficiencies in urban areas, both for women and potentially for their children.
- Over half of the survey households received government cash assistance of 20,000 Myanmar Kyat (about \$18 USD) through *one-off maternal and child cash transfers (MCCT)* in September. However, accurate targeting of these transfers remains a problem. There is low uptake of the MCCT for pregnant mothers introduced in September 2020. In October, only 16 percent of pregnant mothers' sample had received these payments. Simulation results suggest that, even with perfect targeting, 20,000 Myanmar Kyat transfers have only moderate impacts on severe poverty during lockdowns. Larger transfers during lockdowns may be advisable. This may also improve compliance with stay-at-home orders.

Figure 3. Trends in food insecurity and poor maternal dietary diversity from June to October 2020 in urban and peri-urban Yangon



Source: C19-RUFSS.

Knowledge gaps

Targeting of one-off maternal and child cash payments

Urban and non-poor non-mothers are substantially more likely to receive the MCCT payments transfers than are rural and poor mothers. Further research is needed to assess why this is the case. It is possible that awareness of eligibility for these transfers is a major constraint, as well as problems in providing proof of pregnancy (the main eligibility criteria) or in accessing the mobile app to receive the one-off payment.

Quality of the data

The study combines data from the phone based COVID-19 Rural and Urban Food Security Survey (C19-RUFSS) - which consists of four rounds of monthly data collected from a sample of over 2,000 households, all with young children or pregnant mothers, divided evenly between urban and peri urban Yangon and the rural Dry Zone – with simulation based evidence, derived by applying parameter shocks to household models developed from nationally representative household survey data, namely the 2015 Myanmar Poverty and Living Conditions Survey (MPLCS).

Title: Assessment of Eating Habits and Lifestyle during Coronavirus Pandemic in the MENA region: A Cross-Sectional Study

Author or institution	Ismail et al., The British Journal of Nutrition
Geographic focus	MENA Region (18 countries in the study)
Population focus	Age 18 years and older
Technical focus	Dietary Diversity and Practices
Information type	Journal Article (Peer reviewed)
Date published	November 2020
Date added	December 2020

Purpose/objective of source

To assess eating habits and lifestyle behaviours among residents of the Middle East and North Africa (MENA) region during the lockdown in April 2020.

Main nutrition-related findings

The research, conducted through an online questionnaire, examined sources of health and nutrition information, eating habits, sanitizing groceries brought into the home, physical activity and weight gain, stress levels and sleep patterns. Sources of health and nutrition information, eating habits and weight gain are described below.

Sources of health and nutrition information

- Social media applications were the most common sources for health and nutrition information (70.3% and 70.8% respectively), followed by local and international health authorities for health-related information (53.9%) and healthcare professionals for nutrition information (41.3%)

Eating Habits During Lockdown

- The percentage of participants consuming five or more meals per day increased from 2.2% before the pandemic to 6.2% during the pandemic. The percentage of participants skipping meals decreased from 64.4% before the pandemic to 45.1% during the pandemic.
- 48.8% of surveyed participants did not consume fruits on a daily basis, and 32.5% did not consume vegetables daily.
- 44.1% of participants reported consuming sweets or desserts at least once every day and 32.9% consumed salty snacks (chips, crackers, and nuts) daily.

Additionally, 30% of respondents reported gaining weight during the lockdowns.

Methodology applied

- Data were collected through a cross-sectional, online survey, conducted in the Greater Middle East region between 15 April 2020 and 29 April 2020.
 - The sample of 2,970 people was drawn from eighteen countries within the MENA region, including Algeria, Bahrain, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Palestine, Qatar, Saudi Arabia, Sudan, Syria, Tunisia, United Arab Emirates and Yemen.
-

Title: The short-term effects of COVID-19 outbreak on dietary diversity and food security status of Iranian households (A case study in Tehran province)

Author or institution	Pakravan-Charvadeh et al. (Journal of Cleaner Production)
Geographic focus	Iran
Population focus	Households (all ages)
Technical focus	Dietary Diversity and Practices
Information type	Journal Article (cross-sectional study)
Date published	October 2020
Date added	December 2020

Purpose/objective of source

To examine the association of socio-economic factors with food security and dietary diversity before and during the COVID-19 pandemic in Tehran province, Iran.

Main nutrition-related findings

Food security

- Food security of Iranian households improved during the initial COVID-19 pandemic period, which may be related to households' efforts to purchase and store needed foods. Key socio-economic factors associated with food insecurity during the COVID-19 pandemic included personal savings, household income, employment status of head of household, and nutrition knowledge of head of household.

Dietary Diversity

- Households reduced consumption of some food groups (white roots and tubers, dark green leafy vegetables, other fruits, organ meat, legumes, nuts and seeds, sweets, spices, condiments, and beverages) during the COVID-19 pandemic compared to the pre-COVID-19 period. Household size, head of household's occupation, personal savings, and number of male children were significantly associated with dietary diversity.
 - Distributing free food baskets to poor households, extending e-marketing, providing nutrition consultations, and organising donations to support infected households may increase household dietary diversity and improve food security status during a pandemic such as COVID-19
-

Quality of data/method

- A cross-sectional analysis using both retrospective and current situations was used for this study including an online questionnaire completed by 299 respondents from 292 families. The questionnaire covered two different periods: 1) before the COVID-19 outbreak (household conditions in February 2020) and 2) during the onset of the COVID-19 pandemic (March 2020). Data from the questionnaire was used to calculate the food insecurity and dietary diversity scores of the households as well as the association of socio-economic factors, household characteristics, and nutrition knowledge with the changes of households' dietary diversity and food insecurity.
-

Title: Adolescents' experiences of covid-19 and the public health response in Jordan

Author or institution	Gender and Adolescence Global Evidence (GAGE)
Geographic focus	Jordan
Population focus	Adolescents including vulnerable Jordanians, Syrians and Palestinians and located in camps (Azraq, Zaatari and Gaza), as well as host communities and informal tented settlements (ITS) in Amman, Mafraq, Irbid, Jerash and Zarqa.
Technical focus	Dietary diversity and dietary practices, the availability and price of nutritious foodstuffs,
Information type	Factsheet
Date published	September 2020
Date added	December 2020

Purpose/objective of source

This factsheet aims to show a rapid snapshot of adolescents' knowledge and attitudes towards covid-19 in Jordan and to present key findings on the impact of covid-19 across GAGE's capability domains: education and learning; health, nutrition and sexual and reproductive health; psychosocial well-being; economic empowerment; voice and agency; and bodily integrity.

Main nutrition-related findings

Interviews with adolescent boys and girls between May and July revealed the following:

- Rates of food insecurity are high, with 30% of adolescents reporting being hungry at least once in the past four weeks and 15% indicating that this has increased since the start of the pandemic.
- Moreover, 46% of adolescents reported that their meals were less likely to contain protein compared to before the pandemic. Of particular concern are high rates of decreased protein among older married females (55%) when compared to their unmarried female peers (43%). Rates of decreased protein are higher for non-Jordanians (48%) than Jordanians (32%), and highest among those in ITS (51%) compared to those in host communities (48%) and camps (41%). The results on decreased protein by adolescents are corroborated by the primary female caregivers (PFCs) who report cutting back on the amount of food or number of meals served to adolescent boys (50%) and adolescent girls (46%).
- Moreover, PFCs of non-Jordanian adolescents reported higher rates of cutting back meals to boys (51%) and girls (47%) than those in Jordanian households (41% and 39%, respectively).
- There are also disruptions to health services, with 62% of households that needed healthcare and 38% of households surveyed that needed medication reporting that covid-19 disrupted their ability to access these.

Quality of the data/method

- This factsheet presents findings from GAGE's ongoing longitudinal survey in Jordan, which follows 4,100 adolescent boys and girls in two cohorts (ages 10–12 and 15–17 at baseline in 2018/2019). The data presented in this fact sheet was gathered during the covid-19 pandemic and subsequent school closures between 18 May and 21 July 2020 through phone or through virtual sessions

2.3.4 Information collected under MQSUN+

Protect a Generation

Author or institution:	Save the Children
Geographic focus:	Global & Regional
Technical focus:	Diet, Food price and availability, Nutrition intervention delivery
Information type:	Informal

Date published: 10 September 2020

Date added: 23 September 2020

Save the Children interviewed 8,069 children between 11 and 17 years old and 17,565 adults across 37 countries, all beneficiaries of their programmes, with a majority in Asia and sub-Saharan Africa. Key nutrition relevant findings include:

- Almost two thirds (62%) of respondents said that they are finding it difficult to provide their families with meat, dairy products, grains, fruits and vegetables. The primary reason noted was cost.
- The vast majority (89%) of respondents reported that COVID-19 has impacted their access to healthcare, medicine and medical supplies.

2.4 Availability and Price of Nutritious Foodstuffs

2.4.1 Summary overview

This section tracks and summarises the most recent data and evidence on the availability and price of nutritious food. Where relevant, it also includes source descriptions which expand on the impact of price and availability of other foods and on food security, as this might in turn have an effect on the quality of the diets of the households, mothers and children.

The source descriptions are organised in chronological order. An overview of all the sources which have been summarised under this section can be found in box 4.

Box 4. List of sources on the impact of COVID-19 on the availability and price of nutritious food



Impact of COVID-19 on the availability and price of nutritious food

Most recent data and evidence (Added in February 2021)

- [Nordhagen et al.](#) reported how the pandemic and associated control measures affected and are affecting the operations of food micro, small, and medium-sized enterprises and found that negative impacts were greatest for those working in value chains for legumes, dairy, and vegetables.
- Country-level analysis by FEWS NET shows that reduced household disposable income and food market uncertainties has increased household food insecurity in [Uganda](#) and [Rwanda](#), and in [Kenya](#), rising food prices and new COVID-19 restrictions are prolonging acute food insecurity for many households, especially for poor urban households.
- Updates to a surveying exercise by [60 decibels](#) reveals that 20% of households reported a decrease in food consumption as result of COVID-19 between October and November 2020. In comparison, 10% of households have seen an increase. This represents a considerable improvement since May 2020, where 36% of households had seen a decrease since the previous month.
- An [IPC](#) infographic detailing current and projected malnutrition and food security figures at a sub-national level within Somalia, suggest that Up to 2.7 million people across Somalia are expected to face high levels of acute food insecurity (IPC Phase 3 or above) through mid-2021 in the absence of humanitarian assistance. In addition, approximately 840,000 children under the age of five are likely to become acutely malnourished, including nearly 143,000 who are likely to be severely malnourished (with relation to January-June 2021 snapshot).
- Early results from the [World Bank's](#) series of rapid response phone surveys are summarised in a recent blog, and indicate declining employment levels, income losses, worsening food security, and loss of human capital across Sub-Saharan Africa.
- The most recent data collected for [Kenya's High Frequency Monitoring Dashboard](#) (measuring socio-economic impact of COVID-19 in the country) revealed that in January 2021, adults and children in urban and rural households skipped meals during a period of at least two days in the week prior to January 18, 2021.

Earlier data and evidence collected (August 2020 - January 2021)

- GAIN'S latest situation report on the [Impact of COVID-19 on Food Systems](#) stresses the continuing impacts of COVID-19 on food systems in selected countries, and shares that of the countries

surveyed, Nigeria, Ethiopia, and Mozambique are currently at most risk of food and nutrition insecurity as a result.

- FAO's latest [Food Price Monitoring and Analysis \(FPMA\) Bulletin](#) reports further increases in the international prices of wheat and other major coarse grains, reaching record highs in markets in Sudan and South Sudan.
- In *BMJ Open*, [Das et al.](#) assessed the extent and determinants of food insecurity and short-term coping strategies adopted by households in Bangladesh following the lockdown. The prevalence of severe food insecurity was significantly higher in urban households (42%) compared to rural households (15%). Coping mechanisms included consuming fewer food items or changing food habits.
- [The World Food Programme](#) assessed the impact of COVID-19 and the restrictions measures that were put in to place to contain the pandemic in the 15 countries in Economic Community of West African States (ECOWAS) region. Over 90% of all households reported a rise in food prices, while urban and rural household food stocks were lower in 2020 compared to 2019.
- In *Agricultural Systems*, [Boughton et al.](#) report the initial impacts of measures taken to contain the COVID-19 pandemic on Myanmar's agri-food system. They suggest that additional social protection will likely be required to avoid severe food insecurity and malnutrition among vulnerable households.
- In *Frontiers in Nutrition*, [Knorr and Khoo](#) discuss several food and nutrition-related challenges encountered during the COVID-19 pandemic, including consumer and food behaviour, malnutrition and nutrient intakes as well as potential post-COVID-19 strategies with the objective to stimulate robust scientific discussions on existing research gaps and to develop long-term "exit strategies" to prepare for future pandemics.
- A model estimates the [effects of COVID-19 on Papua New Guinea's food system](#). The data explores potential scenarios with some negative implications on household consumption.
- The December edition of [WFP's COVID-19 Emergency Situation Report](#) indicates that an increasing (estimated) number of people worldwide are becoming acutely food insecure as a result of the compounding effects of COVID-19.
- [WFP Global Update on COVID-19: November 2020](#) reports that between June and November acute food insecurity increased mostly in Latin America and the Caribbean, Asia and the Pacific, and "Middle East, Central Asia and North Africa".
- [A blog on crowdsourced data in Nigeria](#) reveals that the COVID-19 pandemic and related lockdown measures have disrupted food systems leading to fluctuations in the prices of some food commodities affecting the affordability of nutritious foodstuffs.
- A WFP [report on hunger, migration and displacement](#) provides insights on how COVID-19 and related measures are impacting migration patterns directly and indirectly, with consequential impacts on livelihoods potentially leading to additional hunger and increased food insecurity.
- The [FAO-WFP early warning analysis](#) of acute food insecurity hotspots observes food price increases since the start of the pandemic. These are exacerbating food crises in a number of countries.
- [A study on food insecurity in tribal high migration communities in Rajasthan](#) provides interesting insights in the food availability and prices during the COVID pandemic
- Proceedings of an [FAO conference](#) on COVID-19 and its Impact in Africa in Rome highlights that affordable healthy diets will be out of reach for a larger number of people in 2020 due to COVID-19
- [A journal article](#) estimated the effects of COVID-19 pandemic on food commodity prices and nutrition security in Nepal.
- A report of [UNICEF on the Middle East and North Africa regions](#) (Algeria, Egypt, Jordan, Morocco, Qatar, Syria, Tunisia) covers the impact of confinement and lockdown measures on the children's social life and mental wellbeing, access to distance education during school closures, and children's health and nutrition, the main focus of this summary.
- A survey on the effect of [Covid-19 on food security in Jordan](#) aimed to assess the impacts of COVID-19 on household food security in Jordan during the first 4 weeks of the lockdown, including the prevalence of food security and food insecurity, risk factors associated with food insecurity and main food groups associated with food insecurity during the lockdown.
- In Cox's Bazar, Bangladesh [access to food assistance has been insufficient for Rohingya refugees](#), particularly single mothers, households headed by persons with disabilities, pregnant and lactating women, the elderly and children.

- Save the Children's [press release](#) reported a household economic survey in several countries which states that findings show access to healthy and nutritious food is becoming increasingly difficult across the region.
- [Global Food Prices \(October 2020 prices published by FEWS NET on 13 October 2020\)](#) report international grain prices showed a strong increase globally in September.
- The [Food Crises and COVID-19](#) provides information on food prices. Prices of premium items like fruit and meat fall as demand falls, though prices also depend on local lockdowns. Extreme events (disease, conflict) also have a large effect on food prices, and it is difficult to distinguish these from the effects of the COVID-19 restriction.
- Several assessments of global food prices are provided through the Famine and Early Warnings Systems Network (FEWSNET) ([July 2020 prices published by FEWS NET on 31 August 2020](#)) and [Global Food Prices June](#)
- IFPRI's [COVID-19's Short-term Impacts on Economies, Food Systems and Poverty in African and Asian Countries: Economywide Estimates from Economywide Models](#) traces direct and indirect effects along and across supply chains and reveals substantial but varying levels of GDP losses during lockdown depending on policy design/implementation and exposure to global markets.

2.4.2 Most recent sources

Title: COVID-19 and small enterprises in the food supply chain: Early impacts and implications for longer-term food system resilience in low- and middle-income countries

Author or institution	et al., World Development
Geographic focus	LMICS in Sub-Saharan Africa and Asia
Population focus	General (Micro, small, and medium-sized food enterprises)
Technical focus	Availability and Price of Nutritious Food
Information type	Journal article (peer reviewed)
Date published	January 2021
Date added	February 2021

Purpose/objective of source

To describe the ways in which the pandemic and associated control measures have affected the operations of micro, small, and medium-sized food firms from 17 LMICs in Sub-Saharan Africa and Asia.

This study identifies the impact of the COVID-19 on food enterprises and highlights characteristics that make food firms more or less resilient to shocks, as well as implications for policymaking.

Main nutrition-related findings

- Based on data extracted from surveys completed in May 2020 (6 weeks after the pandemic began), the majority of food firms reported that their operations were impacted by the pandemic and associated restrictions. A decrease in consumer mobility for grocery shopping was significantly associated with an increased likelihood of severe negative impacts for firms. The youngest firms and those with the fewest employees (controlling for turnover) were less likely to be severely impacted.
- 81.5% of food firms reported decreased sales and 83.8% reported a decreased production volume. Other related impacts on firms included difficulty accessing inputs (48.8%), financing (40.2%), or equipment and services (30.1%); limited financial reserves (42.5%); difficulty paying staff (43.9%), inadequate staff (20.2%), or difficulty with staff getting to work (37.0%); closed retail or sales outlets (39.0%); and lost contracts (34.1%).
- Severe negative impact on operations were greatest for those working in processing, crop farming, retail, catering and food service sectors while negative effects were strongest in value chains for legumes, dairy, and vegetables. See table below showing differences the severity of COVID-19 impact, by sector and value chain:

Table 1: the severity of the impact of COVID-19, by sector and value chain

Differences in severity of COVID-19 impact, by sector and value chain.

	Firms reporting considerable or severe impact on firm operations		Firms reporting stable or increased production	
	Percentage	P	Percentage	P
All Firms	56.1%		25.3%	
By sector				
Processing	60.2%	0.061	52.7%	0.162
Crop farming	66.7%	0.023	18.3%	0.154
Livestock farming	54.0%	0.744	9.7%	0.199
Retail	65.9%	0.090	22.6%	0.501
Distribution	55.8%	0.920	46.2%	0.047
Business advisory services	45.7%	0.192	18.3%	0.001
Input provider	59.1%	0.773	5.4%	0.771
Aggregator	50.0%	0.480	10.8%	0.294
Wholesale, trading, export/import	66.7%	0.519	2.2%	0.828
Catering and food service	100.0%	0.005	2.2%	0.694
By value chain				
Grains	55.7%	0.907	38.7%	0.482
Roots & Tubers	64.1%	0.159	20.4%	0.379
Nuts & seeds	54.4%	0.794	18.3%	0.053
Legumes	67.4%	0.089	17.2%	0.206
Meat & poultry	60.0%	0.553	15.1%	0.642
Fish	47.8%	0.123	9.7%	0.009
Dairy	66.7%	0.081	19.4%	0.239
Eggs	64.7%	0.184	16.1%	0.471
Vegetables	63.3%	0.053	34.4%	0.684
Fruit	55.4%	0.876	28.0%	0.457
Condiments, sweeteners, spices & oils	59.3%	0.734	8.6%	0.594
Beverages	50.0%	0.663	5.4%	0.186
Animal feed	50.0%	0.861	0.0%	0.409
Baked goods & other ready-to-eat foods	63.2%	0.526	6.5%	0.521

Note: p-value refers to the Pearson Chi-squared test statistic; values in bold have p < 0.10

Source: Nordhagen et al., 2021

GESI observations

- Female-owned firms were more likely to report a 30% or greater decrease in production, with 67% of female-owned firms reporting this level of decrease.

Quality of the data / evidence (Method)

- The data presented in the article come from a survey of owners and/or managers of 367 agri-food micro, small, and medium-sized firms in 17 low and middle-income countries, including firms that directly produce, process, or sell nutritious foods as well as those providing supporting services (e.g., agricultural inputs, cold chain services).
- Data was collected over a three-week period, between April and May 2020 via an online survey questionnaire.

Title: FEWS NET Updates: Uganda, Kenya and Rwanda

Author or institution	FEWS NET
Geographic focus	Uganda, Kenya and Rwanda
Population focus	Households
Technical focus	Availability and price of nutritious foodstuffs
Information type	Report/Key message Update
Date published	January 2021
Date added	February 2021

Purpose/objective of source

To assess the impact COVID-19 has had on household income and food security.

Main nutrition-related findings

In Uganda, food security deteriorates in Karamoja as household food and income sources decline

- Limited access to food and income sources, exacerbated by the COVID-19 pandemic, will likely result in food consumption deficits for many households
- Some poor households have depleted their food stocks and are primarily purchasing their food, while staple food prices have evolved differently from expected (e.g. prices of sorghum are up by 10% above the 5-year average), likely linked to an earlier-than-anticipated increase in household

demand. Based on the decline in food stocks and the terms of trade, an increasing number of households are expected to experience food consumption gaps as the March to August lean season progresses

- Food security outcomes in refugee settlements are also expected to deteriorate to Crisis (IPC Phase 3) during the February-May period.
- WFP reports a USD 95.8 million funding gap to provide full rations to the refugee population through June 2021. WFP anticipates that the distribution of a 60 percent monthly cash or in-kind ration will likely be insufficient to prevent food consumption gaps, and warn of a risk of an increase in acute malnutrition due to sustained food consumption gaps since April 2020.

In Kenya, rural food security deteriorates as livestock productivity and household food stocks decline

- Poor urban households in Nairobi, Kisumu, and Mombasa are engaging in crisis-coping strategies such as reducing non-food expenses like healthcare and selling productive assets

In Rwanda, the most recent COVID-19 lockdown threatens poor urban household food security

- There were concerns that some households will struggle to access adequate food and income during the lockdown, but the government was confident that rations would reach the most vulnerable households.
- Since December 21, 2020, the re-introduction of stricter COVID-19 restrictions is limiting food and income-earning opportunities, particularly for poor urban households, though rural household food security is expected to remain stable.

Quality of the data/ evidence (Method)

- FEWS NET uses the Integrated Food Security Phase Classification (IPC) Version 3.0 scale to evaluate the severity of food emergencies, with an IPC of 1 indicating minimal food insecurity and 5 indicating famine.
- Price data is taken from the FEWS NET Price Watch, updated on a monthly basis, to show global, national and regional price levels of the preceding month.
- Data for early warning of food insecurity are taken from a variety of sources, including US science agencies, national ministries of trade and agriculture, international organisations, and NGOs. FEWS NET also employs networks of monitors to report localised data such as staple food prices and rainfall.

Title: 60 decibels: Listening in the time of COVID-19

Author or institution	60 decibels
Geographic focus	Global (Brazil, Cote d'Ivoire, Democratic Republic of the Congo, Ghana, India, Indonesia, Kenya, Madagascar, Myanmar, Nigeria, Paraguay, the Philippines, Rwanda, Senegal, Sierra Leone, South Africa, Tanzania, Uganda and Zambia)
Population focus	Households
Technical focus	Availability and price of nutritious food stuffs
Information type	Data
Date published	January 2021 (Updated February 2021)
Date added	February 2021 (updated from earlier versions included by TASC and MQSUN)

Purpose/objective of source

The objective of 60 decibels is to understand the impact of COVID-19 on the poorest people. They do this by surveying two different groups of people regarding the effect the pandemic has had on them.

- First, they aim to understand the impact of COVID-19 by speaking to the people most likely to be affected—low-income customers—to track how the crisis affects them over time, and to identify their most urgent needs both now and in the future. (The nutrition-related findings relate to food consumption (surveying 25,423 people in 19 countries as of 24 January 2021)).
- Second, they aim to inform about the long-term effects on agricultural supply chains and global food systems (surveying 3,596 Kenyan farmers as of 20 January 2021).

Main nutrition-related findings

- As a result of COVID-19 in November 2020, 20% of households reported a decrease in food consumption per person in the household between October and November 2020. In comparison, 10% of households have seen an increase during the same period
- The countries most affected by a decrease in food consumption of the countries surveyed are Madagascar and Rwanda at 60% and 58% respectively.
- In December 2020, 88% of Kenyan farmers reported being in a worse financial situation and 87% had used a financial coping mechanism. In addition, 69% of Kenyan farmers have had to pay higher prices for inputs and 66% received lower prices for their produce in the previous two weeks. This is despite 67% reporting higher food prices but the profits from these are not reaching farmers.

Knowledge gaps

There is no information as to whether diets are still of the same quality and instead the focus is solely on quantity.

GESI observations

- Food consumption data is available disaggregated by gender. In November 2020, 26.8% of women reported a decrease in food consumption as a result of COVID-19 compared to only 18.6% of men.
- Agricultural impact data are disaggregated by gender. Some differences include women being more likely to report a worsened financial situation and request cash support, as well as being more likely to reduce product sales and less likely to use more expensive digital tools.

Quality of the data/ evidence (Method)

- For food consumption, 60 decibels survey customers of energy companies and microfinance institutions who have agreed to participate. The companies share their customer contact database and participants are randomly selected..
- There are multiple concerns relating to the survey design / methodology including: (1) only surveying customers with access to a certain service, particularly when aiming to survey low-income households; (2) weighting all countries evenly, irrelevant of size and number surveyed; and (3) small sample sizes; (4) lack of clarity around the selection method.

