Impact of COVID-19 on Food Systems: A Situation Report

EDITION 4 – NOVEMBER 23, 2020

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Key Messages

- This rapid assessment—the fourth in a series—indicates that COVID-19-related control measures continue to have an impact on food systems.
- 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.
- 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. 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.
- The situation continues to change rapidly and varies widely across and within countries, particularly as ‘second waves’ of COVID-19 spread are emerging.

1 SCOPE AND PURPOSE

The COVID-19 pandemic is a multiplier of vulnerability, compounding threats to food security and nutrition (FSN), while exposing weaknesses in food systems.\(^1\) In response, the Global Alliance for Improved Nutrition (GAIN) developed the Keeping Food Markets Working (KFMW) programme to provide targeted support to help sustain core food systems, workers, and markets during the COVID-19 emergency. The programme’s objective is to mitigate the risk of collapse of the countries’ food systems in order to sustain the availability and affordability of nutritious food.

This document is a fourth situation report\(^2\) generated to synthetise 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 (Bangladesh, Ethiopia, India, Indonesia, Kenya, Mozambique, Nigeria, Pakistan, Rwanda, and Tanzania). A particular focus is placed on small- and medium-sized enterprises (SMEs) within the food system and how nutritious foods value chains are changing.

2 SOURCES AND METHODS

\(^1\) https://docs.wfp.org/api/documents/WFP-0000119380/download/
\(^2\) Previous reports undertaken are available here: https://www.gainhealth.org/resources/reports-and-publications
The information presented draws on several sources in relation to the impact of COVID-19 on the respective food systems. Largely, it is a synthesis of relevant secondary data, as well as some primary research from GAIN and its partner initiatives. To substantiate the report, a thorough desk review of available secondary data was conducted, including data of Euromonitor’s ecommerce price and stock data (see Annex 2); FEWS NET; the Food and Agriculture Organization (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. The information in this report is current as of approximately November 23, 2020.

3 RESULTS

3.1 Measures Taken to Control COVID-19 Spread

Eight months since the World Health Organization’s (WHO’s) pandemic declaration, the number of reported COVID-19 cases continues to climb. Figure 1 displays the recent trend in new cases per million people in each focus country, though recorded cases are likely an underestimate of the true scale of the outbreak. Many countries worldwide have eased movement restrictions put in place in March and April that brought parts of the global economy to a halt.3

After May 10, 2020, the reporting date of the third situation report,4 certain countries (Pakistan, Bangladesh, and India) saw significant growth of cases, reaching their peaks in late May, late June, and September, respectively. This resulted in delayed easing of restrictions compared to other countries. However, with a resurgence in Pakistan curfews have been re-imposed and the government is considering more stringent measures.5 Other countries (Mozambique, Nigeria, and Rwanda) showed a more modest growth trend, with Nigeria starting to ease measures in June and July. In Indonesia, businesses slowly returned to normal operations in August6 even though the rate of cases per million people had been on the rise since mid-September.7 Kenya had a significant downturn of cases after a peak at the end of July/early August, however, is now in the midst of a second wave, and as a result, the government re-imposed restrictions on November 4, 2020. There is little data for Tanzania as the government has not released any official figures since early May, claiming that releasing the figures was causing ‘unnecessary’ panic in the country.8 While internal movement restrictions have been gradually reduced across many countries, international border controls limiting migratory labour remain in place in most geographies.9

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3 https://fews.net/global/alert/september-2020
5 https://www.flandersinvestmentandtrade.com/export/nieuws/coronavirus-situation-pakistan
9 https://fews.net/global/alert/september-2020
3.2 Impacts on Local Food Systems and Food Security and Nutrition

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 volatilities are anticipated.\(^\text{10}\) According to an FAO report (October 2020), there is evidence that COVID-19 has touched the whole food supply chain, including input suppliers (seeds, animal feed, fertilisers, labour, etc.), farmers, herders, fisher-folks, processors, transporters, wholesalers, retailers, food preparers, and consumers.\(^\text{11}\)

**Box 1: Summary of Known Impacts of COVID-19 on Agri-Food Systems and Food Security and Nutrition**

1. Production was impacted through limited access to inputs and timely operation of activities.
2. Supply chains have been disrupted by limited access to markets for livestock, perishable nutrient dense food products (fresh vegetables, fruits, fish).
3. Small businesses and jobs suffered, including SMEs, while school closures curtailed access to food.
4. Incomes were slashed for informal sector operators, small-scale producers and traders, as well as a reduction in remittances flows.
5. Food price hikes, which were a challenge for the poor, as healthy diets are already a luxury for them, further undermining access to healthy and nutritious food.
6. The limited public funds were switched from social protection to health emergency.


Data from FAO, IFPRI, and International Labour Organisation (ILO) (June 2020) estimated that 34% of global food system livelihoods are at risk due to COVID-19, the greatest food system livelihood risk areas are in food processing, food services and distribution services, with 60%, 60% and 40% of livelihoods at risk, respectively \(^\text{10}\)  \(^\text{11}\)
COVID-19 mitigation and control measures and the emerging economic recession are having profound economic impact, putting the jobs and livelihoods of tens of millions at risk. While easing control measures in GAIN countries in May-August helped to lessen the effects of COVID-19 on food systems, the renewed surge in cases in many countries is drawing new attention to these risks.

The pandemic came at a time when FSN and food systems were already under strain due to conflict, natural disasters, climate change, and the arrival of pests and plagues. For example, more than 17 million people across Malawi, Mozambique, Zimbabwe, Zambia, and South Africa are already food insecure due to last year’s drought. Oxfam estimates that 40 million people in Southern Africa alone are at risk of increased hunger and poverty due to the double threat of COVID-19 and consecutive climatic shocks. In addition, East Africa was facing a “triple menace” of mutually exacerbating disasters, at the beginning of COVID-19, as ongoing heavy rain hampered attempts to deal with swarms of locusts. Meanwhile, the widespread locust breeding continues in eastern Ethiopia where new swarms are expected to start forming in early December and move south to Kenya by mid-December (November 12, 2020). Ethiopia also faces a growing impact of conflict in and around the Tigray region, leading to population displacements. There are also larger international forces that are affecting food accessibility at the local level, such as reductions in remittances and currency fluctuations linked to trade and oil markets.

