Global Panel on Agriculture and Food Systems for Nutrition

COVID-19: safeguarding food systems and promoting healthy diets

This brief focuses on the profound impacts the pandemic has already had on food systems and people's diets during 2020. It sets out key decisions and actions which are needed to ensure that food systems can continue to function effectively, recover quickly from the present crisis, and build their resilience and effectiveness for the future. Its primary focus is on low- and middle-income countries

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ABOUT THE GLOBAL PANEL ON AGRICULTURE AND FOOD SYSTEMS FOR NUTRITION

The Global Panel is an independent group of influential experts with a commitment to tackling global challenges in food and nutrition security.
It works to ensure that agriculture and food systems support access to nutritious foods at every stage of life.

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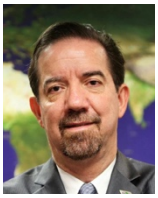

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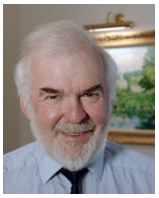

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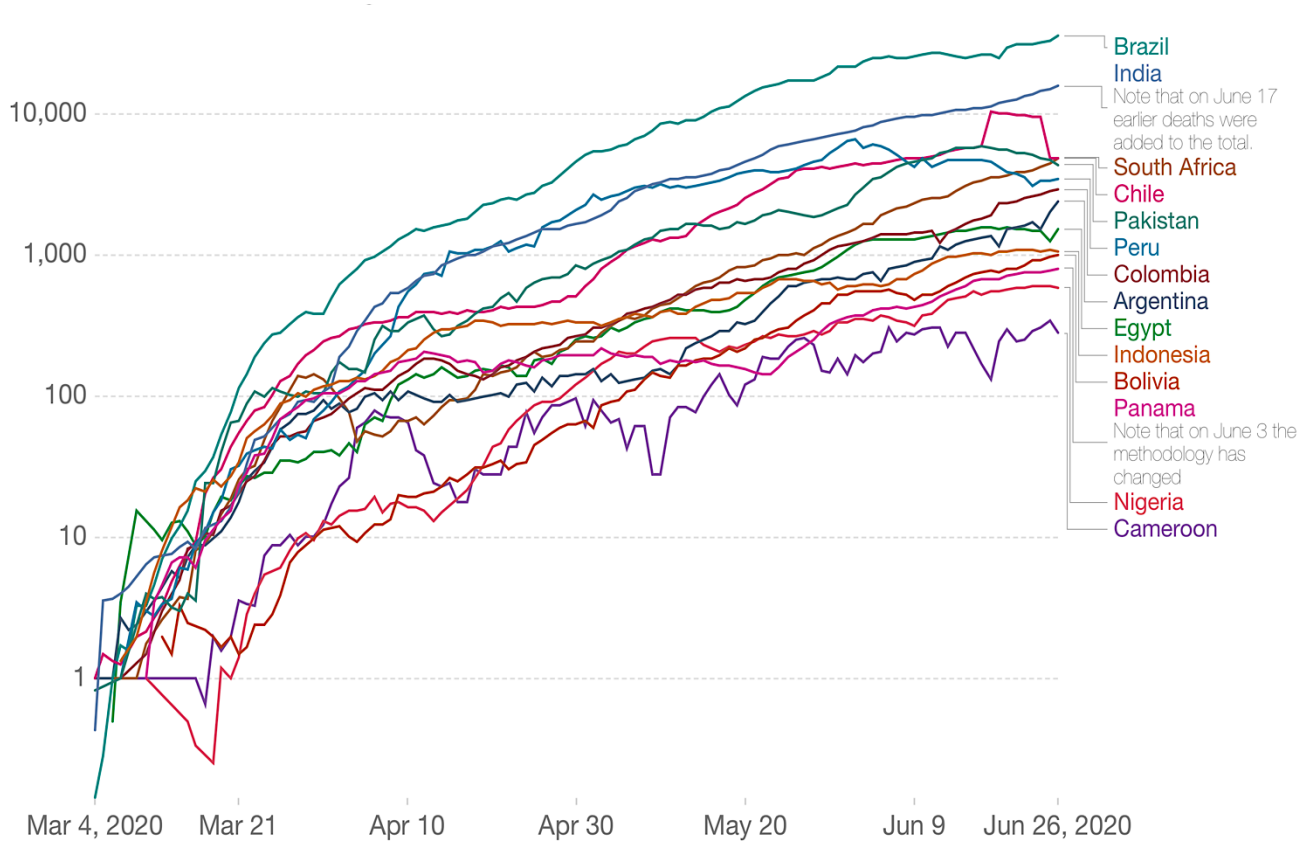
“ The effect of the virus goes far beyond immediate health and economic impacts. We are seeing a fragmentation of food systems which could have serious long-term implications for food security, nutrition, diets and the environment, particularly in lower income countries. ”