Title: Somalia: Integrated Food Security Phase Classification Snapshot | January - June 2021

Author or institution	Integrated Food Security Phase Classification
Geographic focus	Somalia
Population focus	All
Technical focus	Availability and price of nutritious food stuffs; Nutritional status
Information type	Infographic
Date published	February 2021
Date added	February 2021

Purpose/objective of source

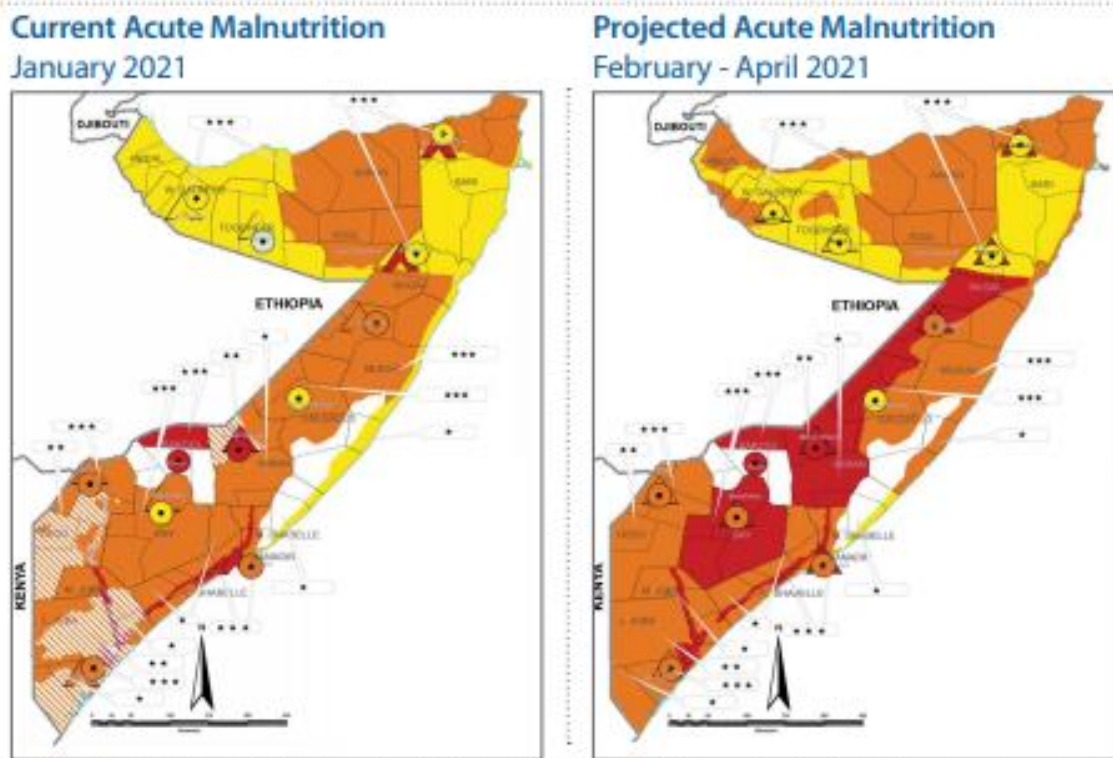
To provide detailed information on current and projected acute malnutrition and food insecurity within Somalia. It focuses on geographical differences but also discusses key drivers of food insecurity.

Main nutrition-related findings

The IPC reveals the following nutrition estimations:

- Up to 2.7 million people across Somalia are expected to face high levels of acute food insecurity through mid-2021 in the absence of humanitarian assistance.
- It is estimated that approximately 840,000 children under the age of five might be acutely malnourished, including nearly 143,000 who are likely to be severely malnourished (Note on the timeline: the source appears to refer to January-April 2021).
- The drivers of acute food insecurity in Somalia include the compounding effects of poor and erratic rainfall distribution, flooding, desert locust infestation, socio-economic impacts of COVID-19, and conflict.
- Without food assistance, the situation is expected to get considerably worse.

Figure 4. Current and projected acute malnutrition



Quality of the data/ evidence (Method)

- Country-specific methodologies, and therefore data sources, are unclear.
- The Integrated Food Security Phase Classification (IPC) [technical manual](#) lists many issues/limitations with the methodology such as: (1) general lack of data in certain countries; (2) lack of detail within certain sources (i.e. quantity of nutritious food); and (3) weak coverage at a sub-national level.
- Note: The infographic does not explore to which extent the food security and acute malnutrition estimations can be attributed to COVID-19.

Title: [How livelihoods deteriorated in Sub-Saharan Africa due to COVID-19](#)

Author or institution	Pierella Paci, World Bank
Geographic focus	Sub-Saharan Africa
Population focus	Households
Technical focus	Availability and price of nutritious food stuffs/intervention delivery and coverage
Information type	Blog
Date published	January 2021
Date added	February 2021

Purpose/objective of source

The blog describes some recent results from a World Bank-led effort to implement a series rapid response phone surveys, specifically from Burkina Faso, Ethiopia, Kenya, Malawi, Mali, Nigeria, Uganda, and Zambia.

Main nutrition-related findings

The World Bank has launched a series of rapid response phone surveys of households and firms in more than 100 countries, including 41 in Sub-Saharan Africa. Early findings include:

- Across Sub-Saharan Africa, the COVID-19 pandemic has taken a major toll on livelihoods, food security, and human capital.

- According to the surveys, the pandemic does not appear to have drastically affected access to health services in most countries. For example, at least three-quarters of households are still able to obtain medical treatment in Nigeria, Malawi, Zambia, and Madagascar, and more than 90 percent in Kenya, Mali, and Ghana. However, in the Democratic Republic of Congo, only 13 percent of households were able to access medical treatment.
- Income losses were reported to have led to reductions in consumption, though the share of households who reported being forced to reduce their consumption of goods varies widely – from approximately 1 in 10 households in Mali and Zambia, to 4 in 10 households in Kenya and more than 8 in 10 households in Kinshasa, Democratic Republic of Congo.
- Food insecurity has also increased. Compared to the previous year, food insecurity has reportedly tripled in Nigeria, Ethiopia, Uganda, and Malawi. In Malawi, Nigeria, Kenya, South Africa, and Sierra Leone, more than half of households reported running out of food in the 30 days prior to the survey, with urban households being disproportionately affected. School closures across all countries aggravated the problem by limiting children’s access to school feeding programs.

Quality of the data/ evidence (Method)

- Data and findings are from the [World Bank’s High Frequency Mobile Phone Surveys of Households to Assess the Impacts of COVID-19](#).
- Some limitations of phone based survey are acknowledged: (i) selection bias driven by a large, yet selected segment of the population owing a mobile phone, (ii) non-response bias (that often worsens throughout the life a phone survey), (iii) heterogeneity in mobile phone coverage, across geographies and population groups, and (iv) a limited scope for verifying accuracy of answers.
- Cross-country comparisons and aggregations should be interpreted with caution - because the surveys were collected by phone, they are only representative of phone owners who are willing to respond to the survey.

Title: [Monitoring COVID-19 Impact on Households in Kenya](#)

Author or institution	The World Bank
Geographic focus	Kenya
Population focus	All population
Technical focus	Intervention Delivery, food security
Information type	Dashboard
Date published	January 2021
Date added	February 2021

Purpose/objective of source

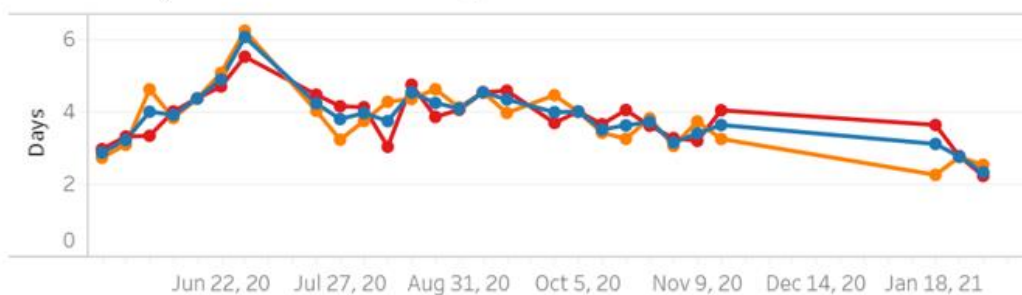
To offer an interactive dashboard which allows to measure the socio-economic impacts of COVID-19 in Kenya.

Nutrition related findings

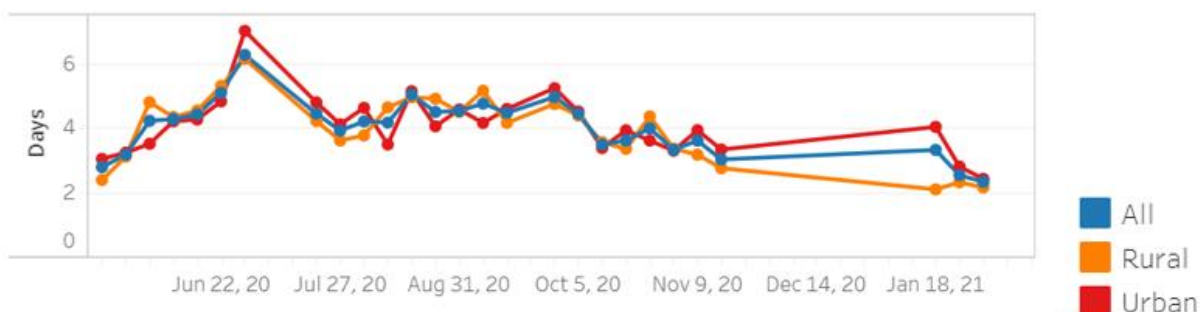
- The World Bank’s High Frequency Monitoring Dashboard contains harmonised, comparable information on over 90 indicators across 14 key topics such as food security, changes in employment, income loss, access to safety nets, access to health services, and household coping strategies for 44 countries in all developing regions.
- New data was collected in January 2021 on Kenya. This month, the findings most relevant to this tracker relate to food security.
- In January 2021, 30% of urban respondents reported experiencing a livelihood shock since March 2020, compared to 20% of rural respondents.
- The below figure indicates that in January 2021, adults and children in urban and rural households have skipped meals during a period of at least two days in the week prior to January 18, 2021.

Figure 5. Number of days adults and children skipped a meal last week (January 18, 2021)

Number of days last week where adults skipped meals



Number of days last week where children skipped meals



Source: [World Bank rapid surveys Kenya Dashboard](#)

Quality of the data/ evidence (Method)

- The high-frequency phone survey on the socio-economic impacts of COVID-19 in Kenya is implemented by the World Bank, in collaboration with the Kenyan National Bureau of Statistics (KNBS), the United Nations High Commissioner for Refugees (UNHCR) and the University of California, Berkeley.
- The data is collected by phone interviews with households from three different groups. The first group of households is drawn randomly from a subset of the Kenya Integrated Household Budget Survey in 2015/16. The second group is reached by Random Digit Dialling, whereby phone numbers potentially existing in Kenya are randomly generated. These first two groups cover urban and rural areas and are designed to be representative of the population of Kenya using cell phones. The third group consists of refugees registered with UNHCR and living in refugee camps as well as in urban areas.
- Data collection started in May 2020 and households are called every two months for five survey rounds, to track the impact of the pandemic over time. The subgroup of households interviewed each week is representative of the surveyed population, allowing analysis of weekly trends in a dashboard.

2.4.3 Information collected in previous months by TASC

Title: [Impact of COVID-19 on Food Systems: A Situation Report](#)

Author or institution	GAIN
Geographic focus	Global with focus on 10 GAIN countries (Bangladesh, Ethiopia, India, Indonesia, Kenya, Mozambique, Nigeria, Pakistan, Rwanda, and Tanzania)
Population focus	All
Technical focus	Availability and price of nutritious food stuffs
Information type	Report

Date published	November 2020
Date added	January 2021

Purpose/objective of source

This document is the fourth situation report generated to synthesise insights on the ongoing impacts of COVID-19 on food systems for use by practitioners and policymakers. The analysis focuses on a set of 10 countries where GAIN works. Particular focus is placed on the impacts on small- and medium-sized enterprises (SMEs) within the food system and how nutritious foods value chains are changing.

Main nutrition-related findings

The situation report consolidates variety of evidence and highlights the following findings:

- An estimated 34% of global food system livelihoods are at risk due to COVID-19, the greatest risk areas are in food processing, food services and distribution services, with 60%, 60% and 40% of livelihoods at risk, respectively ([FAO, IFPRI, and ILO, 2020](#)).
- Staple food marketing systems continue to operate at near-normal levels, though food prices in several countries are higher than pre-pandemic levels; given the potential for periodic trade disruptions and higher operating costs, occasional supply and price volatility are anticipated.
- The economic downturn caused by COVID-19 is expected to worsen an already concerning food security and nutrition context. According to the [WFP September-December 2020 outlook](#), of the 10 GAIN focus countries, Nigeria, Ethiopia, and Mozambique are currently at most risk of food and nutrition insecurity.
- While prices of staple foods have increased in a number of countries, food availability and prices are broadly following seasonal trends.
- There is continued disruption in many countries, particularly when it comes to negative effects on nutritious food consumption, especially proteins and fresh produce, due to reduced incomes, and disrupted food supply chains, including sourcing of inputs and bringing food to market.

Knowledge gaps / areas for further research

The only knowledge gap relates to the small number of countries this analysis has included.

GESI Observations

- The report relays some results from an October 2020 AGRA study on the constraints faced by SMEs owned by women in SSA, based on a voluntary online survey of 71 adult women. It notes that the three largest constraints as a result of the COVID-19 pandemic relate to access to markets (71.8% of respondents), access to finance (60.6%) and disruption of the supply chain (59.2%). In order to cope with these challenges, 64.9% of the respondents were using social media platforms to market their products and 50.7% of them reduced their operational costs to keep their businesses afloat, while 28.17% of the respondents had closed temporarily. There was no comparison to SMEs owned by men.
- The same survey found that over 50% of the women respondents had either experienced gender-based violence or knew a woman who had experienced it

Quality of the data / evidence (method)

This report mostly draws on secondary data with some GAIN/partner primary data. The secondary data sources include Euromonitor's ecommerce price and stock data; FEWS NET; the Food and Agriculture Organisation (FAO) Big Data tool on food chains under the COVID-19 pandemic; FAO Food Price Monitoring and Analysis; and over a dozen studies by FAO, the International Food Policy Research Institute (IFPRI), the World Bank and others.

Title: Impacts of COVID-19 on agricultural production and food systems in late transforming Southeast Asia: The case of Myanmar

Author or institution	Boughton, D., Goeb, J., Lambrecht, I., Headey, D., Takeshima, H., Mahrt, K., Masias, I., Goudet, S., Ragasa, C., Maredia, M. K., Minten, B., & Diao, X.
Geographic focus	Myanmar

Population focus	All
Technical focus	Availability and price of nutritious food stuffs
Information type	Journal Article (peer reviewed)
Date published	January 2021
Date added	January 2021

Purpose/objective of source

The objective of this article is to report the initial impacts of measures taken to contain the COVID-19 pandemic on Myanmar's agri-food system. Due to the effect on the agri-food system being less evident and more indirect, it was under-allocated for in the initial fiscal response from the government.

Main nutrition-related findings

- The agri-food system has been hit by multiple shocks including domestic and foreign demand shocks, supply disruptions due to movement restrictions, and liquidity constraints.
- Farm households, in response to income losses and lower crop prices, cut back on investment in monsoon season crop production, with systemic effects on firms providing agricultural inputs and mechanization services.
- While the agri-food system appears to have been resilient in its ability to adapt to disruption in the short run, persistent income losses among all types of actors may result in a prolonged recovery period.

Calls to action:

- Agricultural inputs, services and products must be allowed to move freely while ensuring safety measures appropriate to COVID-19 prevention.
- Additional financial liquidity should be made available to farmers and businesses, along with flexible terms, to prevent disruption of farm activities and service provision.
- Additional social protection will likely be required to avoid severe food insecurity and malnutrition among vulnerable households (including timeliness through mobile payment coverage improvements and better data for decision makers to target resources).

GESI Observations

Men are generally considered to be more knowledgeable about agricultural production, yet decisions on agricultural production and income are often made jointly. Nonetheless, participants in most agricultural programmes are mainly the household head, who is often the man, limiting women's direct access to agricultural services.

Quality of the data / evidence (method)

- Findings are based on the results from a suite of phone surveys from the second quarter of 2020, completed by households, farm input suppliers, mechanisation service providers, farmers, commodity traders, millers, food retailers and consumers among others. Sample sizes varied from 93 (mechanization service providers) to 2000 (households).
- Limitations include:
 - Opportunistic sampling strategies given time constraints, based on the availability of phone numbers from previous surveys hence not fully representative;
 - Most of the data applies to the second and third quarter of 2020 rather than last quarter;
 - Attrition and non-response issues, as well as short survey instruments and simple question structures.

Title: [Food Price Monitoring and Analysis \(FPMA\) Bulletin # 10, 10 December 2020](#)

Author or institution FAO

Geographic focus	Global with focus on Argentina, Bangladesh, Brazil, Kyrgyzstan, Nigeria, South Sudan, Sudan, Tajikistan and Zimbabwe.
Population focus	Households
Technical focus	Availability and price of nutritious food stuffs
Information type	Report
Date published	December 2020
Date added	January 2021

Purpose/objective of source

Monthly report and analysis on food price trends at world, regional and country level with focus on developing countries.

Main nutrition-related findings

- International prices of wheat and major coarse grains increased further in November, reflecting continued strong global demand. However, rice values remained steady with support provided by tight availabilities and currency movements in selected South East Asian exporters countering limited demand and harvest pressure in other major origin countries.
- In East Africa, prices of coarse grains increased further in Sudan and South Sudan in November, reaching record highs in several markets of both countries, underpinned by insufficient supplies and difficult macro-economic conditions, including a sustained depreciation of the national currencies.
- In West Africa, prices of coarse grains eased further in Nigeria, with fresh supplies from the 2020 harvest but supply chain bottlenecks amid generally difficult macro-economic conditions sustained them well above their year-earlier values, particularly in the northeast where persistent conflict exacerbated the economic challenges.
- In Central America, prices of maize and beans increased, especially in Guatemala, Honduras and Nicaragua, hit hard by hurricanes Eta and Iota.

Knowledge gaps / areas for further research

- The report and findings focus primarily on the price of staples, rather than nutritious food specifically.
- The price changes may not solely be due to the COVID-19 pandemic and instead be due to other supply/demand side shocks (although the report explicitly states the cause of the price change where possible).

Quality of the data / evidence (method)

- The paper uses the real FAO food price index to compare previous food prices to current prices.
- The FAO Food Price Index is a measure of the monthly change in international prices of a basket of food commodities. It consists of the average of five commodity group price indices, weighted with the average export shares of each of the groups. The sub-indices can also be tracked, as done in this report.

Links to references to this source

[Global FAO Food Price Index monthly data csv download](#)

Title: Acute food insecurity and short-term coping strategies of urban and rural households of Bangladesh during the lockdown period of COVID-19 pandemic of 2020: report of a cross-sectional survey

Author or institution	Das et al., BMJ Open
Geographic focus	Bangladesh
Population focus	Households

Technical focus	Availability and price of nutritious food stuffs
Information type	Peer reviewed article
Date published	December 2020
Date added	January 2021

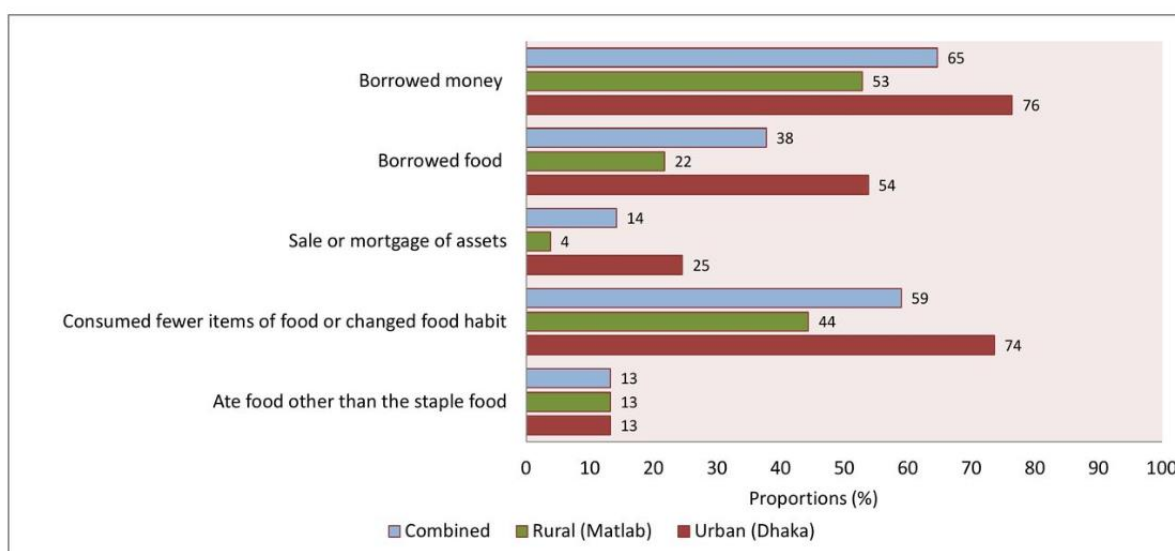
Purpose/objective of source

To assess the extent of food insecurity and identify the determinants and short-term coping strategies adopted by households in one urban and one rural area in Bangladesh after a month-long lockdown during the COVID-19 pandemic.

Main nutrition-related findings

- Around 90% of the households surveyed suffered to some extent from food. While not possible to rigorously compare to pre-COVID studies, a nationwide study cited in the article from 2018 found that 58% of households were either mildly, moderately or severely food insecure.
- The prevalence of severe food insecurity was significantly higher in urban households (42%) than among their rural (15%) counterparts. At the same time, 70% of rural households had mild to moderate food insecurity while in urban areas the corresponding prevalence was 50%.
- To combat food insecurity, households adapted coping strategies including consuming fewer food items or changing their food habits (Urban: 74%, Rural: 44%) and also borrowed food (Urban 54%, Rural 22%). The figure below presents a range of coping strategies to adapt to food insecurity during a month-long lockdown period.

Figure 6: Proportions of different coping strategies adopted by the urban and rural households



Study approach

- The data above are derived from a cross-sectional surveys carried out with mothers in 106 urban and 106 rural poor households of Bangladesh in April 26, 2020, one month after a nationwide lockdown was imposed. Data collected was for the previous four weeks (March 26 to April 26).
- According to the authors, the data were collected through a rapidly done cross-sectional survey just at the end of the first month of lockdown, which limits the possibility of recall bias. However, study locations were identified based on convenience. A larger sample size involving a wider geographical location would be better for generalisability and strength of the study.

Title: Covid-19 Pandemic: Impact of restriction measures in West Africa

Author or institution	World Food Programme
------------------------------	----------------------

Geographic focus	Economic Community of West African States (ECOWAS) region
Population focus	Households
Technical focus	Availability and price of nutritious food stuffs
Information type	Research report
Date published	December 2020
Date added	January 2021



Purpose/objective of source

To assess the impact of COVID-19 and the restrictions measures that were put in to place to contain the pandemic in the 15 countries in Economic Community of West African States (ECOWAS) region.

Main nutrition-related findings

- 90% of urban and rural households surveyed reported a rise in food prices.
- Households reporting on food stocks, an indicator of food availability, stated that their food stocks in 2020 were lower than their food stocks in 2019, with 80% of households in rural areas and 63% in urban areas reporting a decrease.
- In rural areas, transport disruption affected the availability of basic food more sharply. The figure below presents the availability of food and non-food items in urban and rural areas during COVID-19 restrictions.

Table 2: Availability of food and non-food products

	 Fresh food products (e.g. vegetables, meat, eggs)		 Foodstuffs basic (e.g. cereal, sorghum, flour)	
	Urban	Rural	Urban	Rural
Always available	50%	31%	50%	31%
Sometimes available	43%	58%	43%	58%
Rarely / never available	2%	3%	2%	3%
No longer available	2%	7%	2%	7%
Do not know	3%	1%	3%	1%

Source: ECOWAS Commission/Survey data analysis.

GESI Observations

- Concerns about household access to food were felt more by female-headed households, with 74% of non-working women reporting increased vulnerability, compared to 47% of working women in this group.
- A review of coping strategies adopted to address risk of food shortages revealed that 32% of female-headed households reportedly spent an entire day without eating or skipped meals, compared to 28% of male-headed households.

Quality of the data / evidence (method)

- Cross sectional study via household web-based surveys across 15 countries. As part of this survey, a household questionnaire was developed in the three languages officially spoken in the region (English, French and Portuguese). This questionnaire was structured around the demographic characteristics of the responding household, the restrictive measures, the impact on food security and livelihoods, coping strategies and the risks incurred in case of prolonged restriction measures. The questionnaire was developed on ArcGIS' Survey123 platform, the link generated was then widely disseminated in the sub-region.
- Data collection took place from May 10 to July 3 and 4,677 households were registered.

Title: COVID-19 and Food: Challenges and Research Needs

Author or institution	Knoor and Khoo, Frontiers in Nutrition
Geographic focus	Global
Population focus	All
Technical focus	Policy
Information type	Journal article (peer reviewed)
Date published	December 2020
Date added	January 2021

Purpose/objective of source

To highlight several food and nutrition-related challenges encountered during the COVID-19 pandemic,

Main nutrition-related findings

The paper identifies several food and nutrition-related challenges encountered during the COVID-19 pandemic, including food and water safety, supply chain disruptions, food and water insecurity, consumer and food behaviour, malnutrition and nutrient intakes, food surveillance technology, with the objective of stimulating robust scientific discussions on existing research gaps and developing long-term “exit strategies” to prepare for future pandemics

Consumer food behaviour:

- Citing studies in United States on food spending based on household surveys and from transaction-level household financial data from August 2016 to April 2020 ([Baker et al. 2020](#)) and consumer behaviour from April and May 2020 ([International Food Information Council, 2020](#)) the authors show that COVID-19 has changed how, where and what people eat, including quality and quantity of food consumed. More research is needed to understand the impact of consumer food behaviour during- and after the pandemic .
- Some of the areas of future research the authors propose include 1) understanding the changes in consumers' food in an environment in response to mitigation efforts; 2) understanding overall impact of pandemic-related circumstances on consumer food and nutrient intakes, and dietary patterns; 3) understanding dynamics and psychology of food choices and intakes during and post pandemics and the effects on long-term food behaviour; and 4) studying of the impact of COVID-19 on consumer food home preparation and food waste reduction.

Diet and nutrition:

- “While there is no food or nutrition intervention known to stop COVID-19, it is known that a healthy and diverse diet and nutrition can support and modulate immune responses to viral infections.”
- More information is needed to understand the interaction between COVID-19, diet and nutrition. The authors propose studying 1) the link between nutritional status and COVID-19, and the impact of nutritional health in recoveries in different population groups; 2) the potential impact of nutritional status on morbidity and mortality from SARS-CoV-2, and 3) the modulating role food and nutrients play in the management of COVID-19.

COVID-19 exit strategies:

- To prepare for future pandemics, the authors recommend a series of “exit strategies” and goals, which include 1) provision of clear food safety and hygiene requirements for every step along the food chain; 2) initiation of local/regional storage facilities for food staples and drinking water; 3) increasing local/regional self-sufficiency for food and water supplies; 4) assurance of continuous feeding programmes for poor populations during school closures and lockdown with nutritious food; and 4) provision of local/regional recommendations for shelf staple food storage.

Knowledge gaps / areas for further research

The authors encourage the scientific communities to anticipate needed food and nutrition priorities for future pandemics, and to build a more resilient food system that better integrates critical factors such as the food supply chain, nutritional security, healthy food accessibility, education, and communication on

food safety and preparation in the event of long quarantines. They also highlight a need to form a global food, nutrition, and related science advisory body to prepare and advise for future pandemics.

Quality of the data / evidence (method)

Literature review including 32 sources. The paper did not include a description of the methodology.