Global extreme poverty is expected to rise in 2020 for the first time in over 20 years as COVID-19 is expected to worsen an already concerning Food Security and Nutrition context. The World Bank estimates (as of October 15, 2020) that 130 million people could face acute food insecurity and undernourishment by the end of 2020, in addition to the 135 million people who were already food and nutrient insecure before the crisis. Rapid phone surveys done by the World Bank in a number of countries confirmed the widespread impact of COVID-19 on household incomes and FSN.

Figure 2: Estimated Global Percentage of Livelihoods at Risk in the Food Systems.


Of the 10 GAIN focus countries, Nigeria, Ethiopia and Mozambique are at most risk of food and nutrition insecurity according to the World Food Programme (WFP) September-December 2020 outlook (see Table 1). Nigeria has seen an estimated additional 3.65 million people in acute food insecurity since the start of COVID-19. Ethiopia was in a FSN crisis pre-COVID-19, however, there has been an increase in an estimated 0.5 million people as a result of COVID-19. Kenya did not see an increase in food-insecure people as a result of COVID-19. It was in a crisis stage in 2019 but moved down into a stressed phase pre-COVID-19 2020. Rwanda noted an increase of approximately 0.1 million people due to COVID-19. While Table 1 shows the number of acutely food-insecure people, the number of undernourished people due to COVID-19 is expected to be much higher, largely due to the income losses.

Table 1: Highest Number of Acutely Food-Insecure People Pre-COVID-19 2020 and in Times of COVID-19.

<table>
<thead>
<tr>
<th>GAIN Countries</th>
<th>Population in IPC/CH Phase 2 “Stressed” (millions)</th>
<th>Population in IPC/CH Phase 3 or above “Crisis” or “Emergency” (millions)</th>
<th>Change in numbers of people in IPC/CH Phase 3 or above between 2019 peak estimates and 2020 estimates in times of COVID-19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethiopia</td>
<td>10.3</td>
<td>8.5</td>
<td>Data from six selected regions pre-COVID-19 and seven during COVID-19 between Feb and Sep 2020. However, not directly comparable due to an increase in the total population analysed. Increase by 0.5 million people in absolute terms and a decrease by 7 percentage points in prevalence.</td>
</tr>
<tr>
<td>Kenya</td>
<td>3.7</td>
<td>1.3</td>
<td>Data from 26-29% of the population from Jan to Mar 2020. Decrease by 2.2 million in absolute terms and by 17 percentage points in prevalence compared to the 2019 peak.</td>
</tr>
<tr>
<td>Mozambique</td>
<td>1.6</td>
<td>1.7</td>
<td>Not directly comparable due to decrease in population analysed and difference in geographical coverage (urban areas added, rural areas reduced/different).</td>
</tr>
<tr>
<td>Nigeria</td>
<td>19.2</td>
<td>7.1</td>
<td>Data from 16 states and Federal Capital Territory. Increase by 3.65 million people in absolute terms and by 3 percentage points in prevalence.</td>
</tr>
<tr>
<td>Pakistan</td>
<td>1.5</td>
<td>1.2</td>
<td>No available estimate during COVID-19.</td>
</tr>
<tr>
<td>Rwanda</td>
<td>--</td>
<td>0.085-0.125</td>
<td>Increase by approximately 0.1 million people in absolute terms and roughly 1 percentage point in prevalence. Estimated average value here. Original data was a range.</td>
</tr>
<tr>
<td>Tanzania</td>
<td>1.7</td>
<td>1.0</td>
<td>No available estimate during COVID-19.</td>
</tr>
</tbody>
</table>


24 https://reliefweb.int/sites/reliefweb.int/files/resources/WFP_EXTERNAL_REPORT_A4_EN_15.pdf
25 https://docs.wfp.org/api/documents/WFP-0000119673/download?_ga=2.94136349.1460453165.1604404521-792094182.1603971374
Box 2: Impacts on Large-Scale Food Fortification

The heads of UNICEF, FAO, WFP, and WHO made a joint statement in August calling for urgent action to protect children’s right to nutrition: “Malnutrition could exacerbate the effects of COVID-19 in mothers and children … access to nutritious, safe and affordable diets needs to be safeguarded and promoted as a cornerstone of the response to COVID-19.” While there is concern for the growth in undernourished people globally, and thus the need for fortification, fortification supply chains have themselves also been affected by COVID-19. A GAIN report from June 2020, highlighted that fortification has been affected primarily by the following three factors:

1. Increased sea freight, airfreight, shipping, local transport costs. Data from the GAIN Premix Facility (GPF) showed a 20% increase in sea freight costs for premix (the vitamins and minerals added to fortified foods during processing) between February and May 2020, while airfreight costs from Europe to West Africa increased by as much as 1,200 percent. Sea freight costs stabilized at lower levels in August, but air freight expenses are expected to remain high for as long as global travel is restricted.

2. Congested ports and export restrictions have led to delays and extra burden for the producers. In response to the pandemic, 15 countries placed export restrictions on fortifiable foods such as wheat, rice, and edible oil. In March 2020, India included B vitamins in its export ban on active pharmaceutical ingredients, effectively pausing exports of most premix used in flour fortification. The ban was lifted in April, but this action underscores the vulnerability of a global market in which production of vitamin and mineral premix is concentrated in a handful of countries.

3. Monitoring and enforcement challenges. Government efforts to assess and track micronutrient deficiency have suffered due to COVID-19 related uncertainties. Reduced government capacity has also made it difficult for fortified food producers to bring new products to market. A slowdown or a pause in regulatory monitoring of fortification by government officers was reported in Kenya, and Mozambique by the Food Fortification Initiative, and in Ethiopia by the Food and Drug Authority.