Shenggen Fan
Global Panel Member and Chair Professor of China Agricultural University

1. A sharp shock to food systems

Diseases based on the transmission of viruses from animals to humans are not new. They have occurred repeatedly in the recent past, and include HIV/AIDS, successive strains of influenza (such as swine and avian), SARS and Ebola. The current coronavirus pandemic has been exceptional in how rapidly it has spread (see Figure 1), and the fact that the only current means for slowing the spread is issuing 'stay at home' orders and introducing social distancing measures. These responses adopted by most countries have contributed to multiple shocks simultaneously throughout the global food system. Some governments have closed formal and informal retail outlets for food, and severely restricted the movement of citizens, while food production and processing, transport, trade and retail have all been profoundly affected. Taken together, these measures have resulted in multiple challenges to economies and societies, causing widespread disruption and hardship. While this has been a global challenge, the impact has been felt disproportionately by low income workers and consumers, particularly in urban settings, and in nations or parts of countries with the weakest healthcare systems and with the most fragile food systems. Before the pandemic, 135 million people were experiencing acute food insecurity. From February to June 2020, this increased by an estimated 45 million[1], and the World Food Programme has warned that 265 million people may be facing acute food insecurity by the end of the year because of the pandemic.[2]

Figure 1. **Number of daily new confirmed cases of COVID-19 in selected low-and middle-income countries (4 March to 26 June 2020)**