Title: **Effects of COVID-19 on Papua New Guinea’s Food Economy: A multi-market simulation analysis**

Author or institution	IFPRI: Xinshen Diao, Paul Dorosh, Peixun Fang, and Emily Schmidt
Geographic focus	Papua New Guinea
Population focus	Households
Technical focus	Availability and price of nutritious foodstuffs
Information type	Research paper
Date published	December 2020
Date added	December 2020

Purpose/objective of source

- A multi-market model built to simulate effects of COVID-19 control policies and their related economic effects on PNG’s food economy

Main nutrition-related findings

- Developments in the agricultural economy of Papua New Guinea have major impacts on household food consumption decisions.
- The model reveals that urban households, especially the poor, might be particularly vulnerable to shocks related to the COVID-19 pandemic.
- Urban incomes (including poor and non-poor households) are projected to reduce by 15%, as a result of lower economic activity in urban areas, increases in marketing costs due to domestic trade disruptions, and 30 percent higher imported rice prices
- The model also indicates that urban poor households, likely suffer the largest drop in calorie consumption at 19.8 percent, compared to an estimated 15.8 percent decline for urban non-poor households.
- Rural household incomes, affected mainly by reduced urban demand and market disruptions, are projected to fall by only about 4 percent. Nonetheless, calorie consumption for the rural poor and non-poor might fall by 5.5 and 4.2 percent, respectively. About half of these declines are because of the adverse impact of higher rice prices on average rice consumption.

Data

- The above information is based on a modelling exercise. The model includes various production and consumption data from the HIES (2009/10), and calorie consumption data also from the HIES (2009/10) and IFPRI (2018). Calorie conversion factors for individual food items are estimated by FAO for PNG.
- The multi-market model considers different production and consumption patterns within PNG by region, by rural/urban, and by poor/non-poor households. For Southern and Momase Regions, urban households are further disaggregated by metro vs. other urban, following the survey sample design employed by the PNG Household Income Expenditure Survey (HIES).
-

Title: WFP: External Situation Report #17

Author or institution	World Food Programme
Geographic focus	Global
Population focus	General
Technical focus	Availability and price of nutritious foodstuffs
Information type	Report
Date published	December 2020
Date added	December 2020

Purpose/objective of source

- WFP's External Situation Report #17 offers a situation update from WFP and their regional operations. It includes some key information on operational activities and some estimates of the number of people who are food insecure from their corporate alert system and other WFP-related sources.

Main nutrition-related findings

- In their [Global Update on COVID-19: November 2020](#), WFP estimates that 271.8 million people in 79 countries are acutely food insecure – or directly at-risk – due to the compounding effects of COVID-19.
- At a regional level, increases in food insecurity are observed in the Middle East, Asia, and in particular, Latin America and the Caribbean where hunger has quadrupled in the countries where WFP operates.
- In Middle East, North Africa, Central Asia And Eastern Europe: Due to the compounding effects of COVID-19, in November, WFP estimates that 54.5 million people are acutely food insecure in the region, up 2.8 percent from June estimates.
- In West and Central Africa: "The preliminary results of the 2020/21 Cadre Harmonisé analysis conducted in November 2020 suggest that over 19.4 million people are food insecure across the region between October and December 2020. The number of food insecure populations is projected to increase to over 25.9 million people during the June-August 2021 period. Overall, these figures are significantly higher for the current period (October-December) compared to 2019, when an estimated 10.8 million people were estimated to be food insecure (80 percent increase)."

Title: WFP Global Update on COVID-19: November 2020 - Growing Needs, Response to Date and What's to Come in 2021

Author or institution	World Food Programme
Geographic focus	Global
Population focus	General
Technical focus	Availability and price of nutritious foodstuffs
Information type	Report
Date published	November 2020
Date added	December 2020

Purpose/objective of source

- WFP's Global Update on COVID-19 report gives an update from WFP and their operations and presents information on needs, WFP response and WFP requirements. This includes some recent estimates of the number of people who are food insecure.

Main nutrition-related findings

- WFP estimate a total of 271.8 million people in its operational countries are acutely food insecure or directly at-risk of becoming so "due to the aggravating effect the protracted COVID-19 crisis is having in areas affected by conflict, socio-economic downturn, natural hazards, climate change and pests".
- This suggests a slight increase of WFP's previous estimate of 270.2 million in June.
- The projected number of people in acute food insecurity has increased in the 'Asia and the Pacific' region (up 3.6% since June estimates), the 'Middle East, Central Asia and North Africa' region (up 2.8%) 'Latin America and the Caribbean' (up 15%).
- Levels remain similar in 'West and Central Africa (up 0.3%) and have decreased in 'Southern Africa' (down by 4.4% since June estimates) and 'East Africa' (down 3.6%).

Table 3: Projected number of people in acute food insecurity (in millions)

Regions	June	November	Trend
Asia and the Pacific	49.6	51.4	+3.6%
Middle East, Central Asia and North Africa	53.0	54.5	+2.8%
West and Central Africa	57.6	57.4	-0.3%
Southern Africa	52.4	50.1	-4.4%
East Africa	41.6	40.1	-3.6%
Latin America and the Caribbean	16.0	18.4	+15%
Total	270.2	271.8	0.6%

Title: [Crowdsourced data reveals threats to household food security in near real-time during COVID-19 pandemic](#)

Author or institution	IFPRI, Julius Adewopo, Gloria Solano Hermosilla, Fabio Micale and Liesbeth Colen
Geographic focus	Global, Nigeria
Population focus	Households
Technical focus	Availability and price of nutritious foodstuffs
Information type	Blog
Date published	17/11/2020
Date added	17/12/2020

Purpose/objective of source

Researchers from the European Commission's Joint Research Centre and the International Institute of Tropical Agriculture describe the development of a crowdsourcing tool for collecting real-time local price data.

Main nutrition-related findings

The blog describes a number of findings:

- The COVID-19 pandemic and related lockdown measures have disrupted food systems globally, leading to fluctuations in the prices of some food commodities, mostly at the country or local levels.

- Data from May-June 2020 suggested that maize and rice prices increased on average by 26% and 44%, respectively, compared to the same period in 2019. Price increases were slightly higher in urban than in rural areas. The data also showed that after lockdown measures were relaxed, prices continued to rise: For instance, local rice continued to be sold at prices 50% higher than in 2019.
- High food priced hotspots were mainly observed in urban areas during COVID-19 lockdowns. Combining the price data with a spatial richness index grid, shows higher prices in May-June 2020 in richer, and mostly urbanized areas. But rural areas, where poverty rates exceed 70%, were hard-hit as well, with average price increases of 22% for maize and 42% for rice posing a threat to food security.
- For urban areas: Their average level of richness is higher, suggesting that urban households may be better positioned to absorb such steep temporary price increases.

Data

- The Food Price Crowdsourcing Africa (FPCA) project developed, deployed, and tested a systematized process for crowdsourcing daily prices for a small number of staple foods, presenting the validated data in an open-access web dashboard. Following an initial round of publicity, over 700 volunteers from Kano and Katsina States were invited to submit food price data through a mobile app during visits to any type of market for purchase or mere price checking.
- Crowdsourced data was taken from September 2018 to 2019, and again from May 12, 2020 to June 16, 2020, when lockdown measures were severely disrupting the food system in northern Nigeria. The data showed a steep increase in food prices, trailing the lockdown timeline.
- The successful set-up and implementation of this price tool and platform illustrates the potential of engaging citizens through a mobile app to crowdsource spatially- and temporally- rich data in near real-time. In addition, the ease of activating the tool remotely for price monitoring in an emergency shows its potential in responding to sudden food system shocks.
- However, a number of potential concerns remain: Volunteer data contributors may not be fully representative of a region's population; for instance, educated males living in urban areas were over-represented in the Nigeria project.
- Additional efforts are needed to boost the participation of more vulnerable populations, and improve the coverage of remote, less populated and often highly food-insecure areas.
- Overall, findings suggest that smartphone- and citizen-driven price data collection can complement traditional price data collection systems in terms of timeliness, geographical granularity and responsiveness to market disruptions—not only from the COVID-19 pandemic, but also conflicts, climate shocks, and other problems.

Title: Populations at risk: Implications of COVID-19 for hunger, migration and displacement

Author or institution	World Food Programme (WFP) and the International Organisation for Migration (IOM)
Geographic focus	Global
Population focus	Migrants, remittance dependent households and forcibly displaced people
Technical focus	Availability and price of nutritious foodstuffs
Information type	Report
Date published	September 2020
Date added	December 2020

Purpose/objective of source

- A joint study by the World Food Programme and the International Organisation for Migration which explores the impacts of COVID-19 and related containment measures on migrant workers, remittance dependent households and the forcibly displaced. It assesses the implications of the

pandemic for people's mobility, food security and other livelihood outcomes in major migration and hunger hotspots.

Main nutrition-related findings

- "...the impact of the crisis on food security and poverty could increase people's need to search for livelihoods elsewhere, leading to a potential rise in migration driven by necessity."
- "Income loss and unemployment have pushed many migrants to return home as they have become unable to support themselves and their families. Return journeys thwarted by COVID-19 related border closures and travel bans have left nearly 3 million migrants stranded, unable to return to their places of work, their communities or countries of origin (IOM, 2020)."
- "In October, the World Bank estimated that remittances to LMICs would drop by at least 14 percent by 2021 as a result of the pandemic (World Bank and KNOMAD, 2020). Based on this estimation, it was projected by the World Food Programme that remittance losses could leave an additional 33 million people at risk of facing hunger across the countries where it operates."
- "...migrant workers dependent on daily labour are emerging as a new group at increased risk of food insecurity due to loss of income and lack of access to safety nets..."

Data/Approach

Migration data is based on IOM estimates, derived from IOM country missions' inputs to their the MRM/PoE database. Remittance estimates are from World Bank-KNOMAD staff estimates

Title: FAO-WFP Early Warning Analysis of Acute Food Insecurity Hotspots - November 2020

Author or institution	The Food and Agriculture Organisation of the United Nations (FAO and the World Food Programme (WFP)
Geographic focus	Global
Population focus	General
Technical focus	Availability and price of nutritious foodstuffs
Information type	Report
Date published	November 2020
Date added	December 2020

Purpose/objective of source

- A joint FAO-WFP analysis of food insecurity hotspots as the coronavirus crisis unfolds.

Main nutrition-related findings

- "Among the different dimensions of food security, access to food has been the most impacted due to the income losses and macroeconomic shocks caused by the COVID-19 pandemic and the measures introduced to curb its spread." "...while markets and food supply chains worldwide have largely stabilised after the initial disruptions caused by the effects of COVID-19-related restrictions, structural deficiencies in countries with food crises have translated into more substantial impacts on agricultural production and other parts of the food supply chain."
- "The FAO Food Price Index had increased for four consecutive months as of September 2020, when it recorded a 5 percent increase compared to its value in the same month of 2019"
- "While in many countries COVID-19-related restrictions have been progressively lifted, allowing economic activity to resume, analyses carried out between March and September 2020 show a deterioration across 27 countries affected by food crises last year that now have between 101 and 104.6 million people facing a food crisis or emergency (FSIN and Global Network Against Food Crises, 2020)."

- Looking ahead, FAO and WFP estimate that 20 countries and situations have potential for acute food insecurity to deteriorate further.
- “Within the hotspot countries and situations, in some areas of Yemen, South Sudan, north-eastern Nigeria and Burkina Faso, parts of the population are experiencing a critical hunger situation with extreme depletion of livelihoods, insufficient food consumption and high acute malnutrition.”

Data

- The main sources of data for Crisis or worse levels of acute food insecurity (current and projections) are the [Integrated Food Security Phase Classification \(IPC\)](#) and the [Cadre Harmonisé \(CH\)](#). For countries where IPC/CH analyses were not conducted and where no recent analyses were available, estimates of the number of people in acute food insecurity were primarily derived from the [Famine Early Warning Systems Network \(FEWS NET\)](#) IPC-compatible analysis, WFP assessments using [CARI methodology](#) or Humanitarian Needs Overviews.

Title: [Food Insecurity in Tribal High Migration Communities in Rajasthan, India](#)

Author or institution	Saxena et al. (Food and Nutrition Bulletin)
Geographic focus	India (Rajasthan)
Population focus	Community members and patients visiting clinics and health centres, including pregnant women and severely malnourished children
Technical focus	Availability and price of nutritious foodstuffs
Information type	Journal Article (field report)
Date published	November 2020
Date added	December 2020

Purpose/objective of source

To assess the availability of foodstuffs at the household level and community experiences about satiety and hunger during lockdown among tribal populations in southern Rajasthan, India

Main nutrition-related findings

Food availability and prices

- Most of the vegetables and fruits came from kitchen gardens or the locally grown trees. Travel to the nearest markets was difficult. People also stopped buying from vendors coming to the villages, due to fear that these could spread Covid-19.
- Non-perishable items were sourced from the small grocery shops in the villages were running out of supplies due to disruption of supply chain. These started raising the prices, which went up by 30% to 50%. At the same time, people had little liquid cash, and started bartering wheat from the recent harvest to buy these items.

Evidence of widespread food insecurity

- A cereal was reported to be present by 97% of the respondents, two-thirds had pulses, nearly half had milk and one third had nutritious vegetables. The amount of cereals available was adequate for about 5 months and that of pulses, oil/ ghee, and sugar for about 1 to 2 weeks.
- Two-thirds of the respondents reported that food in their households was sometimes not sufficient for the amount they wanted to eat, and 97% of these mentioned not having money to buy food as the reason for not having sufficient food.

Method/approach

- Authors conducted a rapid assessment of food security in rural southern Rajasthan, India, using a structured questionnaire.

- Trained interviewers conducted telephonic interviews using KoBoToolbox, an open-source tool. A total of 211 respondents including community volunteers, family members of tuberculosis patients and malnourished children, pregnant women, and influential members in the villages participated in the study. Lockdown was announced in the region on March 22. The survey began on May 12 and ended on June 10.

Title: COVID-19 and Its Impact on Agri-food Systems, Food Security and Nutrition: Implications and Priorities for the Africa Region

Author or institution	FAO (FAO Regional Conference for Africa, 31 st Session)
Geographic focus	Sub-Saharan Africa
Population focus	All, focusing on the most marginalized
Technical focus	Availability and price of nutritious foodstuffs, Nutrition intervention delivery and coverage, GESI
Information type	Conference report
Date published	October 2020
Date added	December 2020

Purpose/objective of source

To identify the threat of Covid-19 on agri-food systems, availability and access to food and nutrition; the potential impacts of Covid-19 on availability and access to nutritious foods; as well as interventions to promote food security and nutrition in Covid-19 Response. The report also summarises FAO's regional response to Covid-19 in Sub Saharan Africa and identifies implications for FAO's regional priorities.

Main nutrition-related findings

The potential impacts of Covid-19 on availability and access to nutritious foods was highlighted in the report from the October 2020 conference report . The executive summary of the document states:

- COVID-19-induced disruptions affect the entire agri-food system, impacting both supply and demand channels at different points in time. Healthy diets were not affordable for about 829 million people in SSA in 2019, and high levels of unemployment, lost livelihoods and rising poverty levels due to COVID-19 making affordable healthy diets out of reach for even more people in 2020.
- Vulnerable groups, living mostly in rural areas where labour is primarily informal (such as smallholder farmers, livestock keepers, artisanal fishers, persons whose livelihoods depend on the informal economy, women, youth, children engaged in child labour or at risk of child labour, and migrants) have been disproportionately affected by Covid-19.

Interventions to promote food security and nutrition in the Covid-19 response, were also presented in the executive summary. These include:

- Stimulus programmes should meet the needs of vulnerable and the most at-risk populations by expanding and improving emergency food assistance as well as enhancing nutrition interventions.
- Social protection programme should be expanded and adapted to address urgent emergency responses, protecting food security and livelihoods during the pandemic, and to address the recovery and rebuilding of livelihoods of vulnerable people.
- Interventions should consider specific gender roles in agri-food systems and address women's specific and multiple needs as guardians of household food security, food producers, farm managers, processors, traders, wage workers and entrepreneurs. Interventions should also integrate women and their Organisations and informal networks in the design and implementation of COVID - 19 response and mitigation strategies.

Title: Estimating the potential effects of COVID-19 pandemic on food commodity prices and nutrition security in Nepal

Author or institution	Singh, et al. (Journal of Nutritional Science)
Geographic focus	Nepal
Population focus	Households
Technical focus	Availability and price of nutritious foodstuffs, Dietary Diversity and Dietary Practices
Information type	Journal Article (Peer reviewed)
Date published	October 2020
Date added	December 2020

Purpose/objective of source

To investigate the impact of COVID-19 control measures on food commodity prices and models the effect of food price changes on nutrition quality of diets in Nepal. It specifically examines the effect of price changes on micronutrient intake. It presents a comparative intra-country observational study design looking at events before and during the pandemic (after implementation of contagion control measures).

Main nutrition-related findings

- The study finds a substantial increase in food commodity prices across food groups (except animal proteins) and districts with marked inter-district variation. Pulses and vegetables and fruits showed the highest average price rise at 18 and 14 %, respectively, followed by roots and tubers and cereals at around 10 %. Animal proteins showed a very marginal increase in prices at 2 %. These figures come from primary data collection via phone surveys collecting food commodity prices. Prices were collected from two different independent sources- traders and farm cooperatives. Even a nominal increase in food basket cost can have marked negative implications on the diet quality of the meals, impacting the intake of both macro and micronutrients.
- For school meal basket, all micronutrients show large average declines ranging from 9.5 % for zinc to 11 % for vitamin-A. For household food baskets on average, vitamin-A reduced 37 % followed by iron at 19 %, reduction in zinc is low due to the high zinc content in whole grain cereals. In order to estimate the impact of increased prices on the nutrient intake, authors undertook meal adjustment modelling for all school meals for the three districts.
- The change in consumption patterns to cope with increased prices might have the most serious impact on the diet quality of poor households. In terms of intra-household food allocation, women and children are likely to suffer disproportionately.
- COVID-19 control measures are likely to have contributed to substantial price inflation over the reference period with potentially damaging effects on nutrition security in Nepal with serious implications for vulnerable populations.

Method/Approach

- This study examines the effect of price changes on micronutrient intake. It presents a comparative intra-country observational study design looking at events before and during the pandemic (after implementation of contagion control measures).
- The study design includes three districts, enabling comparison between diverse agro-ecological zones and geographical contexts. The methodology consists of primary data collection, modelling and quantitative analysis. The analysis is based on actual school meal food baskets which represent culturally and nutritionally optimised food baskets, developed by the local community and notional typical household food baskets. End May/early June 2020 is the 'Post-COVID-19' reference point, the same time period in 2019 i.e. June 2019 is the 'Pre-COVID-19' reference point.

Title: [The impact of COVID-19 on children in the Middle East and North Africa](#)

Author or institution	UNICEF MENA
------------------------------	-------------

Geographic focus	Middle East and North Africa – Mena regions (Algeria, Egypt, Jordan, Morocco, Qatar, Syria, Tunisia)
Population focus	Children
Technical focus	Availability and price of nutritious foodstuffs
Information type	Report
Date published	November 2020
Date added	December 2020

Purpose/objective of source

To highlight results of phone interviews on how children’s lives have been impacted during the first months of the COVID-19 pandemic in several key dimensions critical to children’s development and well-being- including psychological well-being, social relations, education, access to health services and nutrition.

Main nutrition-related findings

The report covers many areas including the impact of confinement and lockdown measures on the children’s social life and mental wellbeing, access to distance education during school closures, and children’s health and nutrition, the main focus of this summary.

Issues related to children’s health and nutrition reported by households include the following:

- The utilization of essential health services, including immunization, ante-natal and post-natal care peri-natal care, has been negatively impacted, as a result of factors affecting both the supply and the demand of these services, including the fear of getting infected with COVID-19 while at the health facilities.
- Nearly one out of five respondents mentioned the financial impacts of confinement and, specifically, having less money to spend on food. Because of lockdowns, 30% of respondents were not able to access healthy or nutritious foods at least once.
- While Households continue to prioritize providing food for their families (especially their children), the quality of the diets has been compromised which will further impact the nutritional status of children, further compromising the immunity of children. In some countries, respondents reported cutting their expenditures on food- mostly on red meat and fish, and then on fruits and vegetables, reducing both quantity and quality of the food consumed.

Data/study methodology

- The data presented in this study are based on information gathered from nearly 7,000 families in seven countries (Algeria, Egypt, Jordan, Morocco, Qatar, Syria and Tunisia) by UNICEF and its partners through phone interviews. Most interviews were carried out between April and July, which aligns with the first months of the pandemic as lockdowns, closures and confinement measures were put in place.

Title: Effect of Covid-19 on food security: A cross-sectional survey

Author or institution	Elsahoryi et al. (Clinical Nutrition ESPEN)
Geographic focus	Jordan
Population focus	Individuals age 18 and over (not including refugees)
Technical focus	Availability and price of nutritious foodstuffs
Information type	Research Article
Date published	December 2020
Date added	December 2020

Purpose/objective of source

The research aimed to assess the impacts of COVID-19 on household food security in Jordan during the first 4 weeks of the lockdown, state of acute malnutrition including the prevalence of food security and food insecurity, risk factors associated with food insecurity and main food groups associated with food insecurity during the lockdown.

Main nutrition-related findings

Results from the interviews reveal that

- Among the 3129 Jordanians surveyed, 23% were categorized as severely food insecure, 36% as moderately food insecure, and 41% as food secure. The risk of severe food insecurity was strongly correlated with factors such as monthly income per capita (especially among those living below the poverty line), the number of family members, individuals younger between 18 and 30 years old, and those who lived in rented houses.
- Severely food insecure individuals consumed more carbohydrates weekly, especially bread and rice intake (low cost, partially subsidized foods) whereas people categorized as food secure had higher weekly intake of the meat, poultry, and fish (high-cost foods). Consumption of fruits, vegetables, milk and milk products, oils, and sweets did not differ between food secure and food insecure groups due to the fact that the government prohibited food price hikes and that people were allowed to shop at nearby stores.

Data/methodology

- The data presented in this study rely on a cross-sectional study using a Web-based validated questionnaire. The Food Insecurity Experience Scale was used to measure the food insecurity during the first four weeks of the quarantine, and a modified food consumption score was used to determine the number of times the household consumes each food group.

Title In the shadows of the pandemic: the gendered impact of covid-19 on Rohingya and host communities

Author or institution	Intersectoral Coordination Group Gender (ICGG) Hub, ACAPS-NPM Analysis Hub, Care International, Oxfam, UN Women
Geographic focus	Cox's Bazar, Bangladesh
Population focus	All, including marginalised groups (female sex workers, transgender persons and people with disabilities)
Technical focus	The availability and price of nutritious foodstuffs, Dietary diversity and dietary practices
Information type	Rapid Gender Analysis
Date published	October 2020
Date added	December 2020

Purpose/objective of source

The research was conducted to understand the impact COVID-19 has had on age, gender and other social characteristics, and to analyse how the socio-cultural context helps or hinders people's ability to cope with the crisis. The report provides a detailed breakdown on the impact of COVID-19 in six key sectors and working group: Health, Protection, Communication with Communities, Education, Food Security, and Water, Sanitation and Hygiene (WASH).

Main nutrition-related findings

- Access to food assistance has been insufficient for Rohingya refugees, particularly single mothers, households headed by persons with disabilities, pregnant and lactating women, the elderly and children. Respondents additionally reported a deterioration in food quality. Host communities also

face overwhelming difficulties accessing sufficient food, with women sharing concerns about changes in prices at the market, access to distributions and the lack of income.

- Three-quarters of women (76%) and men (74%) reported changes in distribution networks and market prices since the COVID-19 outbreak.
- Based on the interviews conducted among the Rohingya, the quality and quantity of food has worsened. Almost all women attributed the increased difficulty in accessing sufficient food to the increase in market prices (90%), sometimes coupled with a lack of income or savings to purchase items (64%).
- Women reported having to confront barriers in accessing distribution points and additional food.
- The economic consequences of the pandemic and its associated preventive measures have had one of the most significant impacts on women, girls, men and boys in both communities, affecting their livelihoods, which in turn limits their ability to seek services or meet their basic needs, and they have increased the risks concerning protection.
- Women, who are mostly- engaged in the informal economy, and vulnerable groups dependent on daily work, such as persons with disabilities, transgender persons and sex workers, have been hardest hit.
- Increased difficulties accessing health services have been reported during the pandemic. Women, children, transgender persons and persons with disabilities all face more barriers in accessing health services. There is an increase in mental health issues, in feelings of insecurity and stress across the board, particularly among men and boys. Previous work on protecting and empowering women and girls has been disrupted due to the containment measures

Study approach/methodology

- This Rapid Gender Analysis (RGA) was conducted by ISCG Gender Hub, CARE, Oxfam, ACAPS-NPM and UN Women. The RGA used a mixed methods approach, including secondary and primary data, and adapted the CARE Rapid Gender Analysis Toolkit. However, the analysis relies predominately on primary data with secondary data used to help understand the assessment results. Primary data collection conducted between 15 June and 9 July. A total of 152 quantitative questionnaires were conducted with Rohingya respondents (50% women) in camps. Another 120 questionnaires (42% women) were conducted in the host communities of Palong Khali, Jalia Palong and Nhilla. For the qualitative component, a total of 66 key informant interviews (27 Rohingya, 39 host community) were conducted by programme staff with 22 community members, 17 frontline workers, leaders and members of self-organized groups and 17 community-based groups (CBOs) and 10 local authorities.

2.4.4 Information collected under MQSUN+

Impacts of COVID-19 on Food Security and Nutrition: Developing Effective policy Responses to Address the Hunger and Malnutrition Pandemic

Author or institution:	Committee on World Food Security, High-Level Panel of Experts on Food Security and Nutrition
Geographic focus:	Global
Technical focus:	Diet, Food price and availability
Information type:	Informal
Date published:	September 2020
Date added:	14 October 2020

This issue paper presents a synthesis of information around threats to food and nutrition security posed by COVID-19 and provides a description of evidence on the observed effects on food security and food systems and access to social protection services since the pandemic began. Some highlights include:

- Pandemic-altered food environments have variable impacts on nutrition and dietary diversity. Informal markets, which typically sell more fresh fruit and vegetables, shut down, whilst retail outlets, which typically sell processed and packaged foods, remained open. As a result, poor households are

likely to shift their spending away from fresh fruits and vegetables to less nutrient-rich foods. In North America, people have shifted to more direct access to fruits, vegetables, meats and fish.

- Uneven food price fluctuations during the pandemic is a product of complex factors, including export restrictions initially placed on some cereal crops such as rice and wheat in several exporting countries, currency depreciation and increased shipping costs as a result of disrupted supply chains.
- Authors warn that as the pandemic continues, people will exhaust their short-term coping strategies risking further food insecurity if lockdowns continue.
- The report proposes four urgent policy shifts including:
 - Transform food systems as a whole to diversify food systems.
 - Shape food policies in ways that recognise inter-system linkages.
 - Incorporate greater understanding of the complex interactions of different forms of malnutrition including obesity and micronutrient deficiencies.
 - Transform and diversify food policies to fully take into account the specificity of each context.