3.3 Price and Availability Changes

Pricing of 14 main food products in GAIN countries

Using data extracted via the FAO Big Data Price Monitor from Numbeo, a website used to estimate cost of living in different countries, we examined average price changes across 14 main food products in the 10 GAIN countries from February 14th (pre-pandemic) to November 7th (see Table 2). Prices in all GAIN countries have increased an average of 8.8% since before the pandemic, on par with the global average price increase of 9.0% across the combined 14 food products. Prices are relatively stable at the moment, with prices increasing an average of 0.3% in the last 30 days in GAIN focus countries, and 1.4% globally. Since May, prices have increased by a combined average of 5.7% in Bangladesh, Indonesia, India, Mozambique, Nigeria, and Pakistan. The most significant price hikes since May are in Nigeria, Bangladesh, Mozambique, and India. Kenya, Ethiopia, Rwanda, and Tanzania all have seen a slight decline in prices since May.

In terms of specific food products, fresh lettuce and chicory have had the highest price increases in Mozambique (82%), followed by oranges in Rwanda (50.3%), onions in Tanzania (33.9%), and potatoes in Pakistan (28.9%) since February 2020. Generally, all the GAIN countries have suffered food price variability, some swinging by over 200%. For example, the average price of cheese in Indonesia swung between USD 7.50 and USD 13.51 between May and November 2020.

26 https://www.numbeo.com/food-prices/
27 The 14 food products included are: apples, bananas, meat of cattle, meat of chickens, hen eggs in shell, lettuce and chicory (fresh), bread and other bakers’ wares, cheese, fresh or processed, processed liquid milk, onions, oranges, potatoes, rice and tomatoes.
Table 2. Average Changes in Food Prices Since the Start of COVID-19

<table>
<thead>
<tr>
<th>Country</th>
<th>Price changes (%) (14 Feb to 07 May)</th>
<th>Price changes (%) (14 Feb to 07 Nov)</th>
<th>Price changes (%) in the last 30 days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>1.0</td>
<td>7.4</td>
<td>2.2</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>3.4</td>
<td>1.2</td>
<td>-2.5</td>
</tr>
<tr>
<td>Indonesia</td>
<td>2.5</td>
<td>6.1</td>
<td>0.1</td>
</tr>
<tr>
<td>India</td>
<td>3.8</td>
<td>8.8</td>
<td>0.9</td>
</tr>
<tr>
<td>Kenya</td>
<td>4.2</td>
<td>0.6</td>
<td>-0.6</td>
</tr>
<tr>
<td>Mozambique</td>
<td>10.5</td>
<td>16.5</td>
<td>0.8</td>
</tr>
<tr>
<td>Nigeria</td>
<td>3.1</td>
<td>11.3</td>
<td>-</td>
</tr>
<tr>
<td>Pakistan</td>
<td>2.6</td>
<td>7.2</td>
<td>0.5</td>
</tr>
<tr>
<td>Rwanda</td>
<td>19.5</td>
<td>19.4</td>
<td>-</td>
</tr>
<tr>
<td>Tanzania</td>
<td>12.3</td>
<td>9.1</td>
<td>0.8</td>
</tr>
<tr>
<td>Total GAIN Focus Countries</td>
<td>6.3</td>
<td>8.8</td>
<td>0.3</td>
</tr>
<tr>
<td>Total Global</td>
<td>-</td>
<td>9.0</td>
<td>1.4</td>
</tr>
</tbody>
</table>

Note: Refers to average change in price across 14 main food products: apples, bananas, meat of cattle, meat of chickens, hen eggs in shell, lettuce and chicory (fresh), bread and other bakers’ wares, cheese, fresh or processed, processed liquid milk, onions, oranges, potatoes, rice and tomatoes. Data source: Numbeo via FAO Big Data Tool.

Availability and staple food prices

While prices of staple foods have increased in a number of countries, Euromonitor ecommerce stock data indicate improved availability of food. Food availability and prices are broadly following seasonal trends. However, poorer households’ access to food may be more limited in some areas as a result of reduced income – due to the interrelated factors of movement restrictions and reduced economic activity. We analysed availability and staple food price data for GAIN countries, which included India and Indonesia, as well as South Africa (as a weak proxy for other Sub-Saharan African countries). The analysis (see Annex 2 for details) shows that stock levels have increased to at or near pre-pandemic levels for most goods; this may be due to reductions in hoarding as the situation has progressed or to improvements in supply chain stability. Overall, Indonesia has stock availability similar to pre-pandemic levels and has had greater availability of staple foods compared to India and South Africa.

Changes in the prices of animal-source foods and fruits and vegetable vary widely across the GAIN countries. Table 3 compares the price changes of eggs and vegetables from May to July and August to October from Euromonitor. In Indonesia, prices of eggs have declined significantly since May. The reason for the slump in the price of eggs was excess supply of chickens combined with the rate at which they hatch their eggs. The price of vegetables fell by almost 50% between August and October in Indonesia as the population chose to consume more staple foods than vegetables, resulting in low demand. Prior to August, the government of Indonesia made efforts to distribute fresh produce but faced supply chain challenges in ensuring the items reached beneficiaries in prime condition, which then resulted in some commodities being replaced with more durable ones (usually with lower nutritive value). In India, the price of eggs was fairly stable in May, but there was considerable variability between June and mid-September before prices stabilised in October. In South Africa, the price of eggs has been on the rise since mid-August.