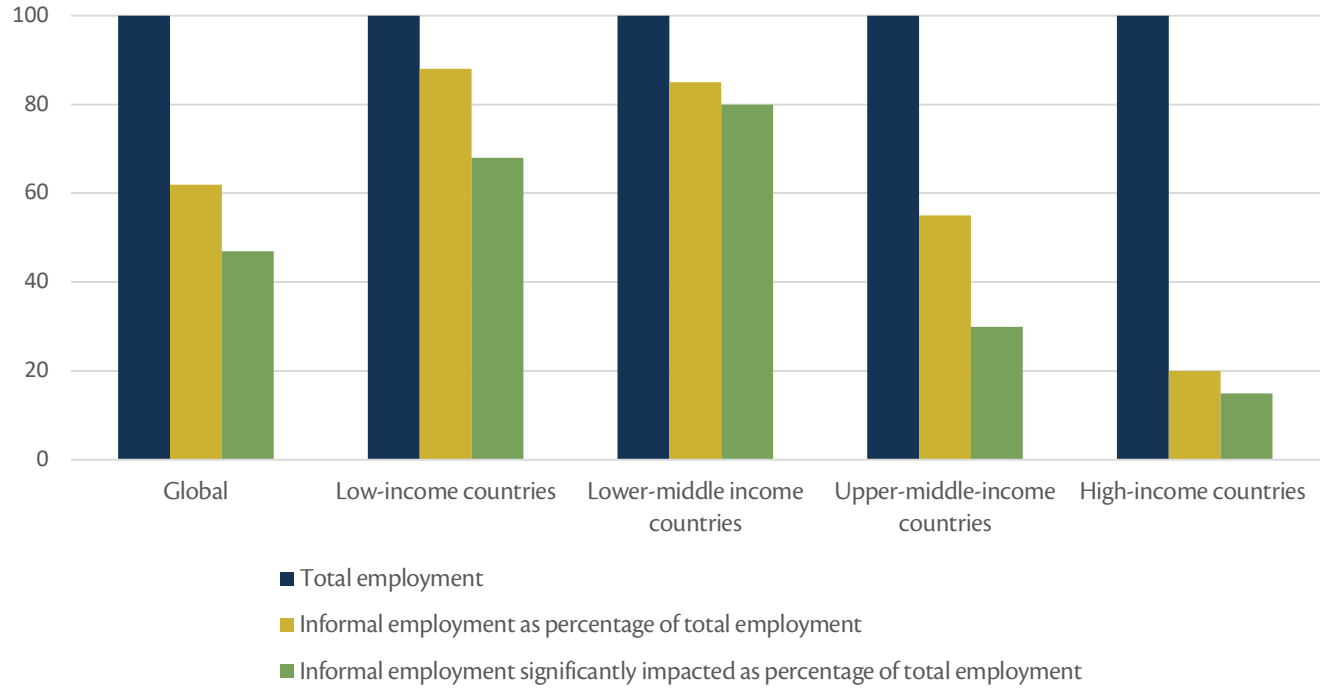


Source: Our World in Data [3]

For consumers, an immediate impact has been to constrain both the affordability and accessibility of food. Even before the pandemic, 1.58 billion people could not afford healthy diets.[4] Now income losses coupled with fluctuations in the price of nutrient-rich, usually perishable foods risk increasing this number further. At the same time, household incomes have fallen as people have been prevented from working. Shopping for food has become more difficult under lockdown conditions and in some areas the urban poor have been most affected by disruptions to the food system rather than those living in rural areas, due to long supply chains and the closure of markets.[5] Those working in the informal sector, which accounts for a large proportion of total employment in low- and middle-income countries have been particularly affected by the pandemic (see Figure 2).[6] Estimates suggest that earnings will fall by 28% in upper-middle-income countries, and 82% in lower-middle and low-income countries.[6] In some countries, panic buying, speculative trading, and supply chain disruptions have led to increased prices for staple foods.[7] Food supply chains have also been disrupted as governments have closed restaurants, street food vendors, food retailers, and restricted road transport to limit the spread of infection.[5] Another effect of the pandemic has been a shift in demand for specific foods. In many cases, dietary patterns shifted quickly to focus more on shelf-stable foods, and less on perishable, nutrient-rich foods. A recent survey on the impacts of the pandemic on diets in Ethiopia found that the average number of days that households consumed fruit decreased from 3.7 to 1.7 days per week, and from 2.2 to 1.6 days for dairy foods over a two to three month period. The consumption of staples, however, was unchanged.[8] This may be partly due to misinformation about fruit, vegetables and animal products being linked to contracting the coronavirus, but it certainly relates to low incomes, rising prices as supply chains contract, and a shift from higher-value to cheaper calories to make ends meet.[9]

Even in the absence of panic buying, relatively small changes in purchasing patterns by large numbers of consumers have led to a shift in relative prices. Demand for prepared meals, for example, has fallen sharply following the closure of restaurants, schools and institutional service outlets. There are also impacts at country level; for instance, demand from Japan for shrimp fell (due to closure of restaurants), leading to a sharp fall in shrimp exports from Mozambique, while the cassava value chain within Mozambique was disrupted as employees in processing and retail were no longer able to work.[10]

Figure 2. **Percentage of workers in the informal economy significantly impacted by the pandemic (due to work closure or working in high-risk sectors, estimated April 2020).**



The pandemic has had major implications for employment and earnings across entire food systems. Many individuals employed in marketing or retailing food lost their jobs as stores closed, public transport was suspended, or they themselves fell ill. In Uganda 76% of 147 businesses surveyed reported reducing their workforce because of the risks associated with COVID-19 and lockdown measures, with the agricultural sector being the most affected.[11] Estimates suggest that if the pandemic conditions persist for six months, 3.8 million people in Uganda will lose their jobs temporarily, partly due to the shutdown of tourism and subsequent fall in hotel demand for foods like chicken and salads, while 600,000 are expected to lose their jobs permanently.[11] Meanwhile, in Lima, Peru in mid-May, some fresh fruit markets were closed after 163 of 842 food merchants tested positive for COVID-19.[12,13]