Global Food Security Alert Report

Author or institution:	Famine Early Warning Systems Network (FEWS NET)
Geographic focus:	Global & Regional
Technical focus:	Nutrition intervention delivery, Food price and availability
Information type:	Informal
Date published:	September 2020 (periodically updated)
Date added:	14 October 2020

- Nearly seven months since the WHO's pandemic declaration, many countries have eased movement restrictions—put in place in March and April—which brought parts of the global economy to a halt. As labourers and goods are now able to move more freely, many economic activities have resumed, contributing to food security improvements in FEWS NET-monitored countries relative to mid-2020. However, millions of poor households are expected to continue facing difficulty meeting their basic food and non-food needs into 2021 as the global economic slowdown persists.
- Millions of poor households are expected to continue to experience reductions in income due to the lasting impacts of the COVID-19 pandemic. Across the 29 countries monitored by FEWS NET, 90 to 100 million people are likely to face Crisis (IPC Phase 3) or worse outcomes in 2020 and need urgent humanitarian food assistance. FEWS NET also provides a peak global needs estimates for an additional 17 countries that it does not directly monitor. The combined estimated peak global needs for these 46 countries in 2020 is 113 million people. The high level of need is also driven by conflict and macroeconomic and weather shocks, including droughts and floods, and the desert locust upsurge. These drivers, including the longer-term economic impacts of the pandemic, are anticipated to continue to negatively affect food security into 2021.

Food Crises and COVID-19 2020: Emerging Evidence and Implications. An Analysis of Acute Food Insecurity and Agri-food Systems during COVID-19 Pandemic Technical Note

Author or institution:	Global Network Against Food Crises
Geographic focus:	Global
Technical focus:	Diet, Food price and availability
Information type:	Informal
Date published:	15 September 2020
Date added:	29 September 2020

The note is based on emerging evidence from country-level food security analyses. The section entitled “Emerging evidence on the effects of COVID-19 and related policy response on agri-food systems”, is based on an analysis of relevant policies and COVID-19-related urgent and essential restrictions from 15 FIRST country profiles between May and July 2020. The analysis is triangulated and complemented with emerging evidence from field monitoring systems and specific assessments of the potential impact of COVID-19 on food supply chains and rural livelihoods. Sources include FAO COVID-19 assessments ongoing in over 20 countries with food crises, available evidence and complementary sources from Global Network Against Food Crises partners’ Global Food Security Cluster (gFSC) assessments, Famine Early Warning Systems Network (FEWS NET), Food Security Cluster, Integrated Food Security Phase Classification/ Cadre Harmonisé (IPC/CH) analysis, World Food Programme’s mobile Vulnerability Analysis and Mapping (WFP mVAM) food security monitoring, and other available evidence. To note, this report used a number of resources that have already been included in this report but may be one of the first to try to triangulate the information.

Highlights include:

- The 2020 IPC analysis, taking into account the effects of COVID-19, pointed to a significant deterioration with a 64% increase in the number of people food insecure in need of urgent assistance across the country compared with the peak reached in 2019—from 5.9 million (or 13% of the population analysed) in June-August 2019.
- Markets and food supply chains have largely stabilised, in part due to government support and action, after initial disruptions due to the effects of COVID-19 restrictions. However, structural deficiencies in countries with food crises remain, with related disruptions to agricultural production and other parts of the food supply chain. Analysis of the available country profiles (May-July) shows that relative market stabilisation can be attributed to two main factors: (i) the progressive ease of restrictions; and (ii) conducive policies targeting the food sector to facilitate its functioning.
- Despite the gradual stabilisation of food markets, reduced economic activity and associated reductions in employment, remittances, incomes and purchasing power, coupled with localised food price increases, have exacerbated most pre-existing COVID-19 food insecurity vulnerabilities.
- There is a mix of reporting regarding the changes in food prices due to the effects of the pandemic and the measures taken to contain its spread. Reported price changes may be different even for the same country.
- The impacts of COVID-19 on livelihoods and acute food insecurity are highly context-specific and affect population groups differently.
- There is a mix of reporting regarding food prices due to COVID-19 even for the same country. The main reasons for the contradictions can be summarised as:

Timing of measurement, coverage and baseline: Sometimes the inability to move products at the producer level to more distant markets forces producers to sell at local markets causing a sharp reduction of prices in local markets in rural areas. As a result, urban markets result in a reduced availability of food items. As restrictions ease, availability increases, and prices tend to fall and stabilise. However, prices of more expensive items, like fruits and meat, fall as demand falls. Prices also depend on local lockdowns.

External factors: Extreme events (disease, conflict) also have a large effect on food prices, difficult to distinguish from the effects of the restriction.

Country-specific case studies are included in the country-by-country analysis.

The Other Way COVID Will Kill: Hunger

Author or institution:	Peter S. Goodman, Abdi Latif Dahir and Karan Deep Singh/New York Times
Geographic focus:	Global & Regional
Technical focus:	Diet, Food price and availability, Nutrition intervention delivery
Information type:	Informal
Date published:	11 September 2020

Date added: 23 September 2020

This article highlights the likely impact of COVID-19 on hunger and malnutrition, drawing on primary anecdotal evidence and secondary evidence from international nongovernmental organisations and UN agencies in multiple countries. It explores issues related to how the impact of COVID-19 interacts with other shocks related to conflict, climate and the desert locust invasion in sub-Saharan Africa and South Asia.

It also examines the reduced availability of, and access to services, falling incomes and evidence of reduced demand for food crops in some contexts.

In addition to including first-person stories, it translates some of the emerging literature into publicly-accessible language, e.g., “COVID has been yet another shock in what has been a terrible year in this region,” from the WFP, and “Worldwide, the number of children younger than five caught in a state of so-called wasting—their weight so far below normal that they face an elevated risk of death, along with long-term health and developmental problems—is likely to grow by nearly seven million this year, or 14%” from [Headey](#).

COVID-19 & Global Food Security

Author or institution:	IFPRI
Geographic focus:	Global
Technical focus:	Nutritional status, Diet, Food price and availability
Information type:	Informal
Date published:	August 2020
Date added:	25 August 2020

This new book (139 pages) published in August 2020 includes a series of short essays with country-specific case studies. It focuses on a broad range of impacts with chapters on food security, poverty and inequality; diets and nutrition; labour restrictions and remittances; food trade; supply chains; gender; policy responses; the future of pandemics and food systems. Highlights include:

- An expected dangerous decline in dietary quality in LMIC countries stemming from the income losses related to government-mandated shutdowns and de-globalisation, as well as from the freezing of food transfer schemes such as school feeding programmes and the breakdown of food markets due to both demand shocks and supply constraints.
- COVID-19 is likely to increase food prices, both as a cause and consequence of food shortages.
- Reduced demand for vegetables, fruits and animal sources (main sources of essential micronutrients) due to income effects and unemployment resulting from COVID-19 mitigation measure. Previous research noted that these nutritious foods can cost as much as 10 times more expensive than calories from staples.
- Significant disruptions to the supply chain for vegetables and dairy have been noted in Ethiopia and dairy in India.
- Amongst the poor, urban poor and women are especially vulnerable.
- Harvests are expected to be good with the US Department of Agriculture projecting an increase of global wheat production of 5% and rice production to remain the same as in 2019.

Trade restrictions are the worst possible response to safeguard food security.

The State of Food Security and Nutrition in the World 2020

Author or institution:	FAO, IFAD, UNICEF, WFP and WHO
Geographic focus:	Global
Technical focus:	Nutritional status, Diet, Food price and availability

Information type:	Informal
Date published:	2020
Date added:	25 August 2020

This report highlights the food security and nutrition situation with projections for 2030 without factoring the impact of COVID-19. Highlights include:

- Globally, the burden of malnutrition in all its forms remains a challenge. According to current estimates, in 2019, 21.3% (144.0 million) of children under 5 years of age were stunted, 6.9% (47.0 million) wasted and 5.6% (38.3 million) overweight. The world is not on track to achieve the SDG 2.1 Zero Hunger target by 2030 - the number of people undernourished is increasing (up by 10 million people in one year from 2018 to 2019).
- A preliminary assessment suggests that the COVID-19 pandemic may add between 83 and 132 million people to the total number of undernourished in the world in 2020 depending on the economic growth scenario.
- Dietary Diversity: Even without factoring the impacts of COVID-19, Africa is significantly off track to achieve the Zero Hunger target in 2030. If recent rates of increase persist, its prevalence of undernourishment (PoU) will rise from 19 to 26%.

Food Affordability: Globally, only one in three children 6 to 23 months of age meets the recommended minimum dietary diversity, with wide variation amongst the regions of the world. More than 57% or more of the population throughout sub-Saharan Africa and Southern Asia cannot afford a healthy diet. (These estimates do not include the additional impact of COVID-19).

Immediate Impact of Stay-at-Home Orders to Control COVID-19 Transmission on Socioeconomic Conditions, Food Insecurity, Mental Health, and Intimate Partner Violence in Bangladeshi Women and their Families: An Interrupted Time Series

Author or institution:	Hamadani et al. / The Lancet
Geographic focus:	Bangladesh
Technical focus:	Food price and availability
Information type:	Peer-reviewed journal
Date published:	25 August 2020
Date added:	08 September 2020

Tagging on to a randomised control trial, this study used a phone survey to assess food insecurity before (Feb 2020) and during lockdown (19 May-18 June 2020) in Rupganj Upazila, rural Bangladesh. Results related to nutrition include:

- Before the pandemic, 136 (6%) and 65 (3%) of 2420 families experienced moderate and severe food insecurity, respectively.
- This increased to 881 (37%) of and 371 (15%) of 2417 families during the lockdown.
- The number of families experiencing any level of food insecurity increased by 52% (p<0.0001).

Global Price Watch July 2020 Prices

Author or institution:	Famine Early Warning Systems Network (FEWS NET)
Geographic focus:	Global & Regional
Technical focus:	Food price and availability
Information type:	Informal
Date published:	August 2020

Date added: 08 September 2020 (Updated Monthly) - information remains the same as previous edition

- **Global:** International staple food markets remained well supplied. Rice and wheat prices decreased whilst maize and soybean prices increased on average in June. Global crude oil prices remained below average but increased further for a second consecutive month as countries continue to lift stay-at-home orders whilst global fertiliser prices were stable or falling in June.
- **West Africa:** Market supplies were sufficient to meet demand but below last year given production deficits and COVID-19 related disruptions. Normal lean season demand increases continued but were at below-average levels given the low purchasing power and limited cross-border trade. Insecurity-related market disruptions persisted in the Greater Lake Chad basin and Tibesti region and Liptako-Gourma regions. Staple food prices were below average across much of the Sahel, but average to above average in deficit areas. Prices were substantially above average in Nigeria and coastal countries facing currency depreciation and high transport costs.
- **East Africa:** Staple food price trends varied across the region. COVID-19 related movement restrictions continued to contribute to some atypical supply, demand and price patterns. Maize prices declined in surplus-producing Uganda and Tanzania with the progression of May-to-August harvests and in a context of weak regional demand. Prices increased seasonally in Ethiopia, Somalia, South Sudan and Sudan as stocks tightened ahead of October-to-December harvests. Prices declined on urban markets of Kenya following the arrival of international imports. Good animal body conditions led to elevated livestock prices.
- **Southern Africa:** Maize supply on major markets continued increasing as the 2020/21 marketing year progressed in most countries of the region. Prices declined seasonally or stabilised in many countries. South Africa continued exporting maize to structurally-deficit countries of the region, notably Zimbabwe where regional imports have expanded considerably in recent months following the easing of phytosanitary (GMO) restrictions. Zambia maintained a ban on formal maize exports but continued exporting via informal channels due to favourable prices in neighbouring countries.
- **Central Asia:** Wheat price trends were stable or decreasing on average in Afghanistan. Wheat prices increased in Pakistan. In Yemen, the broader conflict and macroeconomic context continued to disrupt overall market functioning and food access; staple food prices remained above average.

The Economic Impact of COVID-19 Lockdowns in Sub-Saharan Africa

Author or institution:	Teachout, M et al. / International Growth Centre & London School of Economics
Geographic focus:	Global
Technical focus:	Diet, Food price and availability
Information type:	Informal
Date published:	May 2020
Date added:	25 August 2020

London School of Economics and International Growth Centre modelled the effects of containment measures on household consumption across sub-Saharan Africa using household data from Rwanda, latest poverty rate estimates from the World data lab, employment estimates from International Labour Organisation and lockdown measures from the Oxford COVID-19 response tracker. Highlights include:

- 41.0 million people (4.9%), including 4.8 million children under 5 years old, are very severely food-deprived at the end of an 8-week lockdown.
- The urban poor is most at risk of suffering from income loss and food deprivation.
- A more prolonged income shock even smaller in magnitude or affecting fewer people will put millions of people at risk of severe food deprivation.
- With cash crop harvests to happen in the next few months in most of Eastern Africa, if disruptions prevent farmers from selling their products and food prices in urban areas rise, tens of millions more will be at risk of famine.

Impacts of COVID-19 on Small- and Medium-Sized Enterprises in the Food System: Result of an Online Survey

Author or institution:	GAIN, WFP, SUN Business Network
Geographic focus:	Global
Technical focus:	Diet, Food price and availability
Information type:	Informal
Date published:	May 2020
Date added:	25 August 2020

GAIN and partners, including the Scaling Up Nutrition (SUN) Business Network, undertook a survey of food system SMEs in 17 countries in early May 2020, aiming to assess the impacts of the COVID-19 pandemic on their businesses and their support needs. Highlights include:

- 363 respondents, primarily from firms in the processing and distribution and grains, vegetables and fruit value chains, reported decreased sales (82%), difficulty accessing inputs (49%), difficulty paying staff (44%) and an urgent need for financial (81%) and technical (64%) support.

Subsequently, based on this information, MQSUN+ prepared a brief on [COVID-Sensitive Nutrition Marketing Messages for Small and Medium Enterprises \(SMEs\) in SUN Countries](#) which outlines nutrition and health claims and COVID-sensitive nutrition marketing messages which national SUN Business Network SMEs can tailor to their local context to help promote products that can contribute to good nutrition and healthy diets during and post the COVID-19 pandemic.

Review of Agrarian Studies Volume 10, Number 1

Author or institution:	Various
Publication:	The Journal of Foundation for Agrarian Studies
Geographic focus:	Global with a special reference to India
Technical focus:	Food price and availability
Information type:	Peer-reviewed journal
Date published:	January-June 2020
Date added:	25 August 2020

This edition of the Review of Agrarian Studies (peer-reviewed journal) contains continually updated research with this edition focusing on how COVID-19 impacts on food and health system and policy responses. It also includes a number of phone-based surveys in India. Summary of evidence:

- In rural areas, the collapse in producer prices and farmers' difficulty selling their produce imply lower prices and greater availability of a variety of foods. Yet, in many regions, food insecurity remains high, mainly because of a large loss in incomes, according to several telephone surveys of rural workers and farmers.
-

2.5 Intervention Delivery and Coverage

2.5.1 Summary overview

This section describes the most recent evidence and data relating to the indirect impact of COVID-19 on the delivery and coverage of nutrition sensitive and nutrition specific interventions in LMIC.

The source descriptions are organised in chronological order. An overview of all the sources which have been summarised under this section can be found in Box 5.



Impact of COVID-19 on the intervention delivery and coverage

Most recent data and evidence (Added in February 2021)

- Numerous adaptations have been made to community-based management of acute malnutrition (CMAM) of children under five during the COVID-19 pandemic, with the most frequent being the introduction of the measurement of the MUAC by caregivers (referred to as “Family MUAC”), followed by modifications made to scheduled follow-up appointments for acute malnutrition treatment. Learnings from these adaptations have been documented and led to practical recommendations for improvement (Wrabel, 2021).
- The WFP is monitoring school meals during school closures and assessing alternative solutions to be implemented by government or WFP. As of 12 February 2021, globally 267 million children (49% girls) are missing out on school meals and 113 countries continue to implement school closures to curb the spread of COVID-19.
- Globally, A WFP and UNICEF Innocenti Working Paper publication estimates that in 2020, 39 billion in-school meals have been missed globally during school closures by children who were benefiting from school feeding programmes pre-crisis. Fifty two percent of school-meals missed were in LMIC (World Food Programme and UNICEF, 2021).

Earlier data and evidence collected (August 2020 - January 2021)

- The State of Acute Malnutrition’s tracker for [COVID-19 Adaptations in the Management of Acute Malnutrition](#) includes a wealth of data on protocol adaptations for CMAM, including the introduction of measurement of mid-upper-arm circumference (MUAC) by caregivers, reduced frequency of follow-up visits during treatment, modified admission criteria, reduced dosage of therapeutic and/or supplementary food, and acute malnutrition treatment by community health workers.
- The latest estimates from WFP’s [Global Monitoring of School Meals During COVID-19 School Closures](#) suggest a slight increase in the number of children missing out on meals at school to 264 million globally in January 2021, up from an estimated 246 in December 2020.
- A study on the [impact of Ethiopia’s flagship social protection programme on the adverse impacts of the COVID-19 pandemic on the food and nutrition security of households, mothers, and children reveals that two thirds of the respondents reported that their incomes had fallen after the pandemic began and almost half reported that their ability to satisfy their food needs had worsened.](#)
- Freudenreich and colleagues recommend, [evidence-based nutrition-sensitive interventions to increase food and nutrition security by addressing food system disruptions during the COVID-19 pandemic in LMICs.](#)
- [Alive & Thrive’s implementation research](#) described how IYCF interventions were interrupted, and some cases, how they adapted to COVID-19 pandemic in Bangladesh, Ethiopia, India and Nigeria.
- Programme approaches to support the continuation of SAM and MAM treatment services in Cox’s Bazaar during the Covid-19 outbreak adapted by [integrating acute malnutrition screening into a modified vitamin A supplementation campaign](#) .. [The family MUAC-approach was introduced to into a community MAMI programme in Ethiopia](#) to enable home-based screening of infants under six months. A new type a of reversible MUAC tape was used to supports screening of children under 6 months and children up to age 5 years.
- A [report on disruptions to essential health services in Africa during COVID-19](#) shows that the COVID-19 pandemic and its associated response has had demonstrable (in some countries severe) effect on access to essential health services across Africa.
- The [UNICEF Global COVID-19 Situation Report of October 2020](#) highlights that the COVID-19 pandemic could worsen the situation of child malnutrition, resulting from the reduced coverage of key high impact maternal and child health interventions. The data and evidence are limited to a portion of UNICEF operational countries only.
- The UNICEF composite dataset [track the situation of children during COVID-19](#). (2020, September 24) do not reveal many changes from the previous update. These results are limited to a portion of UNICEF operational countries.
- [WFP monitors School Meals During COVID-19 School Closures](#). Based on the latest report, the number of children missing out on meals at school appears to be decreasing, while an increasing number of countries have found alternative solutions.

- Shumba and colleagues identified [how COVID-19 and associated control measures impact the five domains of nurturing care](#) in Kenya, focusing on the period from conception to four years of age (September 2020).
- [A blog on India's COVID-19 economic relief package](#) explains the essence of the agricultural reforms, their potential impacts and obstacles, and key factors that will determine their impact on India's future agricultural growth. It concludes that the agricultural reforms in India may increase food price volatility.
- [UNICEF country office data](#) shows widespread disruption to several key platforms through which key nutrition services are provided, and which are critical to protecting nutrition.
- The Every Woman Every Child Global Strategy 2016-2030 Report ([UNICEF, Sept 2020](#)) includes a section on the impact of COVID-19 on women's, children's and adolescents' health and highlights potentially catastrophic outcomes of essential service disruptions.
- [Tracking the Situation of Children During COVID-19](#) indicates that the number of countries reporting disruptions to services has increased from 85 to 159 since the last update.
- Government measures to contain and mitigate the pandemic have far-reaching impacts. Recent multi-country estimates from a July [UNICEF survey](#) found that 68% of participating countries reported at least some disruption in health checks for children and immunisation services.
- A (May to July) [survey of ministry of health officials](#) in WHO regions found that disruptions in up to 25 essential health services are widespread, affecting almost every country (90%), with greater disruptions in LMIC than in high-income countries.
- The Global Financing Facility has released [June to July 2020 data from District Health Information Systems-2/DHIS2](#) examining the impacts of COVID-19 on health services. Childhood vaccination was the most disrupted service,
- UNICEF's newsletter [reported](#) having supported delivery of messages and counselling to 29 million caregivers on infant and young child feeding during the COVID-19 pandemic to date.
- The Standardized Monitoring and Assessment of Relief and Transitions (SMART) team reports in their newsletter [that they are updating guidance](#) (expected to be published soon), and its [website](#) has already set out some scenarios, for when nutrition assessment surveys should resume.
- A prospective observational study ([KC et al., August 2020](#)) in Nepal showed that institutional neonatal mortality increased from 13 per 1,000 live births to 40 per 1,000 live births and early initiation of breastfeeding decreased from 49% to 46%.
- A time-series ([Hamadani et al. August 2020](#)) in Bangladesh assessed food insecurity before (Feb 2020) and during lockdown) in, a rural area and found that 52% (N=2,417) of families experienced food insecurity during the lockdown—an increase of 52% compared to before the lockdown.
- The WFP is [monitoring school meals](#) during school closures and assessing alternative solutions from government or WFP. As of 04 September, globally 346 million children (47% girls) are missing out on school meals and 161 countries continue to close schools to curb the spread of COVID-19.
- [FEWS NET reports](#) that interrelated factors around movement restrictions and reduced economic activity during the pandemic are increasing humanitarian food assistance needs. [They also estimate](#) COVID-19's impacts on food production to vary over the coming year, with a potential for significant impacts in some regions.
- Many child nutrition and health services are disrupted ([UNICEF Situation Tracker for COVID-19 socioeconomic impacts June data](#), reported in July 2020). Likewise, school feeding programmes are greatly affected with a 75-100% drop in 4 of 5 focus countries.
- Social and behaviour change (SBC) for nutrition is adapting. A [July webinar](#) gave an overview of the [USAID guidance on SBC for nutrition during COVID-19](#); of managing nutrition-related misinformation by repeating the facts rather than the myth; and of country (Uganda and Kyrgyzstan) experiences with adapting during COVID-19.
- An August webinar [Safeguarding Progress Towards Improved Nutrition During the COVID-19 Pandemic](#) links to USAID's (June 2020) Guiding Principles and Recommendations for Nutrition in the Context of COVID-19, which summarises impacts and intervention priorities.

2.5.2 Most recent sources

Title: [Adaptations to community based acute malnutrition treatment during the COVID-19 pandemic](#)

Author or institution	Wrabel et al., Field Exchange (ENN)
Geographic focus	LMICs (Africa and South Asia focus mentioned in the paper)
Population focus	Children under five
Technical focus	Intervention Delivery
Information type	Magazine/ field publication (not peer reviewed)
Date published	January 2021
Date added	February 2021

Purpose/objective of source

To present initial lessons learned related to adaptations of CMAM interventions due to COVID-19 and to provide recommendations for improving these adaptations.

Main nutrition-related findings

- Numerous modifications have been made to the management of acute malnutrition of children under five during the COVID-19 pandemic, with the most frequent being the introduction of the MUAC measurement by caregivers (referred to as “Family MUAC”), followed by modifications to scheduled follow-up appointments for treatment. Modifications to CMAM admissions and discharge criteria have also been widespread.

Family MUAC: Common challenge

- Limited availability of MUAC tapes. This led to programmes targeting at-risk families such as those with children discharged from acute malnutrition treatment programmes rather than self-referrals from Family MUAC.

Family MUAC: Recommendations to address challenges experienced due to the modified approach

- Engage with MUAC tape suppliers to procure sufficient tapes for wide distribution to maximise coverage; train mothers how to check for oedema in addition to measuring MUAC and integrate sensitisation on the causes of malnutrition and measures to prevent acute malnutrition; prepare clinics for elevated caseloads that may result from an initial increase in self-referrals; retrain caregivers who self-refer children with inaccurate measurements and encourage them to continue health-seeking behaviours.

Modified frequency of follow-up appointments during CMAM treatment: Common challenges

- Staff in multiple contexts observed increases in the selling and sharing of nutrition products, possibly due to the larger rations distributed at each visit combined with families’ livelihoods constraints.
- There were also concerns that nutrition status of those children enrolled may deteriorate during the longer gaps between visits.

Modified frequency of follow-up appointments during CMAM treatment: Recommendations to address challenges experienced due to the modified approach

- Identify storage alternatives for families unable to safely manage the larger ration sizes that accompany less frequent clinic visits; increase home visits to ensure robust caregiver support in managing measured usage of larger rations between appointments; schedule more frequent appointments for high-risk children; provide strong community sensitisation to reduce confusion among caregivers and increase uptake of adapted schedules.

Quality of the data/ evidence (Method)

- Data for this article came from an ongoing mixed methods study in 36 countries that systematically documents, synthesises and analyses information regarding programmatic adaptations in the management of acute malnutrition in children under five in the context of COVID-19.
- Specific study methods included an online survey for implementing organisations (Action Against Hunger, with support from the United States Agency for International Development (USAID) and in collaboration with UNICEF and the United States Centers for Disease Control and Prevention (CDC)), semi-structured interviews with programme staff and secondary analyses of programmatic data. The study was well underway in January 2021, but the exact start date of the online survey and the number of countries covered were not listed by the source.
- The study was conducted by Action Against Hunger, with support from the United States Agency for International Development (USAID) and in collaboration with UNICEF and the United States Centers for Disease Control and Prevention (CDC).

Title: Global Monitoring of School Meals During COVID-19 School Closures

Author or institution	World Food Programme
Geographic focus	Global
Population focus	Children
Technical focus	Intervention Delivery and Coverage
Information type	Dataset
Date published	December 2020
Date added	February 2021 (Updated from earlier data provided under MQSUN and TASC)

Purpose/objective of source

The World Food Programme is monitoring the provision of meals for school children during school closures and assessing alternative solutions from the government and/or WFP.

Main nutrition-related findings

- As of 12/02/2021, WFP estimates the number of children missing out on school meals at 267 million globally, 49% of which are girls.
- This represents a slight increasing trend, building on the previous global estimates of 264 million children missing out on school meals in January and 246 million children missing out in December, although this remains significantly below the 369 million children estimated to be missing out on school meals at the peak of global school closures in April 2020.
- 113 countries continue to implement school closures to curb the spread of COVID-19.
- The number of countries that have found alternative solutions to reach school children with meals remains at 79 as of February 2021, compared to the 58 countries reported in September 2020.

Quality of the data/ evidence (method)

- Data remains missing for 126 countries

Title: COVID-19: Missing More Than a Classroom The impact of school closures on children's nutrition

Author or institution	Borkowski et al., World Food Programme and UNICEF
Geographic focus	Global (126 countries)
Population focus	Children and youth to age 21
Technical focus	Nutrition Interventions
Information type	Innocenti Working Paper (peer reviewed)
Date published	January 2021
Date added	February 2021

Purpose/objective of source

To present the impacts of school closures on nutrition and health, promising practices for adapting school feeding during school closures and considerations for school reopening.

Main nutrition-related findings

- In 2020, an estimated 39 billion school meals have been missed globally during school closures by children who previously benefited pre-crisis.
- Fifty two percent of school meals missed were in LMICs. On average, it is estimated that children missed 4 out of 10 school meals they should have received, with children in some countries missing 9 out of 10 school meals.