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29 https://fews.net/global/alert/august-28-2020
31 https://reliefweb.int/sites/reliefweb.int/files/resources/WFP-0000118525.pdf
32 https://docs.wfp.org/api/documents/WFP-0000118525/download?_ga=2.169842216.803071616.1603959687-2103776965.1602856717
**Table 3: Average Changes in Prices of Eggs and Vegetables since May**

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Eggs Average % Change</th>
<th>Vegetables Average % Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country</td>
<td>May-July</td>
<td>Aug-Oct</td>
</tr>
<tr>
<td>India</td>
<td>-7.07%</td>
<td>5.27%</td>
</tr>
<tr>
<td>Indonesia</td>
<td>-26.82%</td>
<td>-17.56%</td>
</tr>
<tr>
<td>South Africa</td>
<td>2.17%</td>
<td>17.39%</td>
</tr>
</tbody>
</table>

Note: Prices are normalized with a median price base of the commodity as of January 1, 2020 to account for price differences across countries. Source: Euromonitor, [https://www.euromonitor.com/coronavirus](https://www.euromonitor.com/coronavirus)

**Prices across staple foods in many countries began to increase again in September.**

These increases follow seasonal patterns in the countries where prices had been declining in prior months due to improved market availability of newly harvested crops, and the easing of the COVID-19-related restrictive measures. Regional pricing trends are summarized below using monthly insights from the FEWS NET Price Watch (October 2020) and the FAO Food Price Monitoring and Analysis (FPMA) (November 10, 2020).

**West Africa**

Improved market supplies of cereals and legumes from recent harvests put downward pressure on prices in most countries. Consistent with seasonal trends, prices of coarse grains remained stable or decreased in October as new supplies from the ongoing harvests improved domestic availability. However, prices remained generally above their year-earlier levels due to the impacts of the measures introduced to contain the spread of COVID-19, the persistent insecurity in the conflict-affected areas of Lake Chad Basin, Tibesti, and Liptako-Gourma regions, as well as high inflation rates and the continuing trend of weakening currencies.

- In Nigeria, after a sharp increase in recent months, prices of coarse grains began to decline in several markets in September with improved availability following the beginning of the 2020 harvest. Prices remained generally well above their values in September of last year, despite overall favourable prospects for the new harvest, mainly due to the effects of restrictive measures implemented to contain the COVID-19 pandemic, high transport costs, and the weak local currency. In the conflict-affected areas of the north, prices of coarse grains were reported to remain at high levels, with persistent conflict exerting additional upward pressure.

**Southern Africa**

Supply pressure contained price increases. In all but two countries of Southern Africa, nominal prices of maize grain remained stable or climbed only moderately, trends that were primarily underpinned by a favourable supply situation. Despite the general stability of prices, households’ access to food continued to remain weak on account of COVID-19-induced income and job losses, which have sharply diminished households’ purchasing power, particularly for those already vulnerable.

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35 [https://fews.net/global/price-watch/october-2020](https://fews.net/global/price-watch/october-2020)
37 Included in the analysis are Malawi, Zambia, Mozambique, Botswana, Eswatini, Namibia, Zimbabwe, and South Africa.
• Prices of maize in Mozambique increased only moderately in September, in line with seasonal trends. Compared to the previous year, prices were higher, reflecting tighter supplies due to a weather-reduced harvest in 2020. In addition, a weaker currency has reinforced the higher year-on-year grain prices.

East Africa
Staple food price trends varied across the region. Prices of coarse grains followed mixed trends in October. In most countries, prices were around or below their year-earlier levels, reflecting above-average first season harvests. A slowdown in economic activities because of the COVID-19 pandemic and households’ deteriorating purchasing power contributed to generally slack domestic demand.

• In Tanzania, prices of maize increased sharply in October, with seasonal patterns compounded by flood-related trade disruptions.

• In Kenya, prices of maize followed mixed trends in October. They declined in Eldoret market, located in a key producing area, with the start of the ‘long-rains’ harvest, expected to be above average. However, prices remained stable in Nakuru market, also located in a western surplus-producing rural area, while in the capital, Nairobi, persistent supply chain disruptions linked to pandemic-control measures led to a further strengthening of prices. Overall, prices in October were down from a year earlier.

• In Ethiopia, prices of maize levelled off or began to decline in October with the recent start of the major ‘Meher’ harvest. Prices in October were generally well above their year-earlier levels, mainly due to the continuous depreciation of the country’s currency, which has resulted in increased transportation and production costs.

Asia
Rice prices followed mixed trends in October; those of wheat were generally stable or increased.

• In India, rice prices were stable in most markets, as the downward pressure from improving supplies with the progress of the 2020 main Kharif season harvest, estimated to be above average, was offset by steady demand from the government procurement programme. The prices of wheat in India were generally stable as the downward pressure from the 2020 record wheat output was offset by the strong pace of public purchases.

• In Bangladesh, in Dhaka market, prices of medium quality rice continued to increase in October, while those of coarse quality rice showed some signs of softening. The high prices reflect seasonal upward pressure exacerbated by concerns over the impact of unfavourable weather conditions on the forthcoming 2020 ‘Aman’ crop harvest and strong demand amid the COVID-19 pandemic. Overall, prices of rice in October 2020 were almost 35% above their year-earlier levels. Rice production is expected to decline in May-April 2020-21 from a year ago, but this is related to weather and not COVID-19.38 As for wheat grain and wheat flour, prices were generally stable or increased in October.

• Prices of wheat flour increased in Pakistan, generally reflecting tight market availabilities, after a lower-than-expected 2020 harvest. In an effort to curb further increases, the government has allowed private imports, exempt from duties and taxes, and is importing wheat through official channels.

Box 4: In Focus: India Price Fluctuations and Effects on Nutrition Security

**Key Insights**

1. Following the lockdown, there was a rise in prices across food groups compared to last year;
2. The rise in prices was higher for non-cereals than for cereals;
3. Prices stabilised quickly to pre-lockdown levels for cereals, eggs, and vegetables, such as potatoes, onions, and tomatoes; and
4. The price of nutrient-dense crops such as pulses have remained high.

**Implications for Nutrition Security**

While the price patterns have shown the food systems in India to be resilient, the distortions in price trends in cereal versus non-cereal food groups could have implications for nutrition security in India, especially for vulnerable populations. A disproportionate rise in prices of non-cereals may divert consumer spending toward staples (that is, wheat and rice), resulting in inadequate intakes of more nutrient-dense food groups, like pulses. Unemployment and income loss from the decline in remittances to rural areas will further exacerbate the problem.