Food production has also been affected because travel restrictions have reduced the movement of migrant workers within- and between-countries, and consequently farm labour and other inputs to agriculture have become harder to secure. In Ethiopia and India, for example, restrictions have meant that many informal migrant labourers working in fruit and vegetable production have returned to their homes.[9,14] The effects on 2020's autumn harvests remains to be seen.
Policy responses to the pandemic have affected businesses across the food system. Many farms have faced huge difficulty in accessing inputs (including farm wage labour), and in accessing markets for produce which has led to large amounts of food having to be destroyed.[15] In Uganda, for example, many smallholders have experienced difficulties in accessing seeds and agriculture advisory services.[16] This may have a knock-on effect on future harvests if inputs cannot be secured.

Production constraints and subsequent restrictions on food supply chains have had spill-over effects on supply, demand, income and consumption. It has been estimated for South Africa that the year's value addition from activities in agriculture, fishing and forestry may fall by around 25% once all indirect or knock-on effects of the pandemic have been accounted for.[17]

Unfortunately, nutrient-rich foods are particularly vulnerable to the effects of these policy responses to the pandemic.[18] They have complex value-chains, are often labour-intensive in production and processing, and are highly perishable (hence susceptible to delays or disruptions experienced at all stages from farm right through to retail). Countries facing a serious loss of income from reduced export demand for fresh fruits and vegetables and fish products include Tunisia, Senegal, Cameroon, Mauritania, Tanzania and Egypt.[15] In Bangladesh, several perishable-food sectors have been put under strain because of disruption to transport. For example, in May 2020, the average number of trucks carrying fish from Rajshahi to Dhaka fell by over 80%, and fish farmers had to sell fish at substantially lower prices. Vegetable producers were also having to sell produce at a loss.[5]

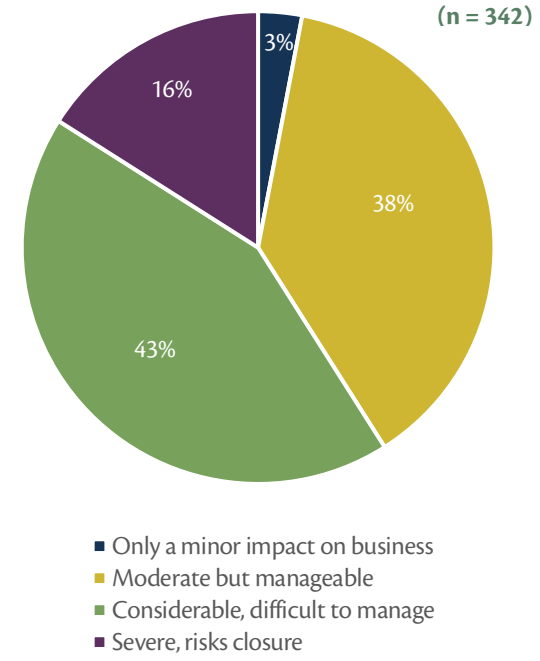
Lockdown and social distancing conditions have threatened the viability of post-farm food enterprises of all sizes, particularly small and medium sized firms (SMEs) because they often have less capital to draw on than larger food firms, and limited access to credit (see Figures 3a and 3b). In sub-Saharan Africa, SMEs are involved in the provision of around 80% of

total calories[19], with many lacking the cash resources to sustain long periods of disrupted cash flows, and limited collateral to obtain loans to keep businesses solvent. A survey of SME owners across 17 low- and middle-income countries found that almost two-thirds of SMEs had been either considerably or severely affected (see Figure 3a) with 81% of businesses in urgent need of financial support.[20] In May, a survey in Uganda suggested that 58% of micro-, 27.7% of small- and 8.3% of medium-sized businesses would have to close in the next three months if the situation did not improve.[11] If these enterprises go out of business, vital linkages in food systems may be lost.