Report recommendations

- Identify and reach out to vulnerable children in the first 8,000 days who are at greatest risk of deteriorating nutrition outcomes due to suspension of school feeding programmes. Ongoing household assessment and data collection at the household level is necessary for identifying such children.
- Adapt/modify school feeding programmes during times of school closures. Potential adaptations include increasing distribution of take-home rations (as opposed to school meals), using cash transfers as a substitute for school feeding, or employing multimodal approaches such as

redistributing money originally designated to provide school meals to buy basic food baskets for disadvantaged families.

- Leverage school feeding programmes to encourage children back to school and maintain enrolment after the crisis. Countries can take advantage of schools reopening by improving the programme design and address formerly neglected issues around school feeding, such as the quality of diets and food-fortification options.

GESI observations

- The report highlights the important of identifying and reaching the most nutritionally vulnerable children, as well as households where incomes and levels of food security have fallen during the COVID-19 crisis.

Quality of the data/ evidence (Method)

- This is an Innocenti working paper, which has been reviewed externally and internally within UNICEF.
- Most of the paper is based on a synthesis of previously published articles and reports.
- The estimate of the 39 billion school meals missed presented in this working paper is based on three data sources for 126 countries including the UNESCO database of school closures (210 countries from 16 February 2020 to 31 December 2020), WFP school feeding map (covering 126 countries which contains information on the number of children regularly receiving school meals by country), and UNESCO UIS (gives estimates of primary and secondary school aged population in each country).

2.5.3 Information collected in previous months by TASC

Title: Adaptations to community-based acute malnutrition treatment during the COVID-19 pandemic

Author or institution	The State of Acute Malnutrition
Geographic focus	Global
Population focus	Children
Technical focus	Intervention Delivery and Coverage
Information type	Article , Data portal
Date published	January 2021
Date added	January 2021

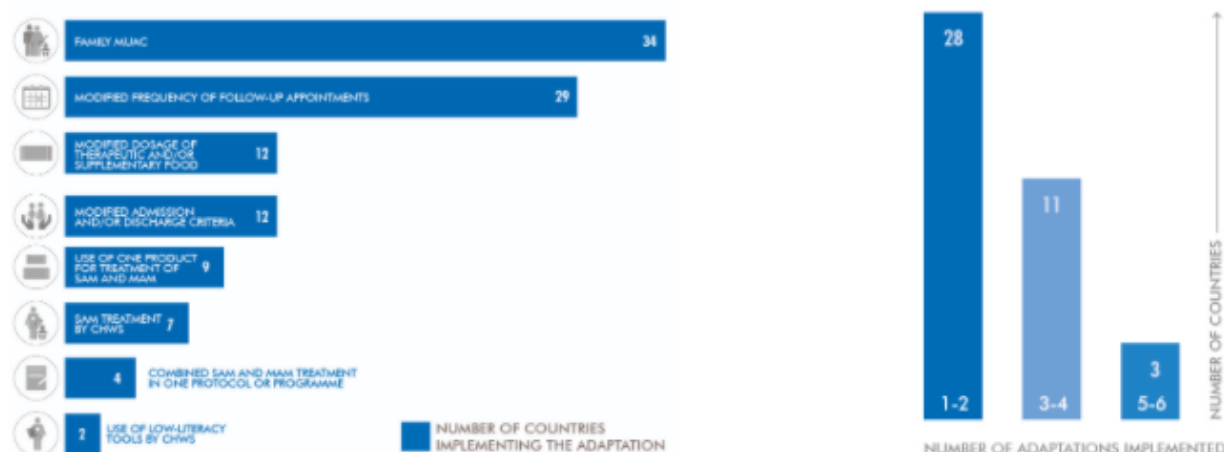
Purpose/objective of source

After the onset of the COVID-19 pandemic, guidance was quickly released by the United Nations Children's Fund (UNICEF), the Global Nutrition Cluster (GNC), Global Technical Assistance Mechanism for Nutrition (GTAM) and the World Health Organisation (WHO). This guidance suggested a range of adaptations to acute malnutrition management programmes to enable service continuity. The State of Acute Malnutrition's tracker keeps record of various protocol adaptations across contexts, highlight innovative case studies, and aggregates available resources as part of a study by Action Against Hunger, USAID, UNICEF, and the US Center for Disease Control.

Main nutrition-related findings

CMAM adaptations studied in 42 countries "included the introduction of measurement of mid-upper-arm circumference (MUAC) by caregivers (referred to as Family MUAC), reduced frequency of follow-up visits during treatment, modified admission criteria, reduced dosage and acute malnutrition treatment by community health workers (CHWs) among others".

Figure 7. Number of countries implementing adaptations



- Overall, programme staff implementing Family MUAC reported that initiating and scaling this approach was largely successful. While the end activity of Family MUAC is consistent – training caregivers to measure children’s MUAC – programme design varied widely, with some building on existing structures (such as Care Groups) and others using a stand-alone cascading training model. Both virtual and in-person training was used with limited availability of MUAC tapes cited as an issue.
- While typical treatment programmes involve weekly follow-up visits, protocols during COVID-19 were adapted to include fortnightly or monthly visits. Issues cited include selling/sharing of nutrition products due to larger dispatches and concerns about deterioration of a child’s nutrition status in the extended gap.
- Adapted protocols most frequently included assessing only MUAC and oedema, while some also expanded MUAC thresholds after conducting a scoping assessment to capture children with low weight-for-height Z-scores (WHZ). Staff reportedly appreciated the reduced workload associated with eliminating these measurements although this may ultimately be offset by an overall increased workload associated with expanding MUAC thresholds.
- Overall, respondents reported that phone-based counselling allowed for continued contact with children in acute malnutrition treatment programmes despite movement restrictions. Clinic staff were sometimes able to engage with caregivers more frequently, however caregivers preferred home-based care and listed caregiver visits as essential for continuing care.

Knowledge gaps / areas for further research

The main gap relates to the limited number of countries and number of organisations surveyed within those countries. It would be useful to expand this. Further, all questions relate to adaptations due to COVID-19, with no time or date specified. It could be useful to know how adaptations have evolved over the course of the pandemic.

Quality of the data / evidence (method)

- As of November 23, 2020, 19 organisations (17 non-governmental organisations (NGOs) and two United Nations (UN) organisations) running operational programmes in 36 countries had completed the survey and 36 semi-structured interviews had been conducted.
- Limitations of and considerations when using this data, include a small sample of countries and, a small sample of organisations working within them and a lack of clarity around how these organisations were selected for surveying (likely only USAID implementing partners). Full results will not be available until mid-2021.

Title: COVID-19 and Food Security in Ethiopia : Do Social Protection Programmes Protect ?

Author or institution Abay et al. (World Bank Group/International Food Policy Research Institute)

Geographic focus	Ethiopia
Population focus	Households, mothers and children <5 included
Technical focus	Nutrition Intervention Delivery and Coverage, Social Protection
Information type	Policy Research Working Paper
Date published	November 2020
Date added	December 2020

Purpose/objective of source

To assess the impact of Ethiopia's flagship social protection program, the Productive Safety Net Programme (PSNP) on the adverse impacts of the COVID-19 pandemic on the food and nutrition security of households, mothers, and children. The analysis uses pre-pandemic, in-person household survey data and a post-pandemic phone survey.

Main nutrition-related findings

Covid-19 Impacts

- Mothers' and children's diets changed little, despite some changes in the composition of diets, with consumption of animal source foods declining significantly.
- Two-thirds of the respondents reported that their incomes had fallen after the pandemic began, and almost half reported that their ability to satisfy their food needs had worsened. Household food insecurity increased by 11.7 percentage points and the size of the food gap by 0.47 months in the aftermath of the onset of the pandemic.

Impacts of participation in the Productive Safety net Programme

- There was no evidence that participation in the PSNP protects mothers' and children's diets. This is, partly because households with limited market access cannot use the cash transfers to buy food, in kind transfers are likely given in consumption items the households already have (such as wheat and cooking oil), and lastly, the dietary diversity of mothers and children is already at a very low level and unlikely to decline further.
- The study finds that household food insecurity increased by 11.7 percentage points and the size of the food gap by 0.47 months in the aftermath of the onset of the pandemic. However, for those households participation in the PSNP, the likelihood of becoming food insecure increased by only 2.4 percentage points for PSNP households and the duration of the food gap increased by only 0.13 month.
- The protective role of the PSNP is greater for poorer households and those living in remote areas. PSNP households were less likely to reduce expenditures on health and education by 7.7 percentage points and less likely to reduce expenditures on agricultural inputs by 13 percentage points.

Figure 8. Food insecurity and food gap of poor households living in chronically food insecure districts where PSNP is implemented. Households participating in PSNP and those who do not



Quality of data/methodology

- This analysis uses pre-pandemic, in-person household survey data and a post-pandemic phone survey.
- Face-to-face surveys with mothers of children under the age of 24 months were conducted to assess how access to the PSNP had affected their food security and nutritional status. In June 2020, the team re-interviewed these mothers—approximately 1,500 in total—by phone. Hence, they were able to assess the extent to which household food security and diets of individual household members changed following the start of the pandemic in Ethiopia.
- These were selected from a previous face-face survey of PSNP and non-PSNP (but considered poor) households in August 2019.
- Some concern raised was that the sampling was not systematic between the two. The authors attempted to counter this by using aspects of each household previously recorded within the modelling. The authors conclude that the results are robust to definitions of PSNP participation, and different estimators applied for the non-randomness of mobile phone ownership

Title: Effective interventions to increase food and nutrition security in response to Covid-19

Author or institution	Freudenreich et al. (BMZ, DEval, IGZ, GAIN, IFAD)
Geographic focus	Global
Population focus	All, especially vulnerable groups such as women and children, youth, the elderly, migrants and poor informal-sector workers
Technical focus	Nutrition Intervention Delivery and Coverage (nutrition sensitive)
Information type	Policy Brief
Date published	October 2020
Date added	December 2020

Purpose

To recommend effective, evidence-based interventions to increase food and nutrition security by addressing direct disruptions in the food system related to the Covid-19 pandemic in LMICs, and to highlight impact pathway and specific adaptations in the context of the pandemic.

Main nutrition-related findings

The document identified various activities but only those that are nutrition-sensitive are discussed here
Interventions Identified to increase food and nutrition security:

- Subsidising inputs for farmers not constrained by labour shortages.
- Post-harvest, storage and processing interventions to minimise losses due to due to labour shortages, market closures and changes in downstream processing and retail.
- Improve social safety nets and transfers through innovative delivery mechanisms. This includes replacing suspended school feeding programmes by take-home rations or cash transfers and promoting and maintaining food fortification schemes.

Context-specific adaptations and recommendations:

For interventions aimed at directly increasing food access, it is important to reach out to vulnerable groups such as women and children, youth, the elderly, migrants and poor informal-sector workers, as these groups are most affected by Covid-19. Respecting sanitation and hygiene standards are key for the effective implementation of any intervention to prevent the spread of Covid-19.

Knowledge gaps

More robust evidence is needed to understand the potential role of mechanization, different processing and storing interventions, especially cold chains, the role and needs of SMEs along the supply chain and the potential for e-commerce in food retail, and urban gardening interventions, and their impact on food and nutrition security.

Data/methodology applied

- The evidence provided in this policy brief is based on a review of existing literature

Title: [An Overview of Alive & Thrive's Implementation Research](#)

Author or institution	Alive and Thrive
Geographic focus	Ethiopia, Nigeria, India, and Bangladesh
Population focus	Pregnant and lactating women
Technical focus	Nutrition Intervention Delivery and Coverage (MIYCN)
Information type	Research Summary brief
Date published	October 2020
Date added	December 2020

Purpose/objective of source

The research summary brief describes the evaluation design, research questions, outcomes, and implementation status of maternal nutrition interventions in government (antenatal care) ANC services in Burkina Faso, Ethiopia, Bangladesh and India; an urban nutrition intervention in Bangladesh, an urban and rural nutrition intervention in Nigeria using SBCC platforms for IYCF, and an urban nutrition intervention in Nigeria via private health facilities. The brief also describes innovations for using home visits for nutrition in India, innovations for adolescent nutrition in Ethiopia, innovations for engaging fathers in complimentary feeding in Nigeria, and innovations in breastfeeding policies in Southeast Asia.

Main nutrition-related findings

Only information directly related to COVID-19 is reported in this summary. 4 out of 10 programme s experienced interruptions or made adaptations in response to the COVID-19 pandemic, which are described here in the findings.

Ethiopia, Intervention interruption

- The implementation of nutrition-related ANC services paused in April 2020 due to Covid-19 and the government's State of Emergency Order. Earliest to restart is August 2021.

Nigeria, Data collection interruption

- End-line data collection delayed for the urban and rural nutrition interventions in Nigeria using SBCC platforms for IYCF.

India, Covid-19 Adaptations

- In response to Covid-19, adaptations were made to maternal nutrition interventions in government ANC services in India in response. The programme conducted a phone survey with frontline workers and households in Bihar, Gujarat, Jharkand and Uttar Pradesh states; elicited information on solutions to strengthen delivery of services during COVID-19; and explored effects on household exposure to nutrition services and communications, nutrition practices and food security. All results forthcoming.

Bangladesh, Covid-19 Adaptations

- In response to Covid-19, adaptations were made to the urban nutrition programme s in NGO-operated facilities by incorporating the use of mobile-MIYCN and establishing social-distancing mechanisms. The programme also conducted phone surveys with frontline workers and clients to understand effects of COVID-19 on services, identified solutions to strengthen delivery and uptake of essential health and nutrition interventions, and explored COVID-19 impacts on households' access to health and nutrition services and communications, nutrition practices, food security and other livelihood aspects.

Data/study method

- The document brings together information from different evaluations carried out by Alive and Thrive. The information related to the adaptations in the interventions due to COVID-19 was based on small surveys.

Title: Integrating screening for acute malnutrition into the vitamin A supplementation campaign in the Rohingya camps during the COVID-19 pandemic

Author or institution	Rahimov et al. (Field Exchange- Emergency Nutrition Network)
Geographic focus	Bangladesh
Population focus	Children under 5
Technical focus	Nutrition Intervention, Delivery and Coverage, GESI, Nutrition intervention- acute malnutrition screening and vitamin A supplementation, GESI
Information type	Journal Article
Date published	October 2020
Date added	December 2020

Purpose/objective of source

To describe an adaptation of programme approaches to support the continuation of severe acute malnutrition (SAM) and moderate acute malnutrition (MAM) treatment services in Cox' Bazaar during the Covid-19 outbreak. The adaptation involved the integration of acute malnutrition screening into a modified vitamin A supplementation campaign conducted in the Rohingya camps between 21st June and 15th July 2020.

Main nutrition-related findings

Vitamin A supplementation campaigns provide a ‘natural fit’ for community nutrition services

- The screening of children aged 6-59 months of age with mid-upper arm circumference (MUAC), integrated within the vitamin A supplementation campaign enabled the identification of almost 21,489 children with severe acute malnutrition (SAM) and moderate acute malnutrition (MAM) using adjusted MUAC thresholds (MUAC <120 mm and <135 mm respectively). The experience shows that screening for acute malnutrition can be successfully combined with vitamin A supplementation, given that the target age group is the same. At the same time, the modified MUAC cutoffs increased nutrition referral rates with particular impact on therapeutic supplementary feeding programmes (TSFPs). This situation is being monitored closely and decisions will be made to ensure continued high coverage of essential nutrition services.

Identification of children with disabilities integrated into screening

- Children with disabilities were identified using a simple questionnaire (based on DFID/FCDO’s 2019 ‘Guidance on strengthening disability inclusion in Humanitarian Response Plans’) carried out with the caregiver, the purpose of which was to screen and refer children for a more detailed assessment. Children identified with disabilities were referred to available disability services (for example, services provided by Handicap International).

Covid-19 Infections did not increase

- The number of cases of Covid-19 infection reported by the Health Sector did not increase following the vitamin A supplementation campaign which suggests that, although many factors are involved, it may be possible to safely implement further rounds during the COVID-19 pandemic using the adapted strategies and implementing infection prevention and control (IPC) measures.
- Adapted strategies included shifting to door-to-door visits instead of mass gatherings, and recruitment and use of locally hired Community Nutrition Volunteers (CNVs) from the Rohingya communities (rather than the typically used Bangladeshi CNVs).

Data Collection Methods

- Data for this article comes from field monitoring and evaluation reporting from the nutrition Sector in Bangladesh, specifically the Technical Working Groups and the Section of UNICEF’s office in Cox’s Bazar which provided vitamin A supplements, designed the content of the integrated supplementation campaign and developed and distributed the communication materials.

Title: [UNICEF GLOBAL COVID-19 Situation Report: No. 14 October 2020](#)

Author or institution	UNICEF
Geographic focus	Global
Population focus	Children
Technical focus	Intervention Delivery and Coverage
Information type	Report
Date published	November 2020
Date added	December 2020

Purpose/objective of source

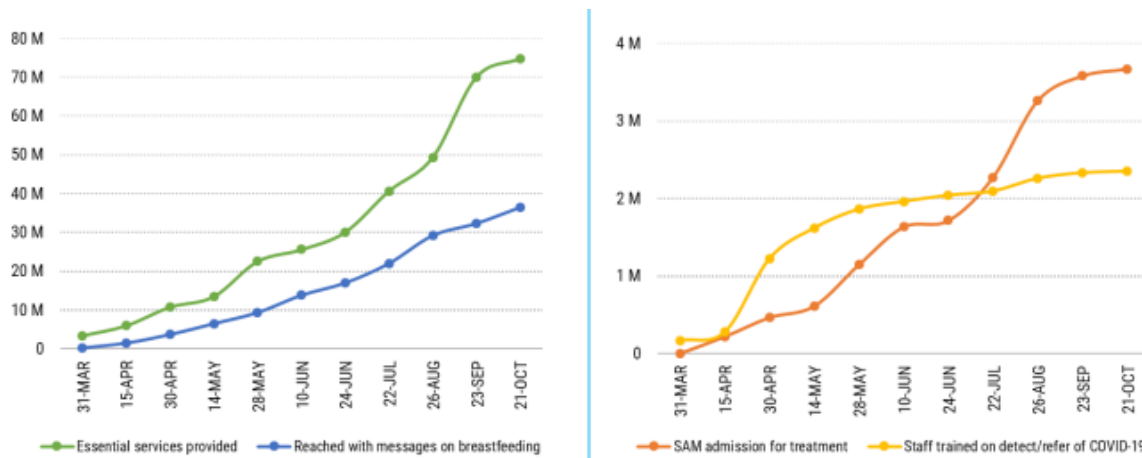
- UNICEF’s situation reports provide an update on the situation and needs of children in a country or region, as well as information on UNICEF’s response and funding requirements.

Main nutrition-related findings

- With regard to the delivery of services, UNICEF “continued to ensure access to essential nutrition services, including the protection of diets and practices, providing guidance and tools on how to breastfeed and supporting infant and young child feeding practices.”.

- Over 3.7 million children 6-59 months have been admitted for treatment of Severe Acute Malnutrition
- Over 36.5 million caregivers of children (0-23 months) have been reached with messages and counselling on infant and young child feeding including hygiene and IPC practices with UNICEF's support.”

Figure 9. Results trend for four health and nutrition pillar indicators throughout the 8 months of COVID-19 pandemic (Numbers are from the beginning of the pandemic and should be read as in addition to UNICEF's regular programming)



Data

- Data is based on reporting by UNICEF country offices and is limited to the reported results from 77 countries for essential services), 74 for breastfeeding messaging), 54 countries for SAM treatment, and 56 countries for staff training.

Title: Implementing the family-MUAC approach for infants under 6 months in the context of COVID-19 in Ethiopia

Author or institution	Rana et al. (Field Exchange- Emergency Nutrition Network)
Geographic focus	Ethiopia
Population focus	Infants and children under 5
Technical focus	Nutrition Intervention Delivery and Coverage- (MAMI)
Information type	Journal Article
Date published	November 2020
Date added	December 2020

Purpose/objective of source

To describe adaptations made in response to the Covid-19 pandemic to community Management of At-risk Mothers and Infants under 6 months (MAMI) programme in Gambela, Ethiopia and corresponding results.

Main nutrition-related findings

Two types of adaptations made

- The family MUAC approach was introduced to enable home-based screening of infants under six months.
- A new type of reversible MUAC tape was introduced to allow for the specifics of screening children less than 6 months of age as well as for children up to 5 years.

Corresponding results

- Measurement accuracy analysis showed that the vast majority of family caregivers trained by Community Outreach Agents (COAs) correctly identified the MUAC of their infants.
- There was a greater total percentage of admissions coming from community-focused active case finding over facility based and mass screening activities.

Knowledge gaps /risks

Need to further investigate the durability of the tapes, to better understand and address confusion in tape utility, and identify where barriers are arising in referral mechanisms. These topics are currently under investigation (and results will be integrated into refresher training in January 2021).

Title: **USING DATA TO FIND A BALANCE: Disruption to essential health services in Africa during COVID-19**

Author or institution	Partnership for Evidence-Based Response to COVID-19 (PERC)
Geographic focus	Africa
Population focus	General
Technical focus	Nutrition Intervention Delivery and Coverage
Information type	Report
Date published	November 2020
Date added	December 2020

Purpose/objective of source

- This brief builds on the September 2020 “[Responding to COVID-19 in Africa: Using Data to Find a Balance](#)” report from the Partnership for Evidence-Based Response to COVID-19 (PERC) to assess the extent of self-reported disruptions to essential health services brought on by COVID-19, to analyse who is most at risk, and to identify the common barriers reported by respondents when attempting to access care.

Main nutrition-related findings

- “The COVID-19 pandemic and its associated response have created a significant downstream effect on access to essential health services in Africa.”
- “The indirect effects of COVID-19 on essential health services in Africa have been severe”
- “Health care disruptions were highest among those with health problems and living in urban areas. Half of respondents with long-standing illnesses (including diabetes) reported disruptions to accessing health care.”
- Over one-third (34%) of respondents reported they missed or delayed visits for noncommunicable disease-related issues, with disruptions to care sought for cardiovascular disease, diabetes and respiratory/asthma reported most common.
- “Safety concerns and affordability of care were key barriers to access, however, more than half of respondents reported that mobility restrictions, coupled with health facility disruptions, contributed to their missing or delaying services.”
- All surveyed AU Member States reported high levels of food insecurity and income loss.

Figure 10. Percentage of respondents reporting experiencing burdens and any received government assistance ([Responding to COVID-19 in Africa: Using Data to Find a Balance](#), 2020).

72% Experienced any barrier to food access

70% Experienced income loss

14% Received government assistance

Data

- Ipsos conducted telephone interviews with 24,041 adults aged 18+ in 18 countries from 4 to 17 August 2020. The questionnaire was developed by Resolve to Save Lives, Ipsos and members of the Partnership for Evidence-Based Response to COVID-19 (PERC) consortium. Samples were drawn to be nationally representative of each AU Member State; weighting was applied by gender, urban/rural and geographic region to align the final data with the population.

Title: Tracking the situation of children during COVID-19

Author or institution	UNICEF
Geographic focus	Global
Population focus	Children
Technical focus	Nutrition Intervention Delivery and Coverage
Information type	Composite dataset
Date published	September 2020 (analysis updated 09/12/2020)
Date added	December 2020

Purpose/objective of source

UNICEF is tracking how “measures taken by governments to contain and mitigate the pandemic are having persistent and far-reaching impacts on children’s lives”.

For nutrition effects, this includes attempting to answer the following questions:

- Approximate level of COVID-19 relevant change in coverage of nutrition services nationally;
- Top reasons for nutrition service/use disruption across reporting COs;
- If facing stock outs of key supplies for management of AM, what percentage of national health and nutrition facilities reported Ready to Use Therapeutic Food (RUTF) stock outs in last month;
- Violations of International Code of Marketing of Breastmilk Substitutes in relation to the COVID-19 response in the last month;
- Adaptations being implemented to ensure management of AM is sustained;
- Adaptations being implemented to ensure continuity of micronutrient powders supplementation for children 6-59 months;
- New/adapted measures to support families on what, when and how to feed young children during complementary feeding period.

Main nutrition-related findings

- The nutrition services with the highest levels of any reported disruption are iron and folic acid supplementation for adolescent girls (72%), vitamin A supplementation (58%), treatment for child wasting (58%) and screening for child wasting (50%). In nutrition-related social protection services, there has been a 78% reduction in school feeding or take-home rations.
- Worryingly, 23% of countries reported 25% or more reduction in the use of programmes treating child wasting with Indonesia and Nepal, reporting 75%-100% reductions in service use, and India, Bangladesh, Papua New Guinea and Peru reporting decreases between 50% - 74%.

-
- Amongst the 102 countries reporting reasons for disruptions, 68% reported a reduction in demand due to fear of infection, 64% client mobility restrictions, 32% closure of services, 29% providers' mobility restrictions and 28% interruption of community engagement.
 - Amongst 116 countries reporting on RUTF stock-outs, 80% report none, 11% report stock-outs in less than 25% of facilities and 6% report stock-outs in more than 50%.
 - Adaptations to ensure sustaining the management of acute malnutrition: reducing the regularity of visits, MUAC by caregivers and increasing district- or facility-level stock (all reported in 37% of 79 countries). 25% of countries report adapting by treating wasted children without complications with one RUTF product; 23% report community health workers providing treatment of uncomplicated wasting; and 22% report use of simplified criteria (<120mm or <125mm MUAC and/or oedema) for admission, follow up and discharge.
 - Reported adaptations to ensure continuity of micronutrient powder supplementation include physical distancing at the health facility (53% of 53 countries), use of community-based platforms (26%) and increasing sizes and reducing the frequency of distribution (11%).
 - Of 102 countries reporting, three-quarters (76) report having introduced adapted measures to support families on what, when and how to feed young children during the complementary period.
 - 41 countries (of 79 that reported) report violations of the International Code of the Marketing of Breastmilk Substitutes. The most common being donations of BMS, bottles and teats from agencies, donors or companies (19 countries), distribution of milk products which could be used as BMS (15), accepting unsolicited donations (8) and inadequate labelling (7). Latin America and the Caribbean reported violations in 11 countries; other regions reported violations in 4-7 countries.
-

Method/data collection

- This dashboard is based on quarterly updates of recent data collection efforts from UNICEF country offices drawing on best available sources in each country, including administrative data or representative survey data collected in the last 3 months; or where necessary, extrapolations from reliable localized quantitative and/or qualitative reports. Estimates may not accurately represent the full national response to the COVID-19 pandemic.
 - Some caution should be employed when using these results since there are anomalies, large gaps and subjectivities. See data section below table.
 - The current version presents highlights as of late August 2020. According to the UNICEF website, the next update might take place in Q1 2021 (approximately March 2021).
-

Table 4: Global Service Disruption in Child Nutrition Services up until late August (% of countries reporting drops in services, compared to the same time period the previous year).*

Change in service use	Child wasting treatment	Child wasting screening	Protection & promotion of breastfeeding	Diet promotion (6-23 months)	School feeding, take-home rations	IFA supp. (Adolescent girls)	PLW counselling & weight monitoring	Home fortification (MNP)	Vit. A supp. (6-59 months)	Food fortification (Salt/oil/wheat)	Food subsidies
Increase/new	12%	9%	10%	6%	2%	0%	8%	6%	11%	0%	53%
No change	30%	41%	44%	48%	21%	28%	38%	58%	31%	83%	34%
<10% drop	18%	12%	11%	6%	3%	8%	15%	4%	11%	7%	3%
10-24% drop	18%	18%	18%	22%	3%	4%	22%	8%	13%	5%	3%
25-49% drop	15%	7%	13%	14%	5%	8%	14%	17%	19%	2%	0%
50-74% drop	5%	7%	1%	4%	10%	16%	2%	2%	9%	2%	6%
75-100% drop	3%	5%	2%	1%	57%	36%	1%	6%	6%	2%	0%
Any reduction	58%	50%	45%	47%	78%	72%	54%	37%	58%	17%	13%
N** =	74	94	106	103	63	25	87	52	80	60	32

*Data covers varying lengths of time from March 12th through late August. The base reference period is the same time period in 2019.