**Government Action**

On 21 September 2020, the government approved the increase in the Minimum Support Prices (MSP) for the 2021 winter ‘Rabi’ crops, to be planted from October. The MSP for wheat, the main Rabi crop, was increased by INR 50 or about 3% up from last year to INR 1 975 per quintal (USD 268 per tonne), while the MSP for barley was increased by nearly 5% to INR 1 600 per quintal (USD 217 per tonne). MSPs for chickpea, lentils, and oilseeds were also raised by 2 to 6%, depending on the crop.


### 3.4 Impacts on Food System Small- and Medium-Sized Enterprises

As a result of the COVID-19 crisis, many SMEs are suffering from decreased financial capacity and lack sufficient capital to whether this shock. These financial constraints put them at risk of needing to either close their business or borrow money at high interest rates. In Bangladesh, for example, there is demand for broader financial packages, such as soft microcredit schemes, so that SMEs can re-employ workers and have working capital. In a rapid assessment conducted by Wageningen University & Research in partnership with GAIN and the CGIAR, amongst expert panellists in July 2020, SMEs also noted needing capacity support, technological support, skills development, and logistical support. Keeping SMEs functioning well is key to guaranteeing food safety (for example, by enhancing storage capacity). Additionally, Learning Lab, ISF Advisors, and Feed the Future have highlighted the following challenges for SMEs amidst COVID-19:

- Reduction in input imports, difficulty in distributing up country (for agro-input dealers)
- Lack of visibility on forecast market prices (for aggregators, traders, and cooperatives)
- Changing regulations on movement within and across borders (for logistics and mechanisation and complementary services)

### Impact of COVID-19 on Women-Owned SMEs

According to an October 2020 AGRA study amongst women-owned SMEs in Sub-Saharan Africa, the three main constraints brought by the pandemic are access to markets (71.8% of respondents), access to finance (60.6%) and disruption of the supply chain (59.2%). Employee safety and management, access to labour, farm inputs, and digital communication were also mentioned as challenges. These constraints can be attributed to the overall economic challenges faced across sectors, as well as the restrictions on local and global movement. 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. Other respondents had sought new marketing channels, formed new partnerships, and/or engaged in new ventures or products.

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The pandemic had increased SMEs’ use of digital solutions, as a resilience measure. During the pandemic, 88.7% of respondents had used or taken up digital solutions in their business operations. They found social media marketing, online communication, online trainings, and capacity building useful and planned to continue using these tools post-COVID-19.42

Many women-owned SME’s have been heavily impacted by the pandemic; most are anticipating heavy losses as a result. Whereas most have taken adaptive measures like using online platforms, these measures have been applied with little to no training, posing risks of sub-optimal utilisation of the innovations for business recovery and resilience. It is therefore crucial to increase women SME owners’ knowledge of digital tools and digital literacy, coupled with access to smartphones and internet connectivity, to aid recovery and build resilience to future shocks.43

3.5 Consumer Behaviour

As a result of income losses during lockdowns and continued COVID-19 risk-avoidance behaviour, lasting economic impacts are anticipated due to changes in household expenditure patterns and corresponding reductions in travel, reduced export earnings, and changes in trade flows. Poorer households’ access to nutritious food remains particularly limited as a result of reduced income — due to the interrelated factors of movement restrictions and reduced economic activity.44

While there was intermittent reduced access to food due to curfews and market closures at the onset of COVID-19, those constraints were largely relieved as control measures subsided. It is important to note that the reduction in income for many households has had a compounding effect of reduced nutritious food intake, such as ability to pay for protein-rich foods. Lower-income consumers, who spend more than half of their income on food, have been severely hampered by the loss of income, thus compromising the quality of their diets.45,46 Below are some country-specific insights gathered on consumer preference trends since the start of COVID-19 in terms of food purchasing behaviour. There is limited information from Mozambique, Pakistan, and Tanzania.

Bangladesh

- Decreased spending on protein-rich food items. There have been several reports of reduced consumption of protein. According to one survey, 94% of respondents in low-income groups have reduced spending on protein-rich food items. This is a key issue for food security, as declining purchasing power appears to be affecting dietary intake.47 Misinformation concerning the spread of COVID-19 through fish and poultry products has also caused a decrease in consumption of these foods.48 Consumption of eggs and broiler meat, which are important sources of protein, especially for low-income households, has fallen. However, dietary changes have also been noted in lower-middle- and middle-income households, specifically those without a guaranteed income.49

- In order to manage rising food prices combined with declined purchasing power, poor households are eating cheaper and less nutritious foods, often reducing the quality of their diet. According to a survey conducted by the Bangladesh National Nutrition Council (BNNC), 75% of respondents indicated that they did not have sufficient access to food at home, while 91% stated that they did not have sufficient money to buy food.50

44 https://fews.net/global/client/august-28-2020
Ethiopia

- Demand for more expensive and perishable products (e.g., milk, butter, and meat) has fallen sharply, as has demand for products that are believed to increase susceptibility to COVID-19, such as cabbage and tomatoes. As people lose jobs and firms cut production, the government diverts investments to emergency response, resulting in an overall decline in consumer demand for perishable food products. This, in turn, leads to even more job losses along these value chains.

- Rising prices of onions and foods thought to protect against COVID-19. There are myths that ginger, garlic, and onion may protect people from getting infected with COVID-19.

India

- Consumers have resumed economic activities albeit with caution, as purchasing lower quality or cheaper alternatives to commonly bought items is still evident. Though most Indians are still waiting for indicators beyond the lifting of restrictions to return to normal out-of-home activities, more are engaging in them.

- The vast majority of Indian consumers have tried new shopping behaviours and digital habits during the crisis and report a strong intent to continue. According to a McKinsey survey in September (n=1,051) there was a 30% net increase in intent to shop online even post-COVID-19, including for grocery delivery and buying online for in-store pickup.

- Declining income is leading to concerns about well-being. According to two surveys (McKinsey, September 2020 (n=1,051) and Experian October 2020 (n=3,000)), about half of Indian consumers are continuing to see reductions in their incomes, spending, and savings compared to pre-COVID-19.