** The proportions in the table excludes countries with “Don’t know” or “Not applicable” responses.

Analysis updated 09/12/2020

Data

- Coverage of reporting countries are mostly low-income and middle income, and the list is not complete. There are 159 countries, of which 127 report on nutrition services however this reduces dramatically for some indicators when ‘Don’t know’ and ‘Not applicable’ is removed.
- Responses rely on various sources and best estimates may combine multiple sources. It is majority admin data and less so survey data.
- Raw data is not currently shared, and there are some anomalies in reported information.
- Figures may not accurately represent the full national response to the COVID-19 pandemic.
- The base reference period is not provided, being variously reported as “admin/survey data from the last three months”, “Other/older sources” and “null”.
- It relies on knowledge of country-based UNICEF staff; the long questionnaire may reduce the quality of responses

Title: Reorienting Nurturing Care for Early Childhood Development during the COVID-19 Pandemic in Kenya: A Review

Author or institution	Shumba et al. (International Journal of Environmental Research and Public Health)
Geographic focus	Kenya
Population focus	Conception to four years of age
Technical focus	Nutrition Intervention Delivery and Coverage (nurturing care)
Information type	Journal Article
Date published	September 2020
Date added	December 2020

Purpose/objective of source

To elucidate how COVID-19 and associated control measures impact the five domains of nurturing care in Kenya (direct health, health and nutrition systems, economic protection, social and child protection, and child development and early learning), focusing on the period from conception to four years of age.

Main nutrition-related findings

Impacts

- Indirect health impacts related to nutrition include reduced access to, delayed and low uptake of antenatal, maternal, infant and child health and nutrition services.
- Economic impacts lead to losses in income and increased poverty levels, ultimately reducing access to nutritious foods.

Direct health and nutrition system support

- Support could include some or a combination of the following: cash transfers, food packs, mobile health and nutrition services, as well as regular support and monitoring by child protection teams.

Knowledge gaps

Little research is currently published on how to support nurturing care for children under 4 years in the wake of such a pandemic, especially in Africa. There is still a lot to learn on what can work and what cannot.

Title: COVID-19 crisis: An opportunity for long-delayed agricultural reforms in India

Author or institution	IFPRI, S. Mahendra, Dev
Geographic focus	India
Population focus	Households
Technical focus	Global policy and responses; A
Information type	Blog
Date published	October 2020
Date added	December 2020

Purpose/objective of source

- In May, the Indian government announced a COVID-19 economic relief package called Atmanirbhar Bharat (Self Reliant India) totalling about \$270 billion, equal to 10% of the country's GDP

- S. Mahendra Dev of the Indira Gandhi Institute of Development Research explains the essence of the reforms, their potential impacts and obstacles, and key factors that will determine their impact on India's future agricultural growth

Main nutrition-related findings

- The government has used the COVID-19 crisis as an opportunity to push through significant agricultural reforms that will have many medium- and long-term impacts.
- The three major reforms, which became law in September, include:
 - Reforming India's Agricultural Produce Market Committees (APMCs), state boards that tightly control sales. The new law eliminates interstate trade barriers and allows e-trading, opening up options for farmers to sell their produce beyond the previously mandated APMC yards (mandis) and seek better prices.
 - Creating a legal framework for contract farming, allowing farmers to contract with buyers on prices and quantities before planting, better ensuring incomes.
 - Limiting the reach of the Essential Commodities Act—which allows the government to control prices and impose stock limits of certain “essential” items—exempting important products including cereals, oilseed, onions, potatoes and pulses. This creates an incentive for private sector investment in supply chains.

Concerns and uncertainties

- An uncertain track record for state reform. After Bihar abolished APMCs in 2006, studies have shown an increase in food price volatility in the state. Thus, policy changes alone may not be enough to reform the agriculture market system.
- Will smallholders' benefit? This is also still unclear and depends on a number of other agricultural policies including on institutional credit, on targeted input subsidies, and the success of Farmer Producers Organisations.
- Will the government follow its own laws? In September, the government imposed an export ban on onions as supplies fell and domestic prices rose; this is inconsistent with Essential Commodities Act reforms.

2.5.4 Information collected in previous months by MQSUN+

Protect the Progress: Rise, Refocus, Recover. 2020 Progress Report on the Every Woman Every Child Global Strategy for Women's, Children's and Adolescents' Health (2016-2030)

Author or institution:	UNICEF
Geographic focus:	Global / regional / country
Technical focus:	Nutrition intervention delivery
Information type:	Informal
Date published:	September 2020
Date added:	29 September 2020

The 15-year Every Woman Every Child Global strategy includes a section on the impact of COVID-19 on women's, children's and adolescents' health and highlights the following:

- The COVID-19 pandemic threatens to turn back the clock on years of progress in reproductive, maternal, child and adolescent health. Models of the potential outcomes of various levels of essential service disruptions show catastrophic consequences and can be useful for encouraging governments and partners to ensure such disruptions do not occur. For example, antenatal care attendance dropped in the wake of the pandemic in Lagos State ([Nigeria National Health Management Information System \[NHMIS\], July 2020](#)).
- **Call to action:** Throughout the COVID-19 response and recovery, urge governments to protect and promote the health and rights of women, children and adolescents through strengthened political commitment, policies and domestic resource mobilisation and financing, supported by official development assistance.

Monitoring Continuity of Essential Health Services during the COVID-19 Pandemic

Author or institution:	Global Financing Facility
Geographic focus:	Nigeria; Afghanistan; Liberia
Technical focus:	Nutrition intervention delivery
Information type:	Informal
Date published:	18 September 2020
Date added:	23 September 2020

This blog post from the Global Financing Facility reports on analyses of data DHIS2 reported by more than 63,000 facilities in 10 countries. Whilst the monitoring is continuous, the analysis of data through June/July 2020 includes the following findings:

- **Childhood vaccination was the most disrupted service amongst the countries studied**, with a significant drop in the number of children given the third dose of Pentavalent vaccine in Liberia (31% drop), Nigeria (13%) and Afghanistan (11%).
- The number of outpatient consultations fell for at least one month in all countries where this was monitored, although some of the reductions in utilisation were found to have improved by June.
- **There are no generalised changes in maternal health services, although disruptions were detected in several countries.** For example, the number of women who attended all four recommended medical visits during pregnancy dropped in Liberia (18% in April), and the initiation of women seeking medical care during pregnancy fell in Nigeria (16% in April).
- **Disruptions vary across indicators and countries.** For example, in Nigeria, there was a more than 10% decrease in April and in May a 15% decrease in family planning services, and a 6% decrease in women delivering babies at health facilities. However, there are mixed results across indicators in most countries. For example, in Afghanistan, whilst there were no significant changes in postnatal consultations as a result of the crisis, there was a 14% drop in outpatient consultations. Results from June and July show that essential services have improved in most countries, but some disruptions persist.
- The authors note **results should be interpreted with care**, and with knowledge of the inherent limitations of HMIS data described above.

Effect of the COVID-19 Pandemic Response on Intrapartum Care, Stillbirth, and Neonatal Mortality Outcomes in Nepal: A Prospective Observational Study

Author or institution:	KC et al. / The Lancet
Geographic focus:	Nepal
Technical focus:	Nutritional status, Breastfeeding, Nutrition intervention delivery
Information type:	Peer-reviewed journal
Date published:	10 August 2020
Date added:	08 September 2020

This prospective observational study was conducted to shed light on how the pandemic response is affecting maternal and neonatal health services, especially given dramatic improvements in neonatal mortality over the past 20 years, which the authors attribute to improved prenatal and delivery care. It aimed to assess the number of and outcomes from institutional deliveries, as well as the quality of delivery care 12.5 weeks before and then during Nepal's national lockdown. Highlights include:

- The number of institutional births decreased dramatically, 1,261 before lockdown to 651 during lockdown (a reduction of 52%).

- Health workers' hand hygiene practices during childbirth improved by 13% (12% to 14%) during lockdown ($p < 0.0001$).
- The immediate new-born care practice of placing the baby skin-to-skin with their mother increased by 13% (12% to 15%; $p < 0.0001$).
- Unfortunately, early initiation of breastfeeding (1hr) reduced from 49% to 46% ($p = 0.0032$).
- As well, institutional neonatal mortality increased from 13 per 1000 live births to 40 per 1000 live births ($p = 0.0022$).

The study comments that whilst some behaviours improved (notably hand hygiene and skin-to-skin with mother), an urgent need exists to protect access to high-quality intrapartum care to prevent excess deaths during the pandemic period. The authors believe this to be the first and perhaps largest documentation to date of service reduction during COVID-19.

The Secondary Impacts of COVID-19 on Women and Girls in Sub-Saharan Africa

Author or institution:	Rafaeli and Hutchinson / K4D
Geographic focus:	Global
Technical focus:	Nutritional status, Nutrition intervention delivery, Diet, Food price and availability
Information type:	Informal
Date published:	June 2020
Date added:	25 August 2020

This review explored the secondary impact of similar outbreaks in the region and globally, most notably from the Ebola crises. Global data or data from other regions have been used in the absence of data which may vary in context and applicability. Highlights include:

- Despite limited evidence, the review found emerging evidence and lessons from past health crises, there is strong evidence to suggest that women and girls in SSA will suffer from extreme and multifaceted negative secondary impact as a result of the COVID-19 crisis. This includes reduced access to healthcare and WASH alongside increased maternal deaths, an increase in unplanned pregnancies and greater food insecurity and malnutrition.

3 Global Policy and Related Responses

This chapter summarises new data and evidence relating to the policy responses which address the indirect impacts of COVID-19 on nutrition in LMIC. It focuses specifically on selected outcomes and outputs including the nutritional status (stunting, wasting, overnutrition and micronutrient deficiencies); breastfeeding practices; dietary diversity and dietary practices – particularly among women and children; the availability and price of nutritious foodstuffs; and nutrition intervention delivery and coverage.

Source descriptions are presented in chronological order.

3.1 Summary overview

The sources which have been summarised under this section can be found in box 6.

Box 6: List of sources on the impact of COVID-19 on the global policy and related responses.



Impact of COVID-19 on the global policy and related responses

Most recent data and evidence (Added in February 2021)

- The [Asia and the Pacific Regional Overview of Food Security and Nutrition 2020](#) report calls for greater investment in primary data collection, especially for the measurement of the impact COVID-19 on food security and nutrition.

Earlier data and evidence collected (August 2020 - January 2021)

- A briefing from the [SUN Movement](#) explains why and how a comprehensive, multisectoral approach to nutrition should be integrated into the COVID-19 response and recovery effort, and recommends “what must be done” in the areas of nutrition policies and programming, financing, and food systems.
- A report from [Save the Children](#) warns that pandemic-related malnutrition is projected to kill an average of 153 children a day/168,000 children by 2022 if action is not taken, and proposes a set of recommendations to accelerate progress on nutrition.
- The [research roadmap](#) developed by the UN in support of a better socio-economic recovery and a more equitable, resilient and sustainable future defines the policy priorities and identifies a set of 25 research priorities. Although only one sub-question relates directly to nutrition, many of the other research questions, if answered, will indirectly inform the multisectoral nutrition agenda.
- FAOs [Food Outlook](#) reports on global food prices and includes special features on how COVID-19 has impacted demand and prices of some nutritious foods. The report also identifies the most recent (May-October) food policy responses by governments as to address the impact of the pandemic on households and agricultural production.
- The [call for action to implement large scale food fortification](#) (October 2020) reviews the impact of the pandemic on the access to nutritious food and the implementation of large scale fortification programmes. The brief suggests that tackling vitamin and mineral deficiencies, through fortification and other interventions, might strengthen community health and resilience to disease and should be prioritized as part of global and national responses to COVID-19.
- The African Leaders for Nutrition Initiative issued a [position paper](#) on embedding nutrition within the COVID-19 response and recovery.
- The World Health Organisation (WHO)/PATH COVID-19 [Essential Health Services Policy Tracker](#) has documented LMIC adopting nutrition-related guidelines and policies in the context of COVID-19.
- The Global Panel on Food Security held a [High-Level Special Event](#) on Global Governance of Food Security and Nutrition from 13-15 October, including a panel on Impacts of COVID-19 on food security and nutrition: developing effective policy responses to address the hunger and malnutrition pandemic, drawing on a recent [issue paper](#) on the topic.
- UNICEF and the Lancet initiated the [Global Development Commons \(GDC\)](#), a digital platform to support child-focused SDGs where organisations and researchers can share tools, resources, case studies and research with a focus on ideas to respond to the COVID-19 pandemic.
- [Tracking the Situation of Children During COVID-19](#) includes examples of countries having implemented adaptations to programme to ensure sustaining the management of acute malnutrition.
- The WFP [estimates](#) the number of children missing out on school meals decreased, from 324 million in 128 in early September to 282 million in 120 countries in late September.
- A Lancet editorial (“COVID-19: a new lens for non-communicable diseases” 5 September 2020) highlights the interaction between non-communicable diseases (NCDs) and COVID-19.
- The World Food Programme (WFP) [estimates](#) the number of children missing out on school meals improved slightly in the first half of September, An updated 58 countries (up from 47) are using or planning alternative modalities for delivery.
- UNICEF has [updated the child MUAC tape design](#) to make it easier for caregivers to use, given the need to safely screen for wasting during COVID-19. They note the physical distancing requirements that will need to be followed in training parents on its use.
- USAID released [findings, conclusions and recommendations](#) from the advisory Board for International Food and Agriculture Development (BIFAD) meeting, to support stakeholder decision making to advance food security and nutrition at global, regional and national levels, given the context.
- WFP is monitoring school meals amidst school closures and has been supporting 47 countries in using or planning alternative modalities.
- Action Against Hunger and partners have launched (on [acute malnutrition.org](#)) a tracker documenting nongovernmental organisations’, UN agencies’ and governments’ [COVID-19 Adaptations in the Management of Acute Malnutrition](#).

- The United Nations Office for the Coordination of Humanitarian Affairs (OCHA) and partners updated the [Global Humanitarian Response Plan COVID-19](#) (31 August 2020) with increased scope and targets across 63 countries and covering country-specific food security responses.
- UNICEF and the WHO published [Prevention, Early Detection and Treatment of Wasting in Children 0–59 Months through National Health Systems in the Context of COVID-19 Implementation Guidance](#), for implementing the recommendations reflected in [existing guidance](#), with a range of context-specific examples.
- UNICEF and Nutrition Cluster partners have published various guidance pieces:
- [Toolkit for Community Health Workers on Community-Based Treatment of Uncomplicated Wasting for Children 6-59 Months in the Context of COVID-19](#) to provide key considerations for rolling out the approach as well as step by step guidance on an implementation protocol.
- [Summary of the Main Evidence and Operational Considerations for the Family MUAC Approach](#), responding to questions from a recent [Webinar](#).
- Briefs on [Nutrition Information Management, Surveillance and Monitoring in the Context of COVID-19](#).
- The UN OCHA has launched on [humanitarianresponse.info](#) an online survey gathering field examples of [Nutrition Innovations and Adaptations in the Context of COVID-19](#).
- Several regularly updated tools are tracking policy responses. These include the [WHO/PATH COVID-19 Policy Tracker Dashboard](#), the FAO's [Food And Agriculture Policy Decision Analysis Tool](#), the [Oxford Government Response Tracker \(OxCGRT\)](#) and the [World Bank and International Labour Organisation Social Protection and Jobs Responses to COVID-19 Real-Time Review](#). A range of nutrition-relevant policy responses are emerging (Non-linked countries are from WHO/PATH Tracker, which is in beta testing):
- Notable policy responses from multilateral institutions include the World Bank, which [approved](#) a \$14 billion COVID-19 response package, announcing they would open in July a \$2.5 billion emergency funding window, of which, \$500 million would be allocated for food security and nutrition crises.
- In a policy brief on [The Impact of COVID-19 on Food Security and Nutrition](#), the United Nations have described the COVID-19 pandemic as a health and humanitarian crisis threatening the food security and nutrition of millions of people.
- Nutrition, economics, food and health system experts have formed [Standing Together for Nutrition](#) to address COVID-related nutrition challenges. Its [Call to Action](#) to build evidence to inform nutrition responses has over 500 signatories (governments, civil society, UN agencies and the private sector).

3.2 Most recent sources

Title: [Asia and the Pacific Regional Overview of Food Security and Nutrition 2020](#)

Author or institution	FAO, UNICEF, WFP and WHO
Geographic focus	Asia and Pacific region
Population focus	Children under 5, women and mothers
Technical focus	Policy, Availability and Price of Nutritious Food
Information type	Report
Date published	January 2021
Date added	February 2021

Purpose/objective of source

To track progress on key SDG 2 indicators and World Health Assembly targets up to 2019, including what is known to date on the impact of COVID-19; to identify challenges and possible solutions to improve maternal and child diets in the Asia and Pacific region.

Main nutrition-related findings

Citing data from previously published papers and reports, this source touches on equity in the light of COVID-19, estimated impacts of COVID-19 on food security and nutrition, and exclusive breastfeeding practices during the COVID-19 pandemic. The most relevant points for the purposes of this tracker are as follows:

- The report calls on governments in the region to better prepare for and build resilience to future disasters and pandemics by investing in stronger disaster preparedness, early warning and response systems. The report also calls for greater investment in primary data collection especially for the measurement of the impact of COVID-19 on food security and nutrition.
- The report affirms that there is no known evidence of vertical transmission of the virus through breastmilk and states that maintaining exclusive breastfeeding remains important during the COVID-19 pandemic for both mothers and infants.
- The report highlights previously published examples where social protection interventions have played an important role in meeting the needs of vulnerable populations and mitigating the damage caused by COVID-19.

GESI observations

- The report reiterates the importance of the inclusion and protection of the most vulnerable populations in responses to COVID-19, as the virus disproportionately affects those experiencing poor health and malnutrition, the poor, women and children, the chronically sick and old, those living in fragile or conflict-affected states, minorities, refugees and the unsheltered.

Quality of the data/ evidence (Method)

- Review and synthesis of existing data collected at country level by various sources including MICS, DHS, and numerous others, identified by the agencies involved in the report-writing.

3.3 Sources collected in previous months by TASC

Title: Weekly Briefing for the SUN movement

Author or institution	SUN Movement
Geographic focus	Global
Population focus	All
Technical focus	Policy
Information type	Brief
Date published	December 2020
Date added	January 2021

Purpose/objective of source

The briefing presents figures on COVID-19 cases around the world, identifies problems related to COVID-19 and nutrition (previous and recent reports); explains why and how a comprehensive, multisectoral approach to nutrition should be integrated into COVID-19 response and recovery effort, and recommendations on “what must be done” to stakeholder groups within the SUN Movement.

Main nutrition-related findings

Selected recommendations for stakeholder groups in the SUN movement

- SUN Governments: Ensure nutrition is prioritised in COVID-19 response and recovery plans; continue implementing a multi-sectoral, multi-stakeholder approach to nutrition and investing and implementing interventions to prevent and treat malnutrition across health, food, and social protection; an additional USD 19 billion/year from LMICs’ own budgets should be provided for food security and nutrition to accompany development cooperation.
- Bilateral & multilateral donors & philanthropies: scale up funding - an additional USD 14 billion is needed from donor governments to stop millions more people from going hungry; support innovation, research, and development that can strengthen the nutrition response to COVID-19; provide technical assistance to LMICs based on country need.
- The UN: Ensure that key UN actors coordinating the COVID-19 response at national level liaise with nutrition actors; deliver clear, actionable operational guidance for frontline workers and policymakers;

share emerging evidence regarding COVID-19 and nutrition; document and share country experiences to promote learning across borders.

- Civil Society: Maintain or adapt nutrition programming in line with ongoing guidance; utilise operational capacity to support implementation efforts amidst the COVID-19 response across sectors, in coordination with government and partners; continue commitment to a multi-sectoral, multi-stakeholder approach to nutrition at country level, aligning programmes and advocacy efforts.
- Business and private sector: Contribute to the production and delivery of nutritious foods and food products, focusing on the most vulnerable; avoid donating, marketing and promoting unhealthy foods; adhere to the International Code of Marketing of Breast-milk Substitutes and subsequent WHA resolutions; advocate for and support SME in a broader food systems' response; adopt and deliver workforce nutrition programmes for all employees.

GESI Observations

- In post-COVID recovery and emergency preparedness, the brief states that vulnerability factors such as poverty, inequality (also gender-based), pre-existent malnutrition, infectious diseases such as HIV/AIDS, non-communicable diseases such as diabetes, crowded living conditions, poor access to healthcare and clean water and sanitation must be considered and addressed.
- Citing a report from Care from August 2020, the brief also states that national and global responses aiming to prevent a hunger crisis need to critically look at the role and status of women and girls in food systems and nutrition actions, as responses to COVID-19 and related hunger crises are either ignoring women and girls or treating them as victims who have no role in addressing the problems they face.

Quality of the data / evidence (method)

Review of SUN country responses and summaries of new and older research, models and estimations, and reports on COVID-19 and nutrition.

Title: Nutrition Critical, Why We Must Act Now to Tackle Child Malnutrition Now

Author or institution	Save the Children
Geographic focus	Global
Population focus	Children under age 5
Technical focus	Policy and general child malnutrition
Information type	Report Data
Date published	December 2020
Date added	January 2021

Purpose/objective of source

The report reviews child malnutrition in the world today, including the impact of Covid-19, and proposes a set of recommendations to accelerate progress on nutrition.

Main nutrition-related findings

The document brings together as set of existing research and estimations , and presents a series of recommendations

1. Ensure no child is left behind from progress to end malnutrition for all and include children in the decisions that impact them, including health and nutrition.
2. Urgently address the malnutrition crisis in fragile and conflict-affected settings;
3. Strengthen essential health and nutrition services (especially as health system resources are being diverted from a range of nutritionally important functions and essential health services that affect nutrition towards combating COVID-19);

4. Protect, promote and support infant and young child feeding – particularly breastfeeding – and care for children and their caregivers;
5. Protect and support food security and livelihoods and access to nutritious foods.
6. Commit to nutrition financing by making long term and flexible commitments to address malnutrition.

The report also recommends to

- Address the Youth Agenda for Action (The Youth Agenda for Action was generated by the SUN Civil Society Network’s Youth Leaders for Nutrition).
- Preserve and scale up critical food, nutrition, health, water, sanitation, hygiene and livelihood assistance.
- Prioritise humanitarian cash and voucher support for families in order to increase their household income.

GESI Observations

- In recommendations ensuring no child is left behind, the report states that
 - interventions should prioritise actions to enhance gender equality;
 - data should be disaggregated by age-group, sex and disability to enable intersectional gender analysis and to inform gender-, age- and disability-sensitive responses for more effective programming.
- In recommendations ensuring essential health and nutrition services are accessible to all, barriers to access, including those related to gender, should be addressed.

Quality of the data/ evidence (method)

The report reviews new data, estimations and models from the Standing Together for Nutrition consortium, country case studies, and existing data from the Lancet and other external sources.

Title: UN Research Roadmap for the COVID-19 Recovery. Leveraging the Power of Science for a More Equitable, Resilient and Sustainable Future

Author or institution	United Nations
Geographic focus	Global
Population focus	All
Technical focus	Policy (research agenda)
Information type	Research roadmap
Date published	November 2020
Date added	December 2020

Purpose/objective of source

- To “provide a framework for leveraging the power of science in support of a better socio-economic recovery and a more equitable, resilient and sustainable future”.
- To “better equip researchers, research funding agencies, governments, UN entities and other international institutions to harness collective knowledge and innovation in order to catalyse transformative changes and achieve the SDGs”.

Main nutrition-related findings

- This roadmap covers a wide range of research agendas which will complement the UN’s Framework for the Immediate Socio-Economic Response to COVID-19 (April 2020). It was developed through concertation with researchers, research funders, government policymakers, civil society leaders and UN officials around the world.
- The document first spells out recommended the policy priorities for governments related to health services, social protection/basic services, economic recovery and macro-economic collaboration.

Many of these policy recommendations are nutrition-sensitive (pages 15-16). Nutrition was specifically highlighted under the social protection/basic services agenda, notably “maintain essential food and nutrition services, particularly for infants and young children, women, and other marginalized populations, including those living with HIV/AIDS”.

- Subsequently, the document identifies key research priorities to inform the socio-economic recovery from the current pandemic and accelerate progress towards the SDGs. In total, 25 research priorities are identified, organised within five pillars and linked by their focus on addressing the interdependence of people, systems and generations and advancing a framework for achieving equity, resilience and sustainability co-benefits through COVID-19 recovery efforts. Each research priority includes a set of more detailed research questions, organised by those who can generate quick-wins, best-buys and game-changers.
- Many of these research priorities and questions relate to nutrition, directly or indirectly (see document page 22 onwards). Nutrition was specifically cited in the document as part of a “game-changer” research question to support the economic response and recovery programme, notably “How can food supply chains be secured for the world’s most marginalized populations to ensure food security and nutrition in all circumstances?” (Page 50).

Title: Food outlook. Biannual Report on Global Food Markets

Author or institution	FAO
Geographic focus	Global
Population focus	All
Technical focus	Policy responses; Access and price to nutritious food
Information type	Report
Date published	November 2020
Date added	December 2020

Purpose/objective of source

To provide an update on the global food markets.

Main nutrition-related findings

- This document provides period updates on global food markets, relevant policy developments and market indicators. Information is provided for various food groups, including nutritious food such as dairy, meat and fish. This edition also includes a special feature on how food imports and export have been challenged by COVID-19 pandemic and includes an assessment on the impacts of the pandemic on the trade in bananas and tropical fruits.