- Pulses, an important, shelf-stable source of protein in Indian diets, have seen heightened demand during lockdown, which, combined with supply chain troubles, has kept prices persistently high. This disruption had exacerbated the challenge of ensuring adequate access to protein-rich foods during COVID-19.

- A report by the Tata-Cornell Institute notes that the lockdown impacted government programmes that already provided access to healthy foods. For example, children normally receive a nutritious midday meal at government-run and government-assisted schools. However, those schools closed during lockdown, so children had access only to the foods that their parents could afford to bring home.

Indonesia

- There is up to a 60% net increase in intent to spend online even post-COVID-19, according to a McKinsey survey (n=1,034). Further, the survey found that 92% of Indonesian consumers have tried a new shopping behaviour in the past three months, and 78% of Indonesian consumers are not yet resuming ‘normal’ out-of-home activities.

- 68% of consumers believe their finances will be impacted for another 4 or more months, which could impact nutritional intake (McKinsey survey, November 6, 2020), however Indonesian confidence in an economic recovery is among the highest in the world, at 53%.

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1. https://www.wur.nl/upload_mm/3/2/e/a34fc0ff-0ad6-4e60-a855-86ced16b075e_COVID-19%20Food%20System%20-%20Rapid%20Country%20Assessment-Ethiopia%20%28JulyV2%29.pdf
2. https://www.wur.nl/upload_mm/3/2/e/a34fc0ff-0ad6-4e60-a855-86ced16b075e_COVID-19%20Food%20System%20-%20Rapid%20Country%20Assessment-Ethiopia%20%28JulyV2%29.pdf
• COVID-19 is also projected to lead to reduced diet quality, especially among the poor and vulnerable (WFP, October 2020). This is to be expected as a result of COVID-19’s negative impact on employment and income.62

• Staple food shortages and a worsening malnutrition situation63 were addressed in a budget update by the Indonesian government on June 16, 2020. The budget will prioritise the 10 million families in the Family Hope Programme as well as the 20 million families in the Staple Food Programme.64

Kenya

• Market closures, supply chain disruptions, and a lack of school meals are affecting household food access, particularly for households dependent on casual labour and informal sector work. Local markets play a crucial role in the informal economy and in the supply of fresh food at affordable prices for the poor and middle-income groups in the country. Disruptions in their activities have a major impact on food security.65

• Food-insecure households in informal urban settlements are highly impacted by mobility restrictions beyond the easing of closures, as the loss of informal employment opportunities means a large reduction in purchasing power and therefore in expenditure on food. This group is also likely to suffer from more health-related shocks and stresses, and the lack of savings and food stocks may prove detrimental in future lockdowns.66

• Less discretionary spending and savings. In September 2020, Nielsen’s Consumer Confidence Index (CCI) Survey for the second quarter of 2020 showed that consumer confidence fell by 11 points to 88, with many consumers now setting aside spending intentions and saving less. Only 20% of interviewed Kenyans said they have spare cash, down from 27% in the last quarter.67

• Local demand for vegetables and staple crops is on the rise, as people are prioritising staple foods—such as maize—and non-perishables for stockpiling. The struggle to fulfil this demand has resulted in price increases. Demand is expected to fall again due to the price increases and decline in purchasing power.68

• A GAIN survey in Madaraka Market, Kiambu, Kenya found that 85% of consumers have changed their shopping behaviour due to the COVID-19 pandemic; 71% reported that they had reduced their frequency of shopping.69

Nigeria

• More urban consumers turned to online shopping for the first time, with 42% of shoppers starting to purchase food via eCommerce platforms. Most observers agree that the increased focus on digital commerce by consumers and merchants will likely remain even after the economy reopens.70

• Consumers are mindful of their spending and are on the lookout for savings, while increasing spending on essentials, entertainment, and fuel.71

• Most consumers expect routine and financial implications to last beyond the COVID-19 period. A higher proportion of consumers witnessed a decrease in income, savings, and spending levels.72

• An 11% increase in prices across core food products (see Table 2), indicates pressure on food and

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64https://home.kpmg/xx/en/home/insights/2020/04/indonesia
66 https://www.wur.nl/en/show/COVID
67 https://www.wur.nl/en/show/COVID
68 https://www.wur.nl/en/show/COVID
69 https://www.wur.nl/en/show/COVID
70 https://www.wur.nl/en/show/COVID
71 https://www.wur.nl/en/show/COVID
nutrition security, especially amongst the most marginalised households.\textsuperscript{73} The most critical price signal at the time of this report is the upward surge in coarse grains prices; this stopped in September, with the start of the 2020 harvest, but prices remain high.\textsuperscript{74}

**Rwanda**

- **Reductions in dietary quality:** A report by ADECOR with support from the Voice for Change Partnership (V4CP), funded by the Netherlands Foreign Affairs through SNV-Rwanda and IFPRI,\textsuperscript{75} highlights that income losses are likely to be dramatic for poor households because of widespread unemployment resulting from COVID-19 mitigation measures. Vulnerable households are expected to quickly give up nutrient-rich foods in order to preserve their caloric intake and respond by purchasing the cheapest calories they can find to feed their families.

- **Demand for staple foods and non-perishable products has increased.** Demand for horticultural produce has fallen because of consumer preferences for staple foods and non-perishable products that can be stockpiled.\textsuperscript{76} After the easing of lockdown, households reliant on horticulture for income have experienced a reduction in their incomes and may needed to cut expenditures on food, education, and/or health.\textsuperscript{77}

**Moving forward**

Since October/November 2020, there has been a renewed sense of caution amongst consumers as COVID-19 cases start to rise again in many of the GAIN countries. It is important to understand the impacts that potential new control measures may have by considering the effects of the control measures in April/May. A survey of urban residents in 20 African countries\textsuperscript{78} found that, among various control measures, opposition tended to be highest to shutting down markets. Running out of food was cited as the biggest barrier to following social distancing rules, and half of survey respondents estimated that, if forced to stay home for two weeks, they would run out of money and food in a week or less, with this being soonest for lower-income households. Governments of GAIN countries need to carefully consider the trade-off between the positive effects of further control measures for COVID-19 and the negative impacts on household livelihoods and nutrition security.