Findings on food demand and prices are not specific to LMICs, but some relevant key findings are reported hereafter

- Globally, meat demand and meat prices have fallen this year due to COVID-19-related market disruptions. This trend is likely to persist. Milk demand dropped earlier in the year caused by logistical bottlenecks, reduced food sales and market uncertainty. Global milk prices had dropped earlier in the year but have recently recovered. World supply and demand for bananas and tropical fruits have experienced COVID-19-related disruptions through several channels of transmission. By October however, a comparatively positive global trade situation was observed for bananas and avocados, but the overall decline in global import demand for most major tropical fruits in response to COVID-19 remained.
- “Given that the negative economic repercussions of the pandemic’s mitigation measures are likely to worsen as the virus continues to spread, consumers’ ability to afford healthy diets will probably be affected in both producing and importing countries, contingent on people’s access to savings, credit and safety net programme. LMICs which may lack the capacity and funds to implement effective social protection programme and economic stimuli, are especially at risk, alongside net food importing countries.”

The document also reports on the most recent (May-October) food policy responses by governments as a response to the pandemic. Some examples

- India extended until end-November 2020 the national scheme providing 5 kg of food grains free of charge to 800 million individuals. The programme had initially been launched in April in response to COVID-19.
- Indonesia implemented a wide range of measures (see country profiles) to facilitate and increase exports of processed food products and launched the Rice Social Assistance programme to help vulnerable consumers during the COVID-19 pandemic.
- In Nigeria a support programme to farmers affected by the COVID-19 pandemic, was implemented (see country profile).

Title: COVID-19 is making it harder for vulnerable people to access healthy food Strengthening large scale food fortification should be part of the response

Author or institution	Food Fortification initiative, Global Alliance for Improved Nutrition, AIN, Helen Keller, Iodine Global Network, Nutrition International, Scaling up Nutrition, UNICEF, World Food Program
Geographic focus	Global
Population focus	All
Technical focus	Diets, Interventions and Policy
Information type	Advocacy brief
Date published	October 2020
Date added	December 2020

Purpose/objective of source

This brief makes the case for large scale staple food fortification as a critically important tool to fight malnutrition in general, and even more so during the global COVID-19 pandemic.

Main nutrition-related findings

- The brief brings together existing evidence on how strategies to mitigate the spread of the virus might affect acute food insecurity worldwide and drive up multiple forms of malnutrition, limit access to food and basic supplies, reduce accessibility and consumption of fresh produce and animal-source foods and affect fortification programmes in LMICs.
- The brief calls for action and asserts that tackling vitamin and mineral deficiencies, through fortification and other interventions, strengthens community health and resilience to disease and should be prioritized as part of global and national responses to COVID-19.

Data/method

- This is an advocacy brief which uses existing evidence to underline statements

Link to relevant webinar

- <https://nutritionconnect.org/webinar-fortification-covid19>

3.4 Sources collected under MQSUN+

African Leaders for Nutrition (ALN) Initiative Embedding Nutrition within the Covid-19 Response and Recovery - COVID-19 Position Paper

Author or institution:	African Leaders for Nutrition (ALN)
Geographic focus:	Africa

Technical focus:	Diet, Food price and availability
Information type:	Informal
Date published:	September 2020
Date added:	14 October 2020

The African Leaders for Nutrition (ALN) Initiative issued a [position paper](#) on embedding nutrition within the COVID-19 response and recovery. The call to action urges high-level political leadership and governments to prioritise nutrition in national COVID-19 response plan and strategies. The African Union Commission has launched the African Union COVID-19 Response Fund, and the African Development Bank has put in place a US\$10 billion COVID-19 response facility.

COVID-19 Discussion Papers: Strengthening Food Systems' Resilience to COVID-19 Initial Lessons from FOLU Countries' Responses to the Global Pandemic

Author or institution:	Food and Land Use (FOLU) Coalition
Geographic focus:	Updates focus countries: Ethiopia, India, Indonesia
Technical focus:	Diet, Food price and availability
Information type:	Informal
Date published:	13 July 2020
Date added:	14 October 2020

The Food and Land Use (FOLU) Coalition assessed the food systems, economics, and vulnerabilities to COVID-19 in five FOLU countries (China, Colombia, Ethiopia, India, and Indonesia). The focus of the analysis was on the ability to ensure availability and access to food and to support adequate livelihoods, positive nutritional outcomes, and natural resource resilience. Additionally, it reviews policy responses put in place in these countries. Authors point to how emphasis was placed on food availability and sustaining incomes, and far less weight has been on supporting nutrition outcomes of vulnerable groups or ensuring access to nutritious food, such as fruits and vegetables. Making urban markets safe has also received less attention as it is not easy to do. Supporting stronger and more local supply chains, particularly for nutritious fruit, vegetables and proteins, was highlighted as a key intervention to strengthen food systems.

Findings, Conclusions and Recommendations of the 181st Public Meeting of the Board for International Food and Agricultural Development, regarding Food Security and Nutrition in the Context of COVID-19: Impacts and interventions

Author or institution:	Board for International Food and Agriculture Development (BIFAD)
Geographic focus:	Global
Technical focus:	Nutrition intervention delivery
Information type:	Policy
Date published:	September 2020
Date added:	23 September 2020

Recommendations from the BIFAD advisory board to USAID, regarding best-bet operational and programmatic investments, to support decision making by stakeholders working to advance food security and nutrition at global, regional, and national level. Recommendations include bolstering economic recovery programming, supporting nutrition, supporting social safety nets- food assistance, supporting markets and supply chains, and supporting long-term and institutional arrangements.

COVID-19: A New Lens for Non-Communicable Diseases

Author or institution:	The Lancet
Geographic focus:	Global & Regional
Technical focus:	Nutritional status, Nutrition intervention delivery
Information type:	Peer-reviewed journal
Date published:	5 September 2020
Date added:	23 September 2020

A Lancet editorial ([“COVID-19: a new lens for non-communicable diseases” 5 September 2020](#)) highlights the interaction between non-communicable diseases (NCDs) and COVID-19, in which lockdowns exacerbated an obesogenic environment, in which access to nutritious food and physical activity was made more difficult and in which those with [underlying NCDs are at increased risk of severe COVID-19](#). It calls for this COVID-19 impact on NCDs to serve as a catalyst to increase investment on stricter sugar and alcohol controls and improve physical activity and healthy diets.

World Food Programme: Global Monitoring of School Meals (Live tracker)

Author or institution:	UNICEF & WHO
Geographic focus:	Global
Technical focus:	Nutrition intervention delivery
Information type:	Policy
Date published:	April 2020
Date added:	18 September 2020 (updated)

The World Food Programme (WFP) are monitoring school meals during school closures and assessing alternative solutions from the government and/or WFP.

- WFP estimates the number of children missing out on meals at school has improved slightly between 4 and 16 September, from 346 million (47% girls) in 161 countries to 324 million (46% girls) in 128.
 - As of 18 September, 58 countries are using or planning alternative modalities. In very few countries (mostly higher-income and those in the Americas), governments have offered alternatives to traditional school feeding programmes. These alternatives include providing cash-based transfers to school children’s families (12 countries), using various modalities (9 countries) and providing take-home rations (37 countries).
-

Prevention, Early Detection and Treatment of Wasting in Children 0–59 Months through National Health Systems in the Context of COVID-19: Implementation Guidance

Author or institution:	UNICEF & WHO
Geographic focus:	Global
Technical focus:	Nutrition intervention delivery
Information type:	Policy
Date published:	August 2020
Date added:	08 September 2020

This guideline published by UNICEF & WHO is a tool for implementing the recommendations reflected in existing WHO and UNICEF guidance on the delivery of services through national health systems for the prevention, early detection and treatment of child wasting in the context of COVID-19. The note:

- Reflects broad guidance for all levels of the health system, including community health services that offer prevention, early detection and treatment services for child wasting. Temporary programmatic adaptations are largely around adherence of infection prevention and control measures throughout programming, strengthening systems to support the delivery of services through various avenues (coordination/governance, financing, health workforce, supply of essential medicines and commodities, health information systems).
- Offers context-specific examples of programmatic changes or adaptations that may be temporarily introduced to ensure the continuity and safety of prevention and treatment services.

Maintaining Essential Health Services: Operational Guidance for the COVID-19 Context

Author or institution:	WHO
Geographic focus:	Global
Technical focus:	Nutrition intervention delivery
Information type:	Policy
Date published:	June 2020
Date added:	25 August 2020

This guideline published by WHO recommends practical actions for countries to take to maintain access to high-quality, essential health services in the pandemic context. Highlights include:

- Provides recommended modifications for safe delivery of nutrition services.
- Includes nutrition indicators to track essential services, e.g. number of children 0-59 months of age who were screened for severe wasting and bilateral pitting oedema. These indicators are used in the [WHO/PATH COVID-19 Essential Health Service Policy Tracker](#).
- The COVID-19 pandemic will impact the nutritional well-being of vulnerable populations through multiple mechanisms. Dietary quality and quantity are expected to fall due to the loss of household income and disruptions in food systems (e.g. disruption of trade and transport of foods from production to markets) and school feeding programmes. Programmes delivering important nutrition components, such as antenatal care (ANC) and postnatal care (PNC), counselling for infant and young child feeding, micronutrient supplements and early detection and treatment of wasting) will be threatened, along with the surveillance of at-risk populations used to identify communities or individuals in need of nutritional support.

WHO Clinical Management of COVID-19 (Policy)

Author or institution:	WHO
Geographic focus:	Global
Technical focus:	Breastfeeding
Information type:	Policy
Date published:	27 May 2020
Date added:	25 August 2020

The WHO issued this interim guidance on the clinical management of COVID-19 which includes feeding and caring for infants and young children of mothers with COVID-19. It recommends that mothers with suspected or confirmed COVID-19 should be encouraged to initiate and continue breastfeeding.

Annex 1: Key Resources and Repositories for Periodic Consultation

Information contained in this annex includes guidance and tools related to COVID-19 and nutrition interventions and programming and key nutrition information and knowledge hubs used for monthly consultation.

Table 1. 1. Guidance and Tools in the Context of COVID-19

Name	Description
1 Interim Guidance on Household Surveys during COVID-19	Provides guidance on resuming household data collection (rather than continuing to rely only on alternative methods).
2 Overweight and Obesity in the Context of COVID-19	The overweight and obesity in the context of COVID-19 technical note and guidance aims to support WFP's work in the area of promoting healthy and nutritious diets and preventing all forms of malnutrition.
3 USAID guidance on SBC for nutrition during COVID-19	The guide includes considerations, messaging, and resources to support country programmes in adapting nutrition SBC programming in response to the challenges presented by COVID-19.
4 Prevention, Early Detection and Treatment of Wasting in Children 0–59 Months through National Health Systems in the Context of COVID-19 Implementation Guidance	This document serves as a tool for implementing the recommendations reflected in existing WHO and UNICEF guidance on the delivery of services through national health systems for the prevention, early detection and treatment of child wasting in the context of COVID-19. This note reflects broad guidance for all levels of the health system, including community health services that offer prevention, early detection and treatment services for child wasting.
5 Toolkit for Community Health Workers on Community-Based Treatment of Uncomplicated Wasting for Children 6-59 Months in the Context of COVID-19	The Toolkit for CHW Community-Based Treatment of Uncomplicated Wasting for Children 6-59 Months in the Context of Covid-19 brings together existing evidence and operational experience to provide implementers key recommendations and considerations for rolling out the approach as well as step by step guidance on an implementation protocol. Adaptations to the Family MUAC approach, the simplified treatment protocol and existing CHW delivery platforms are described alongside links to additional and emerging resources and best practices in the context of COVID-19.
6 Maintaining Essential Health Services: Operational Guidance for the COVID-19 Context	This guideline published by WHO recommends practical actions for countries to take to maintain access to high-quality, essential health services in the pandemic context.
7 WHO Clinical Management of COVID-19	The WHO issued this interim guidance on the clinical management of COVID-19 which includes feeding and caring for infants and young children of mothers with COVID-19. It recommends that mothers with suspected or confirmed COVID-19 should be encouraged to initiate and continue breastfeeding.
8 Nutrition-Sensitive Guidance in the Context of COVID-19 in Myanmar	These guidelines support the implementation and prioritization of nutrition sensitive interventions in the context of COVID-19. The document highlights key opportunities for leveraging existing nutrition

sensitive programmes to mitigate the impacts of COVID-19 and provides guidance as to adaptations which may be relevant to ensure that nutrition sensitive programmes appropriately respond to Government priorities within nutrition sensitive sectors (agriculture, social protection, and education).

Table 1. 2. Situation Updates and Live Trackers

Name	Description
1 World Food Programme (WFP) COVID-19 Situation Updates	Updates on actions taken by the World Food Programme (WFP) in response to the novel Coronavirus (COVID-19) pandemic, including needs assessments.
2 OCHA COVID-19 Situation Updates	Not COVID-19 specific. However, the updates do contain COVID-19 related information and, in particular, on nutrition programme coverage and impacts of disease control on coverage.
3 WFP VAM COVID-19 Resources	Weekly overview of the food security situation, COVID-19 caseloads, and an indication of how relevant indicators – such as health and market access – are shifting. The data provided through these Snapshots are sourced from WFP’s remote monitoring systems and thus only cover countries where these systems are operating.
4 FAO FPMA Bulletin. Global Information and Early Warning System (GIEWS)	The food price monitoring at the global, regional and country level with a focus on developing countries updates monthly. This resource feeds into the monthly price monitoring section.
5 UNICEF Situation tracking for COVID-19 socioeconomic impacts	The dashboard draws on periodic country office reporting against an evolving questionnaire, first initiated on 12 March 2020; Country Office responses rely on varying sources and in some cases best estimates combining multiple sources; figures may not accurately represent the full national response to the COVID-19 pandemic.
6 UNICEF Nutrition COVID-19	Knowledge dissemination tool to share programmatic guidance, position papers, technical notes, and emerging research and evidence being developed by UNICEF and its partners on understanding and responding to the COVID-19 pandemic’s impact on maternal and child nutrition.
7 UNICEF COVID-19 situation reports in East Asia & Pacific	Useful in the country by country analysis. These reports mostly focus on UNICEF response but include changes in service use, needs, and related policy responses in countries more generally.
8 IPA Research for Effective COVID-19 Responses (RECOVR)	Innovation Poverty Action (IPA) on the Research for Effective COVID-19 Responses (RECOVR) have a series of continually updated phone surveys. Round 1 results of phone surveys to examine the effects of COVID-19 on disruptions to healthcare, education and work in selected countries are posted, with plans to update with subsequent rounds.
9 FEWS NET COVID-19 Briefings (Weekly Video)	A range of COVID-19 related reports. It should be noted FEW NET also incorporate COVID-19 impacts in regular updates on countries and regions.
10 WFP HungerMap Live: Hunger and COVID-19 Weekly Snapshot	This website provides a weekly overview of the food security situation, COVID-19 caseloads and an indication of how relevant indicators – such as health and market access – are shifting. The data provided through these Snapshots are sourced from WFP’s remote monitoring systems and thus only cover countries where these systems are operating. The HungerMap Live is a data visualisation with COVID-19

		<p>alerts to increasing cases and deterioration of food consumption from one month ago. Indicators include the number of people reporting challenges accessing health services and top five barriers to accessing health services.</p> <p>Limitations: Difficult to identify sample size or representativeness information; long term trends not shown, just current and previous week's data, so difficult to interpret values; likely to be biased toward younger, better off and those in urban areas with access to electricity for mobile phone charging.</p>
11	PATH/WHO COVID-19 Essential Health Services (EHS) Policy Tracker	An interactive display of government guidance related to maintaining and adapting essential health services during the COVID-19 pandemic. The dashboards show which countries have issued policies on essential health services, as well as how those policies change over time. The aim of these dashboards is to facilitate cross-country policy exchange and learning, to improve the overall response to maintaining, adapting, and reinstating essential health services. Policies are searchable by health area and by each programme activity included in WHO's June 1st version of: "Maintaining essential health services: operational guidance for the COVID-19 context".
12	FAO Fapda - Food And Agriculture Policy Decision Analysis Tool	The FAPDA tool provides an electronic repository for food and agriculture policies in over 130 countries. The tool facilitates policy research and analysis by enabling the identification of policy trends, allowing an initial assessment of policy coherence on a country by country basis. Tends to be less relevant to nutrition but on COVID-19 lockdown measures.
13	IFPRI's COVID-19 Policy Response (CPR) Portal: Identifying trends and implications for food systems	The CPR tracks food related policy actions systematically across many different domains, enabling governments, donors, and researchers to compare policy commonalities and differences. The CPR focuses on nine distinct types of policy responses, providing information about cross-government institutional coordination, levels of pandemic foreign aid, and citizen compliance with control measures

Table 1. 3. Search Engines (also includes knowledge hubs with search engines)

Name	Description
1 FEWS NET COVID-19 Search Page	In the link, search terms "COVID and nutrition" are applied. Documents can be further refined based on the country of interest. Documents tend to be situation updates. Depending on the country, this can be as frequent as monthly updates. Search term "COVID" is applied in the link.
2 IFPRI COVID-19 Document Search Page	In the IFPRI publication and tools search engine, search term "COVID" is applied in the link. A dedicated COVID-19 page on the FEWS NET website provides a list of the most recent COVID-19-specific documents related to food security and price-monitoring. The search function can be used to filter types of reports and the country of interest.
3 IFPRI COVID-19 Blogs Page	IFPRI is curating a special series of blog posts analysing the impacts of the COVID-19 pandemic on national and global food and nutrition security, poverty, and development
4 World Food Programme (WFP) Library	WFP library catalogue with search term "COVID" is applied in the link.

5	Food and Agriculture Organisation (FAO) Library	FAO library catalogue with search term “COVID” is applied in the link.
6	UNICEF Publications Library	UNICEF publications page with the latest reports and publications. Can type in COVID under the search option.
7	UNICEF Innocenti COVID Research Library	A knowledge hub with UNICEF Innocenti’s curated library of COVID-19 + Children research. You can also filter by topic (nutrition).
8	Reliefweb Updates Search	Search terms applied: COVID and Nutrition Limitations: Tends to be a duplicate of other resources like FEWS NET and other situation updates.
9	OCHA Humanitarian Response Document Search	Search terms applied: COVID and Nutrition
10	WHO COVID-19 Global Literature on Coronavirus Disease	WHO is gathering the latest international multilingual scientific findings and knowledge on COVID-19. The global literature cited in the WHO COVID-19 database is updated daily (Monday through Friday) from searches of bibliographic databases, hand searching, and the addition of other expert-referred scientific articles. This database represents a comprehensive multilingual source of current literature on the topic. While it may not be exhaustive, new research is added regularly.
11	The Lancet COVID-19 Resource Centre	The resource hub includes all COVID-19 articles published in the Lancet. The email is also subscribed to the Lancet COVID-19 listserv which will have likely covered the latest content but would be good to check.
12	PUBMED LitCOVID	LitCovid is a curated literature hub for tracking up-to-date scientific information about the COVID-19. It provides a central access to relevant articles in PubMed. The articles are updated daily and are further categorized by different research topics and geographic locations for improved access.
13	PLOS COVID-19 pandemic (2019-20)	This Collection of articles highlights all content published across the PLOS journals relating to the COVID-19 pandemic in 2019-20. The topics are further broken down into clinical epidemiology and care, molecular and genetic studies, social care, and others. While information here is quite clinical, this may change over time.
14	Elsevier Novel Coronavirus Information Center	Provides various repositories for COVID-19 articles in Elsevier journals and book chapters. Also, quite clinical, but this may change over time.
15	Field Exchange (ENN)	Field Exchange enables fast track publication of programming experiences of relevance to nutrition in emergencies and high burden contexts. The journal includes both original and summaries of relevant research.
16	FHI 360 resources related to nutrition	FHI 360 works in food security and emergency nutrition, micronutrients and food fortification, maternal and child nutrition, and nutrition and infectious diseases.

Knowledge Hubs without a search engine

1	Johns Hopkins University COVID-19, Maternal and Child Health, Nutrition	A repository compiled by the Johns Hopkins Center for Humanitarian Health provides an overview of what peer-reviewed journal articles currently state on COVID-19, maternal and child health (including infants), and nutrition. The publications are updated at least monthly.
---	---	---

2	Johns Hopkins University COVID-19, Breastfeeding, Infant Feeding, Breast Milk	A subsidiary COVID-19 repository from the above resource (Johns Hopkins Centre for Humanitarian health) with a specific focus on breastfeeding, infant feeding and breastmilk. This can also be accessed on the main COVID-19 maternal and child health, nutrition website .
3	Scaling Up Nutrition COVID-19 knowledge hub	This knowledge hub aims to be a resource for all members of the SUN Movement to get informed about COVID-19 developments, at large. It also sheds light on important links between COVID-19 and nutrition, hunger, health and food systems – by bringing together important updates, guidance, articles and opinion pieces, in its initial stage.
4	Innovations for Poverty Action: Research for Effective COVID-19 Responses (RECOVR)	This knowledge hub funded by the Bill and Melinda Gates foundation provides a range of initiatives from Innovation Poverty Action (IPA) on the Research for Effective COVID-19 Responses (RECOVR). It also includes a range of analysis of socioeconomic impacts of COVID-19 on low-and-middle-income countries.
5	The State of Acute Malnutrition: Innovations and COVID-19 Adaptations in the Management of Child Wasting	This page serves to track protocol adaptations across contexts, highlight innovative case studies, and aggregate available resources as part of a study by Action Against Hunger, USAID, UNICEF, and the US Centers for Disease Control.
6	CGIAR Response to COVID-19 & CGIAR COVID-19 Hub	CGIAR, as the world's largest public agricultural research network, is working to anticipate and address the causes and consequences of the COVID-19 crisis, building on work that spans almost half a century. The CGIAR COVID-19 Hub , in collaboration with the London School of Hygiene & Tropical Medicine, was created to ensure that a research-informed response effectively reaches the world's most vulnerable. So far, this hasn't been updated regularly.
7	UNSCN COVID-19 Recent News	Provides a list of resources on Food Systems and Nutrition responses and COVID-19 pandemic. Last updated July 31, 2020.
8	UNICEF Coronavirus disease (COVID-19) information centre	Provides stories and features on how countries are responding to the pandemic, resources for policy makers and frontline workers, as well as UNICEF data tools.
9	Global Nutrition Cluster Technical Alliance	Provides global, regional, and country-level resources for COVID-19 to assist Nutrition in Emergencies (NiE) practitioners and coordination teams with integration of COVID-19 preparedness and response into humanitarian nutrition response.
10	CARE Reports and Resources	A resource library of CARE's latest reports and publications.
11	Save the Children COVID-19 Resource Centre	An online library that hosts comprehensive, reliable and up-to-date information on Save the Children's work and thematic areas, including their COVID-19 response and coverage.
12	ENN: COVID-19 and Nutrition Programming	A live question and answer forum on COVID-19 and nutrition programming
13	GAIN Reports and Publications	Advocacy and policy documents, conference presentations and proceedings, peer-reviewed publications, programme and project documents, as well as tools and guidance documents.
14	Nutrition International Learning Resources	Research and knowledge products generated by NI including scientific articles, guidelines, fact sheets, policy briefs, online tools.

Table 1. 4. Data Portals

Name	Description
1	<p>UNICEF Tracking the situation of children during COVID-19</p> <p>A dashboard providing interactive data visualisations based on quarterly updates of recent data collection efforts from UNICEF country offices drawing on best available sources in each country, including administrative data or representative survey data collected in the last 3 months. The current version presents highlights from 159 countries as of late August 2020. The next update will take place in Q1 2021 (approximately March 2021)</p>
2	<p>UNICEF Data to inform the COVID-19 response</p> <p>This portal pulls together various existing datasets that UNICEF maintains on an number of indicators relevant to the COVID-19 response for children.</p>
3	<p>COVID-19 Dashboard by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University (JHU)</p> <p>The Johns Hopkins Coronavirus Resource Center (CRC) is a continuously updated source of COVID-19 data and expert guidance. The center aggregates and analyses the best data available on COVID-19—including cases, as well as testing, contact tracing and vaccine efforts.</p>
4	<p>IMF Policy Response to COVID-19</p> <p>The IMF’s policy tracker summarises the key economic responses that governments are taking to limit the human and economic impact of the COVID-19 pandemic. The tracker includes 197 economies and is updated regularly.</p>
5	<p>60 Decibels- Listening in the time of COVID-19</p> <p>60 decibels are conducting a series of interviews and surveys to explore some of the impacts of COVID-19 on peoples livelihoods. This dashboard presents the latest of their findings and is updated weekly.</p>
6	<p>WFP School Feeding Map</p> <p>The World Food Programme is monitoring the provision of meals for school children during school closures and assessing alternative solutions from the government and/or WFP. This portal visualises the latest results and updates regularly.</p>
7	<p>IFPRI COVID Policy Tracker</p> <p>The portal aggregates policy responses in nine different domains for countries where IFPRI and its partner institutions have country and regional programs and projects. The information can be analysed by country or policy response category.</p>
8	<p>COVID-19 High-Frequency Monitoring Dashboard</p> <p>Dashboard from the World Bank that presents harmonized indicators from high-frequency phone surveys conducted in over 40 countries in response to the COVID-19 pandemic. Data are available from indicators in 12 topic areas including food security.</p>

Annex 2: References of documents used by TASC

60 Decibels. (2021, February 14). *Listening in the time of COVID-19*. 60_decibels. <https://app.60decibels.com/covid-19#explore>

Abate, G. T., de Brauw, A., & Hirvonen, K. (2020). *Food and nutrition security in Addis Ababa, Ethiopia during COVID-19 pandemic: June 2020 report* (0 ed.). International Food Policy Research Institute. <https://doi.org/10.2499/p15738coll2.133766>

Abay, K. A., Berhane, G., Hodidinott, J. F., & Tafere, K. (2020). *COVID-19 and food security in Ethiopia: Do social protection programs protect?* International Food Policy Research Institute (IFPRI). <https://doi.org/10.2499/p15738coll2.134146>

Adewopo, J., Solano Hermosilla, G., Micale, F., & Colen, L. (2020). *Crowdsourced data reveals threats to household food security in near real-time during COVID-19 pandemic*. <https://doi.org/10.2499/p15738coll2.133737>

Adolescents' experiences of covid-19 and the public health response in Jordan. (n.d.). GAGE. Retrieved December 11, 2020, from <https://www.gage.odi.org/publication/adolescents-experiences-of-covid-19-and-the-public-health-response-in-jordan/>

Alive & Thrive. (2020). *An Overview of Alive and Thrive's Implementation Research* (p. 12). https://www.aliveandthrive.org/wp-content/uploads/2020/10/Implementation-Research-Summary-Brief_v7-NO-SUMMARY-map.pdf

Ashish, K. (2020). *Effect of the COVID-19 pandemic response on intrapartum care, stillbirth, and neonatal mortality outcomes in Nepal: A prospective observational study—The Lancet Global Health*. [https://www.thelancet.com/journals/langlo/article/PIIS2214-109X\(20\)30345-4/fulltext](https://www.thelancet.com/journals/langlo/article/PIIS2214-109X(20)30345-4/fulltext)

Bhatt, N. (2020). Breastfeeding in India is disrupted as mothers and babies are separated in the pandemic. *BMJ*, 370, m3316. <https://doi.org/10.1136/bmj.m3316>

Bodamaev, S., & Tuwo, A. (n.d.). *INDONESIA COVID-19: Economic and Food Security Implications* (p. 38). WFP. https://docs.wfp.org/api/documents/WFP-0000116063/download/?_ga=2.879857.1124278459.1597768347-1870693230.1576591270

Borkowski, A., Correa, J. S. O., Bundy, D. A. P., Burbano, C., Hayashi, C., Lloyd-Evans, E., Neitzel, J., & Reuge, N. (n.d.). *COVID-19: Missing More Than a Classroom*. 30.

Boughton, D., Goeb, J., Lambrecht, I., Headey, D., Takeshima, H., Mahrt, K., Masias, I., Goudet, S., Ragasa, C., Maredia, M. K., Minten, B., & Diao, X. (2021). Impacts of COVID-19 on agricultural production and food systems in late transforming Southeast Asia: The case of Myanmar. *Agricultural Systems*, 188, 103026. <https://doi.org/10.1016/j.agsy.2020.103026>

Busch-Hallen, J., Walters, D., Rowe, S., Chowdhury, A., & Arabi, M. (2020). Impact of COVID-19 on maternal and child health. *The Lancet Global Health*, 8(10), e1257. [https://doi.org/10.1016/S2214-109X\(20\)30327-2](https://doi.org/10.1016/S2214-109X(20)30327-2)

COVID-19 High-Frequency Monitoring Dashboard. (n.d.). [Text/HTML]. World Bank. Retrieved February 18, 2021, from <https://www.worldbank.org/en/data/interactive/2020/11/11/covid-19-high-frequency-monitoring-dashboard>

COVID-19 is making it harder for vulnerable people to access healthy food. (n.d.). Global Alliance for Improved Nutrition (GAIN). Retrieved December 15, 2020, from <https://www.gainhealth.org/resources/reports-and-publications/covid-19-making-it-harder-vulnerable-people-access-healthy-food>

Das, S., Rasul, M. G., Hossain, M. S., Khan, A.-R., Alam, M. A., Ahmed, T., & Clemens, J. D. (2020). Acute food insecurity and short-term coping strategies of urban and rural households of Bangladesh during the lockdown period of COVID-19 pandemic of 2020: Report of a cross-sectional survey. *BMJ Open*, 10(12), e043365. <https://doi.org/10.1136/bmjopen-2020-043365>

Diao, X., Dorosh, P. A., Fang, P., & Schmidt, E. (2020). *Effects of COVID-19 on Papua New Guinea's food economy: A multi-market simulation analysis*. <https://doi.org/10.2499/p15738coll2.134174>

Dodgson, J. (2020). *Protecting and Supporting the WHO International Code During COVID-19*. <https://journals.sagepub.com/doi/10.1177/0890334420939554>

Dong, E., Du, H., & Gardner, L. (2020, May 1). *An interactive web-based dashboard to track COVID-19 in real time*. *The Lancet Infectious Diseases*; Elsevier. [https://www.thelancet.com/journals/laninf/article/PIIS1473-3099\(20\)30120-1/abstract](https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(20)30120-1/abstract)

Effect of Covid-19 on food security: A cross-sectional survey—Clinical Nutrition ESPEN. (n.d.). Retrieved December 1, 2020, from [https://clinicalnutritionespen.com/article/S2405-4577\(20\)30213-8/fulltext](https://clinicalnutritionespen.com/article/S2405-4577(20)30213-8/fulltext)

Fact sheets—Malnutrition. (n.d.). Retrieved December 15, 2020, from <https://www.who.int/news-room/fact-sheets/detail/malnutrition>

FAO. (2020a). *COVID-19 and Its Impact on Agri-food Systems, Food Security and Nutrition: Implications and Priorities for the Africa Region*. FAO Regional Conference for Africa (ARC), Rome, Italy. <http://www.fao.org/publications/card/en/c/NE079EN>

FAO. (2020b). *Food Outlook – Biannual Report on Global Food Markets*. FAO. <https://doi.org/10.4060/cb1993en>

FAO. (2020c). *The State of Food Security and Nutrition in the World 2020: Transforming food systems for affordable healthy diets*. FAO, IFAD, UNICEF, WFP and WHO. <https://doi.org/10.4060/ca9692en>

FAO/WFP. (2020). *FAO-WFP early warning analysis of acute food insecurity hotspots*. FAO and WFP. <https://doi.org/10.4060/cb0258en>

Fernandes. (2020). *Economic Effects of Coronavirus Outbreak (COVID-19) on the World Economy by Nuno Fernandes: SSRN*. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3557504

Freudenreich, H., Demmler, K. M., Fongar, A., Jäckering, L., & Rudolf, K. (n.d.). *Effective interventions to increase food and nutrition security in response to Covid-19*. 9.

GAIN. (2020). *Impact of COVID-19 on Food Systems: A Situation Report, Edition 4 (No. 4)*. GAIN. <https://www.gainhealth.org/sites/default/files/publications/documents/impact-of-covid-19-on-food-systems-a-situation-report-iv.pdf>

GFF, Ahmed, 2020 | Tashrik, Fern, P. A., ez, Drouard, S., Friedman, J., Hashemi, T., Kakietek, J., K, E., pal, Rilling, C., Rusatira, J. de D., Shapira, G., & Vergeer, P. (2020). *Monitoring continuity of essential health services during the COVID-19 Pandemic | Global Financing Facility*. <https://www.globalfinancingfacility.org/monitoring-continuity-essential-health-services-during-covid-19-pandemic>

GIEWS - Global Information and Early Warning System. (2020a). *FPMA Bulletin, December 2020*. Food and Agriculture Organization of the United Nations. <http://www.fao.org/3/cb2424en/cb2424en.pdf>

Global Nutrition Cluster. (n.d.). *Global Nutrition Cluster (GNC) support dashboard*. COVID-19 Data Portal. Retrieved January 14, 2021, from <https://app.powerbi.com/view?r=eyJrIjoiODc3Zjk0ZDgtZmFiOC00NTI0LTk3YmUtNDI0N2NiMTk3M2QxliwiLCI6IjVIZjFhZDQ4LWJkZTgtNDY0My1hODIhLWVvKMTQyNmlONGJjMyJ9&pageName=ReportSection6d9ff2d2802443c630e5>

Goalkeepers, B. and M. G. F. (2020). *We can end COVID-19. Together.*
<https://www.gatesfoundation.org/goalkeepers/report/2020-report/>

Guidance on Household Surveys during COVID-19_Final version.pdf. (n.d.). Retrieved December 10, 2020, from https://www.nutritioncluster.net/sites/nutritioncluster.com/files/2020-10/Guidance%20on%20Household%20Surveys%20during%20COVID-19_Final%20version.pdf

Haiek, L. N., LeDrew, M., Charette, C., & Bartick, M. (n.d.). Shared decision-making for infant feeding and care during the coronavirus disease 2019 pandemic. *Maternal & Child Nutrition*, n/a(n/a), e13129.
<https://doi.org/10.1111/mcn.13129>

Harris, J., Depenbusch, L., Pal, A. A., Nair, R. M., & Ramasamy, S. (2020). Food system disruption: Initial livelihood and dietary effects of COVID-19 on vegetable producers in India. *Food Security*, 12(4), 841–851. <https://doi.org/10.1007/s12571-020-01064-5>

Headey, D. D., Oo, T. Z., Mahrt, K., Diao, X., Goudet, S., & Lambrecht, I. (2020a). *Poverty, food insecurity, and social protection during COVID-19 in Myanmar: Combined evidence from a household telephone survey and micro-simulations.* International Food Policy Research Institute (IFPRI).
<https://doi.org/10.2499/p15738coll2.134144>

Headey, D. D., Oo, T. Z., Mahrt, K., Diao, X., Goudet, S., & Lambrecht, I. (2020b). *Waves of disease, waves of poverty: New evidence on the economic impacts of COVID-19 in Myanmar.*
<https://doi.org/10.2499/p15738coll2.134144>

Headey, D., Heidkamp, R., Osendarp, S., Ruel, M., Scott, N., Black, R., Shekar, M., Bouis, H., Flory, A., Haddad, L., & Walker, N. (2020). Impacts of COVID-19 on childhood malnutrition and nutrition-related mortality. *The Lancet*, 396(10250), 519–521. [https://doi.org/10.1016/S0140-6736\(20\)31647-0](https://doi.org/10.1016/S0140-6736(20)31647-0)

Hirvonen, K., de Brauw, A., & Abate, G. T. (2020). *Food consumption and food security during the COVID-19 pandemic in Addis Ababa* (0 ed.). International Food Policy Research Institute.
<https://doi.org/10.2499/p15738coll2.134018>

HNN. (2020). Webinars on COVID-19, newborn and perinatal health. *Healthy Newborn Network.*
<https://www.healthynewbornnetwork.org/event/webinars-on-covid-19-and-newborn-perinatal-health/>

Hoang, D. V., Cashin, J., Gribble, K., Marinelli, K., & Mathisen, R. (2020). Misalignment of global COVID-19 breastfeeding and newborn care guidelines with World Health Organization recommendations. *BMJ Nutrition, Prevention & Health*, bmjnph. <https://doi.org/10.1136/bmjnph-2020-000184>

How COVID-19 is changing the world: A statistical perspective, Volume II (p. 80). (n.d.). UNICEF.
<https://data.unicef.org/wp-content/uploads/2020/07/covid19-report-ccsa.pdf>

How livelihoods deteriorated in Sub-Saharan Africa due to COVID-19. (n.d.). Retrieved February 17, 2021, from <https://blogs.worldbank.org/africacan/how-livelihoods-deteriorated-sub-saharan-africa-due-covid-19>

IFPRI. (n.d.-a). *COVID-19 Policy Response (CPR) Portal.* COVID-19 Policy Response (CPR) Portal. Retrieved January 14, 2021, from https://public.tableau.com/views/CPRPORTAL/Overview?%3Aembed=y%3AshowVizHome=no%3Adisplay_count=y%3Adisplay_static_image=y%3AbootstrapWhenNotified=true%3Alanguage=en-GB&publish=yes&:embed=y&:showVizHome=n&:apiID=host0#navType=0&navSrc=Parse

Impact of COVID on Children-Snapshot report.pdf .pdf. (n.d.). Retrieved November 30, 2020, from <https://reliefweb.int/sites/reliefweb.int/files/resources/Impact%20of%20COVID%20on%20Children-Snapshot%20report.pdf%20.pdf>

Integrated Food Security Phase Classification. (n.d.). *Integrated Food Security Phase Classification Snapshot | January—June 2021—Somalia* [Map]. Retrieved February 5, 2021, from https://reliefweb.int/sites/reliefweb.int/files/resources/IPC_Somalia_AFI_AMN_2021JanJuly_Snapshot.pdf

Integrated Food Security Phase Classification Technical Manual Version 3.0 -Evidence and Standards for Better Food Security and Nutrition Decisions. (2019). IPC Global Partners. http://www.ipcinfo.org/fileadmin/user_upload/ipcinfo/manual/IPC_Technical_Manual_3_Final.pdf

Jawaldeh, A. A., Doggui, R., Borghi, E., Aguenau, H., Ammari, L. E., Abul-Fadl, A., & McColl, K. (2020). Tackling Childhood Stunting in the Eastern Mediterranean Region in the Context of COVID-19. *Children*, 7(11), 239. <https://doi.org/10.3390/children7110239>

Josephson, A., Kilic, T., & Michler, J. D. (n.d.). *Socioeconomic Impacts of COVID-19 in Four African Countries* (p. 60). World Bank Group. <http://documents.worldbank.org/curated/en/955251604433596591/Socioeconomic-Impacts-of-COVID-19-in-Four-African-Countries>

Kansiime, M. K., Tambo, J. A., Mugambi, I., Bundi, M., Kara, A., & Owuor, C. (2021a). COVID-19 implications on household income and food security in Kenya and Uganda: Findings from a rapid assessment. *World Development*, 137, 105199. <https://doi.org/10.1016/j.worlddev.2020.105199>

Kansiime, M. K., Tambo, J. A., Mugambi, I., Bundi, M., Kara, A., & Owuor, C. (2021b). COVID-19 implications on household income and food security in Kenya and Uganda: Findings from a rapid assessment. *World Development*, 137, 105199. <https://doi.org/10.1016/j.worlddev.2020.105199>

Kenya—Key Message Update: Fri, 2021-01-29 | Famine Early Warning Systems Network. (n.d.). Retrieved February 5, 2021, from <https://fews.net/east-africa/kenya/key-message-update/january-2021>

Knorr, D., & Khoo, C.-S. H. (2020). COVID-19 and Food: Challenges and Research Needs. *Frontiers in Nutrition*, 7. <https://doi.org/10.3389/fnut.2020.598913>

Kundu, S., Banna, M. H. A., Sayeed, A., Sultana, M. S., Brazendale, K., Harris, J., Mandal, M., Jahan, I., Abid, M. T., & Khan, M. S. I. (undefined/ed). Determinants of household food security and dietary diversity during the COVID-19 pandemic in Bangladesh. *Public Health Nutrition*, 1–9. <https://doi.org/10.1017/S1368980020005042>

Laborde, D., Martin, W., Swinnen, J., & Vos, R. (2020). COVID-19 risks to global food security. *Science*, 369(6503), 500–502. <https://doi.org/10.1126/science.abc4765>

Laborde Debuquet, D., Martin, W., & Vos, R. (2020). *Impacts of COVID-19 on Global Poverty, Food Security and Diets* (IFPRI Discussion Paper 01993, p. 50) [Discussion Paper]. IFPRI.

Laderchi, C. R., Bismarck, T., & Patel, N. (2020). *Strengthening Food Systems' Resilience to COVID-19: Initial Lessons from FOLU Countries' Responses to the Global Pandemic.* 25.

Malnutrition: Emergencies and disasters. (n.d.). Retrieved December 15, 2020, from <https://www.who.int/news-room/q-a-detail/malnutrition-emergencies-and-disasters>

Mertens, E., & Peñalvo, J. L. (2021). The Burden of Malnutrition and Fatal COVID-19: A Global Burden of Disease Analysis. *Frontiers in Nutrition*, 7. <https://doi.org/10.3389/fnut.2020.619850>

Monitoring COVID-19 Impact on Households in Kenya. (n.d.). [Text/HTML]. World Bank. Retrieved February 18, 2021, from <https://www.worldbank.org/en/country/kenya/brief/monitoring-covid-19-impact-on-households-and-firms-in-kenya>

Nordhagen, S., Igbeka, U., Rowlands, H., Shine, R. S., Heneghan, E., & Tench, J. (2021). COVID-19 and small enterprises in the food supply chain: Early impacts and implications for longer-term food system

resilience in low- and middle-income countries. *World Development*, 141, 105405.
<https://doi.org/10.1016/j.worlddev.2021.105405>

Nutrition critical: Why we must all act now to tackle child malnutrition (p. 47). (2020). Save the Children.
https://resourcecentre.savethechildren.net/node/18600/pdf/nutrition_critical_africa_version.pdf

Nutrition-information-COVID-Brief#2 Final July2020.pdf. (n.d.). Retrieved December 10, 2020, from
<https://www.nutritioncluster.net/sites/nutritioncluster.com/files/2020-07/Nutrition-information-COVID-Brief%232%20Final%20July2020.pdf>

Oakley, E., Baird, S., Haque, M. A., Jones, N., Raihan, S., & Seager, J. (n.d.). *Adolescents' experiences of covid-19 and the public health response in urban Dhaka, Bangladesh*. 8.

Obesity and overweight. (n.d.). Retrieved December 16, 2020, from <https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight>

Pakravan-Charvadeh, M. R., Mohammadi-Nasrabadi, F., Gholamrezai, S., Vatanparast, H., Flora, C., & Nabavi-Pelesarai, A. (2020). The short-term effects of COVID-19 outbreak on dietary diversity and food security status of Iranian households (A case study in Tehran province). *Journal of Cleaner Production*, 124537. <https://doi.org/10.1016/j.jclepro.2020.124537>

Peng, S., Zhu, H., Yang, L., Cao, L., Huang, X., Dynes, M., Narayan, A., Xia, J., Chen, Y., Zhang, P., Liu, H., Li, H., & Xia, S. (2020). A study of breastfeeding practices, SARS-CoV-2 and its antibodies in the breast milk of mothers confirmed with COVID-19. *The Lancet Regional Health – Western Pacific*, 4. <https://doi.org/10.1016/j.lanwpc.2020.100045>

Policy Responses to COVID19. (n.d.). IMF. Retrieved January 14, 2021, from
<https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19>

Popkin, B. M., Du, S., Green, W. D., Beck, M. A., Algaith, T., Herbst, C. H., Alsukait, R. F., Alluhidan, M., Alazemi, N., & Shekar, M. (2020). Individuals with obesity and COVID-19: A global perspective on the epidemiology and biological relationships. *Obesity Reviews*, 21(11), e13128.
<https://doi.org/10.1111/obr.13128>

Rahimov, B., & Mustaphi, K. S. and P. (2020). Integrating screening for acute malnutrition into the vitamin A supplementation campaign in the Rohingya camps during the COVID-19 pandemic. *Field Exchange* 63, 61.

Rana, R., Barthorp, H., & Beri, M. T. M. and A. (2020). *Implementing the family-MUAC approach for infants under 6 months in the context of COVID-19 in Ethiopia*.
<https://www.enonline.net/fex/64/ethiopiagoalcovidadaptations>

Report_a4_en.pdf. (n.d.). Retrieved December 10, 2020, from
https://www.gatesfoundation.org/goalkeepers/downloads/2020-report/report_a4_en.pdf

Rwanda—Key Message Update: Fri, 2021-01-29 | Famine Early Warning Systems Network. (n.d.). Retrieved February 5, 2021, from <https://fews.net/east-africa/rwanda/key-message-update/january-2021>

S. Mahendra, D. (2020). *COVID-19 crisis: An opportunity for long-delayed agricultural reforms in India | IFPRI : International Food Policy Research Institute*. <https://www.ifpri.org/blog/covid-19-crisis-opportunity-long-delayed-agricultural-reforms-india>

Save the Children. (2020). *11m children under five at risk of extreme hunger or starvation across eleven countries—Democratic Republic of the Congo*. ReliefWeb. <https://reliefweb.int/report/democratic-republic-congo/11m-children-under-five-risk-extreme-hunger-or-starvation-across>

Saxena, A., Amin, A., Mohan, S. B., & Mohan, P. (2020). Food Insecurity in Tribal High Migration Communities in Rajasthan, India. *Food and Nutrition Bulletin*, 0379572120967163. <https://doi.org/10.1177/0379572120967163>

Shumba, C., Maina, R., Mbuthia, G., Kimani, R., Mbugua, S., Shah, S., Abubakar, A., Luchters, S., Shaibu, S., & Ndirangu, E. (2020). Reorienting Nurturing Care for Early Childhood Development during the COVID-19 Pandemic in Kenya: A Review. *International Journal of Environmental Research and Public Health*, 17(19). <https://doi.org/10.3390/ijerph17197028>doi: 10.3390/ijerph17197028.

Singh, S., Nourozi, S., Acharya, L., & Thapa, S. (2020). Estimating the potential effects of COVID-19 pandemic on food commodity prices and nutrition security in Nepal. *Journal of Nutritional Science*, 9. <https://doi.org/10.1017/jns.2020.43>

Storz, M. A. (2020). The COVID-19 pandemic: An unprecedented tragedy in the battle against childhood obesity. *Clinical and Experimental Pediatrics*, 63(12), 477–482. <https://doi.org/2020.63.12.477>

Swinnen, J., & McDermott, J. (2020). *COVID-19 and global food security* (0 ed.). International Food Policy Research Institute. <https://doi.org/10.2499/p15738coll2.133762>

Tamru, S., Hirvonen, K., & Minten, B. (2020). *Impacts of the COVID-19 crisis on vegetable value chains in Ethiopia* (0 ed.). International Food Policy Research Institute. <https://doi.org/10.2499/p15738coll2.133762> 18

Tech RRT. (2020a). *A Learning and Sharing “Café”: IYCF Programming Adaptations in the Context of COVID-19 – Third Cafe*. https://s16947.pcdn.co/wp-content/uploads/2020/10/Cafe-3_Final_no-videos.pdf

Tech RRT. (2020b). *A Learning and Sharing “Café”: IYCF Programming Adaptations in the Context of COVID-19 – Fourth Cafe*. https://s16947.pcdn.co/wp-content/uploads/2020/11/cafe4_slidedeck_27102020_final.pdf

The DHS Program—COVID-19. (n.d.). Retrieved December 10, 2020, from <https://dhsprogram.com/topics/COVID-19.cfm>

The DHS Program—COVID-19 Update: Some DHS surveys return to the field; others postponed until 2021. (n.d.). Retrieved February 19, 2021, from <https://dhsprogram.com/Who-We-Are/News-Room/COVID-19-Update-Some-DHS-surveys-return-to-the-field-others-postponed-until-2021.cfm>

The Impact of COVID-19 on Children in West and Central Africa: Learning from 2020. (2021, January 18). Resource Centre. https://resourcecentre.savethechildren.net/node/18647/pdf/rapport_covid_anglais.pdf

The potential impacts of the COVID-19 crisis on maternal and child undernutrition in low and middle income countries. (2020). <https://doi.org/10.21203/rs.3.rs-123716/v1>

The State of Acute Malnutrition. (n.d.-b). *Innovations and COVID-19 Adaptations in the Management of Child Wasting—State of Acute Malnutrition*. The State of Acute Malnutrition. Retrieved January 14, 2021, from <https://www.acutemalnutrition.org/en/innovations-and-covid19-adaptations>

The State of the World’s Children 1998. (n.d.). Retrieved December 14, 2020, from <https://www.unicef.org/sowc98/fig5.htm>

Tulleken, C. van, Wright, C., Brown, A., McCoy, D., & Costello, A. (2020). Marketing of breastmilk substitutes during the COVID-19 pandemic. *The Lancet*, 396(10259), e58. [https://doi.org/10.1016/S0140-6736\(20\)32119-X](https://doi.org/10.1016/S0140-6736(20)32119-X)

Uganda—Key Message Update: Fri, 2020-07-31 | Famine Early Warning Systems Network. (n.d.). Retrieved December 11, 2020, from <https://fews.net/east-africa/uganda/key-message-update/july-2020>

Uganda—Key Message Update: Fri, 2021-01-29 | Famine Early Warning Systems Network. (n.d.). Retrieved February 5, 2021, from <https://fews.net/east-africa/uganda/key-message-update/january-2021>

UN. (2020). *UN Research Roadmap for the COVID-19 Recovery*. 128.

UNICEF. (2020a). *UNICEF Global COVID-19 Situation Report No. 14: October 2020 - World*. <https://reliefweb.int/report/world/unicef-global-covid-19-situation-report-no-14-october-2020>

UNICEF. (2020b, September 24). *Tracking the situation of children during COVID-19*. UNICEF DATA. <https://data.unicef.org/resources/rapid-situation-tracking-covid-19-socioeconomic-impacts-data-viz/>

UNICEF. (2020c). *Humanitarian Action for Children 2021 Overview*. UNICEF. <https://www.unicef.org/reports/humanitarian-action-children-2021-overview>

UNICEF. (2020d, December 30). *COVID-19 and conflict: A deadly combination*. <https://www.unicef.org/coronavirus/covid-19-and-conflict-deadly-combination>

UNICEF, MENA. (n.d.). *The potential impact of health care disruption on child mortality in MENA due to COVID-19*. Retrieved February 16, 2021, from <https://www.unicef.org/mena/reports/potential-impact-health-care-disruption-child-mortality-mena-due-covid-19>

UNICEF, WHO, and the World Bank Group. (n.d.). *Levels and trends in child malnutrition: Key findings of the 2020 edition*. Retrieved February 16, 2021, from <https://www.unicef.org/reports/joint-child-malnutrition-estimates-levels-and-trends-child-malnutrition-2020>

UNOCHA. (2020). *Zimbabwe Situation Report*. <https://reports.unocha.org/en/country/zimbabwe/>

UNOCHA. (2021, January 13). *Asia Pacific Regional Humanitarian Update*. ASIA PACIFIC REGIONAL HUMANITARIAN UPDATE. <https://reports.unocha.org/en/country/asia-pacific/>

Update on the CGIAR Research Response to COVID-19. (n.d.). Retrieved January 14, 2021, from <https://a4nh.cgiar.org/files/2020/12/COVID-19-Hub-Update-December-2020.pdf>

USING DATA TO FIND A BALANCE: Disruption to essential health services in Africa during COVID-19. (n.d.). *Africa CDC*. Retrieved December 9, 2020, from <https://africacdc.org/download/using-data-to-find-a-balance-disruption-to-essential-health-services-in-africa-during-covid-19/>

Weekly-SUN-Movement-Briefing_18Dec2020.pdf. (n.d.). Retrieved January 13, 2021, from https://scalingupnutrition.org/wp-content/uploads/2020/12/Weekly-SUN-Movement-Briefing_18Dec2020.pdf

WFP. (2020a). *COVID-19 L3 Emergency—External Situation Report #17, 2 December 2020—World*. <https://reliefweb.int/report/world/covid-19-l3-emergency-external-situation-report-17-2-december-2020>

WFP. (2020b). *Global Monitoring of School Meals During COVID-19 School Closures*. <https://cdn.wfp.org/2020/school-feeding-map/index.html>

WFP. (2020c). *Populations at Risk: Implications of COVID-19 for Hunger, Migration and Displacement, November 2020 | World Food Programme*. <https://www.wfp.org/publications/populations-risk-implications-covid-19-hunger-migration-displacement-2020>

WFP. (2020d). *COVID-19 will double number of people facing food crises unless swift action is taken | World Food Programme*. <https://www.wfp.org/news/covid-19-will-double-number-people-facing-food-crises-unless-swift-action-taken>

WFP (2020e). *Covid-19 Pandemic: Impact of restriction measures in West Africa*. (2020). <https://reliefweb.int/report/burkina-faso/covid-19-pandemic-impact-restriction-measures-west-africa>

WFP. (2021, January 14). *WFP HungerMap Live: Hunger and COVID-19 Weekly Snapshot*. <https://hungermap.wfp.org/>

WHO. (2020a). *Breastfeeding and COVID-19*. <https://www.who.int/news-room/commentaries/detail/breastfeeding-and-covid-19>

WHO. (2020b). *Pulse survey on continuity of essential health services during the COVID-19 pandemic: Interim report, 27 August 2020*. https://www.who.int/publications-detail-redirect/WHO-2019-nCoV-EHS_continuity-survey-2020.1

WHO | DALYs / YLDs definition. (n.d.). WHO; World Health Organization. Retrieved February 18, 2021, from https://www.who.int/mental_health/management/depression/daly/en/

World bank high frequency monitoring dashboard. (n.d.). Retrieved February 18, 2021, from <https://www.bing.com/search?q=world+bank+high+frequency+monitoring+dashboard&cvid=34c67427c22542509ffff2f28a10687d&FORM=ANAB01&PC=U531>

Wrabel, B. M., & Stobaugh, S. K. and H. (2021). Adaptations to community-based acute malnutrition treatment during the COVID-19 pandemic. *Field Exchange* 64, 55.