### 3.6 Government and Policy Responses

**Several countries have further expanded existing or put in place new social protection programmes.** World Bank-collated information on social protection programmes\textsuperscript{79} notes that social protection measures of various kinds have been taken in all of the ten GAIN countries, as summarised in Table 4. These include scale-ups of existing safety net programmes (in terms of number of beneficiaries and/or amount provided), basic food transfers to vulnerable groups, waivers on charges for mobile money, and loan moratoriums. In Indonesia, for example, the government is expanding an existing food voucher programme to cover over 30% of the population whereas a Pakistani cash transfer programme aims to reach about 10 million families, including a new basic income scheme to provide an emergency cash transfer to those facing potential hunger during the lockdown, such as daily wage workers, street vendors, and rickshaw drivers. Kenya has used an existing cash transfer programme to boost payments to more than one million vulnerable people, including food hawkers and day labourers. In Bangladesh, there are promises of income support for certain factory workers, and in Ethiopia layoffs remain prohibited.

Since May 2020, a few things have changed regarding social protection programs in GAIN countries. For example, Rwanda rolled out community-based health insurance for urban refugees and refugee students.\textsuperscript{80} Indonesia, introduced labour regulations like reducing work shifts, limiting or removing overtime work, and reducing work

\textsuperscript{73} https://www.numbeo.com/food-prices/
\textsuperscript{74} https://www.fao.org/giews/food-prices/price-warnings/en/ (Data current as of November 10th, 2020)
\textsuperscript{78} PERC. 2020. Responding to COVID-19 in Africa: Using Data to Find a Balance.
hours. The government of Mozambique’s response prioritised the upcoming 2020/21 cropping season to prepare farmers for planting in terms of input distribution and extension services. It ensured credit lines were dedicated to smallholder farmers in peri-urban areas by financing hubs of agro-dealers through credit transfers of subsidised vegetable kits (seeds, fertilisers, and other inputs) for smallholder farmers. Further social protection programmes have been limited to paid sick-leave equivalent to 70% of average salary. The World Bank has teamed up with other development partners in its support to the Government of Mozambique’s efforts to expand social safety net coverage in urban and peri-urban areas, directly benefiting more than 1.5 million affected families.

Table 4. Summary of Social Protection Programmes put in Place to Respond to the COVID-19 Pandemic

<table>
<thead>
<tr>
<th></th>
<th>Social Assistance</th>
<th>Social Insurance</th>
<th>Labour Markets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
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<tr>
<td>Ethiopia</td>
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<tr>
<td>India</td>
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<tr>
<td>Indonesia</td>
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<tr>
<td>Kenya</td>
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<tr>
<td>Mozambique</td>
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<td>Nigeria</td>
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<td>Pakistan</td>
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<td>Rwanda</td>
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<tr>
<td>Tanzania</td>
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<td></td>
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</tbody>
</table>

Note: No GAIN countries were noted as offering pensions or disability benefits, or subsidies for reduced work time. Source: World Bank. September 18, 2020.

In India, there are an estimated 75 million MSMEs, of which 43% were expected to shut down if lockdowns are continued (August 2020). In mid-May the Central government of India allocated loan amounts up to INR 3,000 (USD 4,072) to help SMEs in this crisis. This initiative will help to act as seed money and working capital for small businesses to start again via purchasing raw materials, paying initial bills and wages to workers, and similar. Earlier, banks were unwilling to disburse such loans to firms; now, the central government has offered a full guarantee and specified no collateral needs to obtain these loans, especially for MSMEs. In late April, the Development Bank of Ethiopia planned to provide credit support and a 30% waiver on rental tax for SMEs. In late September, the Addis Ababa city administration decided to cover the cost of income tax of workers in health institutions until COVID-19 is considered a non-threat to the public.

Regarding monetary and financial policies, in late September, the government of Bangladesh announced giving leeway to loan defaulters by not changing the classification of their loans upon default as a measure to ease the impact of COVID-19 on businesses. Earlier in May, the bank of Bangladesh instructed banks to charge zero interest on all loans until further notice. The Bank of Indonesia has also taken measures to further strengthen access to

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84 https://www.researchgate.net/publication/343682950_MSMEs_in_COVID-19_Crisis_and_India%27s_Economic_Relief_Package_A_Critical_Review
85 https://www.researchgate.net/publication/343682950_MSMEs_in_COVID-19_Crisis_and_India%27s_Economic_Relief_Package_A_Critical_Review
86 https://www.researchgate.net/publication/343682950_MSMEs_in_COVID-19_Crisis_and_India%27s_Economic_Relief_Package_A_Critical_Review
87 https://www.researchgate.net/publication/343682950_MSMEs_in_COVID-19_Crisis_and_India%27s_Economic_Relief_Package_A_Critical_Review
financial services, and monetary operations, by facilitating collaboration between the banking industry and Fintech companies, supporting digital payment in various sectors, and introducing Sharia-compliant instruments.88

**It is not clear how the government of Tanzania is supporting food SMEs with policies.** In April, UNDP proposed a set of interventions that the government of Tanzania could provide to its population, ranging from food security and production to COVID-19-specific health interventions. The one social protection measure that has been reported is that Zanzibar will be vertically expanding their social pension by 20% (bringing the monthly transfer to TZS 24,000 (USD 10.36)).89

However, it is important to note that many government support measures do not specifically target casual labourers in the agricultural sector. For example, some reports mention (as of July 2020) that – informally - funds are being raised by local communities (including local authorities) to support severely affected households.90 The government of Bangladesh aimed to provide five million poor families a USD 30 cash handout; manual workers engaged in agriculture, poultry, and dairy farms were intended to be included. However, the selection process was not transparent, and some believe the middle class also received payments.91

<table>
<thead>
<tr>
<th>Country</th>
<th>Aid Received in Billions USD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nigeria</td>
<td>4.037</td>
</tr>
<tr>
<td>Pakistan</td>
<td>2.417</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>1.737</td>
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<tr>
<td>Ethiopia</td>
<td>1.467</td>
</tr>
<tr>
<td>Kenya</td>
<td>1.222</td>
</tr>
<tr>
<td>Rwanda</td>
<td>0.606</td>
</tr>
<tr>
<td>India</td>
<td>0.475</td>
</tr>
</tbody>
</table>

FIGURE 3: Aid Received in Billions USD
Data for Indonesia and Tanzania are unavailable.

To support government and policy responses, billions of USD have been given to countries to help deal with the pandemic. Nigeria has received the most, followed by Pakistan and Bangladesh, as reported on the IFPRI COVID-19 Policy Response (CPR) Portal on November 13, 2020.92 Amounts received by each GAIN country are listed in Figure 4. The majority of support has been economic, with a smaller percentage going towards health and social protection.

*In conclusion, this study has indicated continued disruption in many of the countries where GAIN works, particularly when it comes to the 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. At the same time, some signs of optimism were also noted in the growing measures taken by governments to mitigate the harmful effects of pandemic-control efforts and in the ingenuity of food system actors to explore and develop new approaches to doing business.*

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92 https://public.tableau.com/profile/ifpri.td7290#!/vizhome/CPRPORTAL/Overview?publish=yes
ANNEX 1.

Selected Media on COVID-19 Impact on Food Systems in GAIN Countries

Bangladesh
- Inclement weather, not Covid, to cut rice production (link)
- Corruption complicates Bangladesh’s fight against Covid-19 (link)
- iFarmer: Enabling Investment and Creating Wealth Through Farming and Agriculture (link)

Ethiopia
- A new generation of desert locusts, flooding and Covid-19 threaten food security in Ethiopia (link)
- Aid agencies call for urgent action to prevent famine in hunger hotspots (link)
- Ethiopia: COVID-19 Humanitarian impact - Situation Update No. 14, as of 18 October 2020 (link)

India
- Wheat export may rise but realisation not much (link)
- Rural women in India – The Veiled Potential (link)
- Prices on the rise (link)
- India’s October Wholesale Price Index rises for 3rd straight month, jumps to 1.48% (link)

Indonesia
- Indonesia to develop food barns to secure rice stock (link)
- Indonesia market worries cattle exporters (link)
- SMERU-WFP study urges wider food, social policies to tackle TBM amid coronavirus (link)
- Indonesia’s ‘militarized agriculture’ raises social, environmental red flags (link)
- Urban farming a solution to food security issues during pandemic (link)

Kenya
- Food security in peril amid suppressed rains: EAC bloc says (link)
- More swarms of locust arrive in northeast Kenya (link)
- Poultry farming and impact of Covid-19 (link)
- Universal basic income helped Kenyans weather Covid-19, but it’s not a silver bullet (link)
- Urban planning must include agri-food systems – FAO (link)

Mozambique
- Mozambique: Bachellet appalled by escalating conflict in Cabo Delgado province (link)
- Sussundenga, Mozambique – How an agri-business has made itself resilient to multiple shocks (link)
- COVID-19 in Mozambique: police violence, mistrust of government and the fear of hunger (link)
- Mozambique farmers reinvent themselves after a cyclone and a pandemic (link)
- Mozambique Food Security Outlook Update October 2020 to May 2021 (link)

Nigeria
- ‘Famines of biblical proportions feared in 2021 amid COVID-19 pandemic, UN food agency warns (link)
- Nigeria grain production slips as dependency on imports tighten (link)
- 4 new areas at imminent risk of famine, UN food agency warns (link)
- Looters of wheat seed scuttle national production, says agric minister (link)
- Enugu: 2000 rural farmers benefit from World Bank’s $750m Nigerian CARES programme (link)

93 Inclusion of a news article here does not indicate endorsement of the source or its veracity; they are included to highlight indicative ways in which food systems issues are being represented in local and regional media.
- CBN promises to sustain FX restrictions on import of food items that can produced locally (link)

**Pakistan**
- Pakistan distributes 200 tonnes of high-yielding seed varieties (link)
- NIC Pakistan to host hackathon on agriculture (link)
- CORONAVIRUS - The situation in Pakistan (link)

**Rwanda**
- Covid-19 affects food chain in Rwanda (link)
- The COVID-19 Pandemic: Impact on Nutrition and How to Protect Vulnerable People in Rwanda (link)
- Rwanda controls COVID-19, but its farmers still struggle (link)

**Tanzania**
- Tanzania draws plans to quell malnutrition (link)
- Zanzibar responds to COVID-19 economic challenges with a 20% rise to their universal social pension (link)
ANNEX 2.

Euromonitor Price and Availability Data\textsuperscript{94}

1. Price Index

For all graphs of the Euromonitor price index, the data span from 1 March to 5 November 2020. \textbf{India is shown in orange, Indonesia in blue, and South Africa in green}. Of note, these price indexes can be influenced as much or more by changes in the SKUs composing the sample (due to stock-outs) as by actual price changes; SKU changes can entail changes in product size and/or quality.

\textsuperscript{94} Source: Euromonitor Coronavirus Price and Availability Tracker, https://www.euromonitor.com/coronavirus
2. Availability Data

The graphs below show a bi-weekly average of the number of SKUs available in the following categories: essentials\(^95\), vegetables, eggs, shelf stable fruits and vegetables, rice dried pasta, noodles, and starchy roots. Data span from the first week of March to November 2020.

\(^{95}\) Essentials as defined by Euromonitor are a basket of product categories from across Fast Moving Consumer Goods (FMCG) industries that have been determined to be essential necessities based on their econometrically estimated income elasticity of demand and qualitative input from Euromonitor International’s research teams.
Impact of COVID-19 on Food Systems: A Situation Report

Rice
- India
- Indonesia
- South Africa

Dried Pasta
- India
- Indonesia
- South Africa

Noodles
- India
- Indonesia
- South Africa
Starchy roots

- India
- Indonesia
- South Africa