Businesses operating under these conditions face multiple challenges. For example, a case-study from an SME selling pre-cooked beans in Rwanda reports difficulties sourcing inputs, hampered operations due to the lack of safe transport for staff, and a loss of sales due to border restrictions.[21] In Nigeria, SMEs involved in nutritious food production have had to cut working hours and staff numbers to manage reduced production and cash flow.[22]

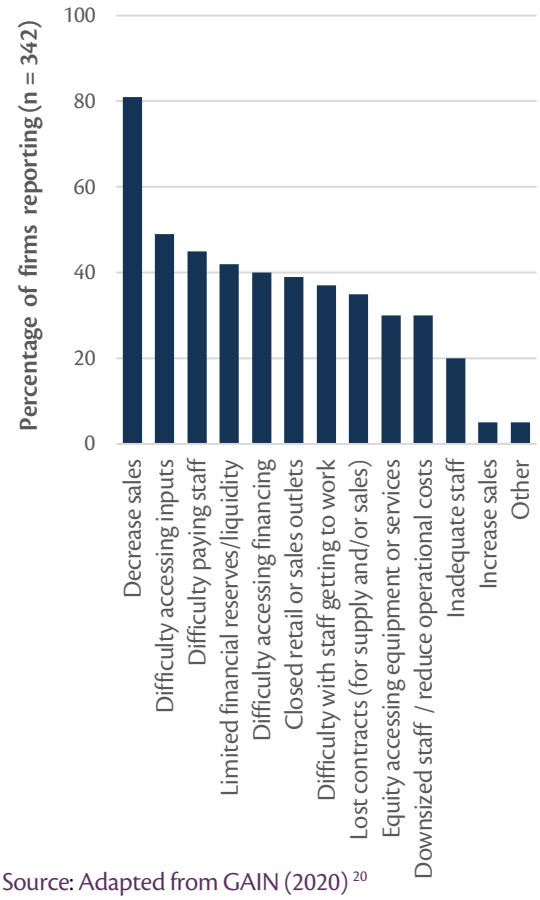
For some countries in the Horn of Africa, the coronavirus pandemic has compounded the impact of a widespread locust invasion, adding to constraints on the availability of basic cereals, even in rural areas.[23] Efforts to control the insects have also been hampered by the limited supply of pesticides due to border closures, and ongoing flooding in the area.[16] In Kenya,

Figure 3a. **The severity of the pandemic's impact on SMEs in low and middle-income countries**



Source: Adapted from GAIN (2020) [20]

Figure 3b. **How the COVID-19 pandemic is impacting SMEs in low– and middle-income countries**



Source: Adapted from GAIN (2020) [20]

locust swarms are on a scale not experienced for at least 70 years, adding to the pressure on grain reserves arising from panic buying.[24,25] Countries are also having to deal with the pandemic alongside other challenges such as conflict and insecurity in fragile settings. For example, despite the UN Secretary-General's calls for a global ceasefire, conflicts are escalating in Libya and assistance from humanitarian partners is being hampered. [26,27]

The economic downturn that all countries are now facing threatens government finances (reduced tax intake and export returns as well as rising levels of debt), and their ability to mitigate impacts on food systems.[28] Economic pressures, competing priorities for action and overstretched human resources may all last for a considerable time beyond the immediate pandemic.

Taking these impacts together, the effects of the virus on the food system go far beyond contagion. Rather, it has caused the fragmentation of food systems with some parts continuing to function, while others are struggling or even collapsing. The knock-on effects to diets, nutrition and health are a major concern, particularly for low income and nutritionally vulnerable consumers.

2. Framing policy responses

The need to go beyond ensuring the availability of staple grains

Ensuring an adequate supply of food for everyone, with attention to the most vulnerable, needs to be accorded the highest possible priority during the present crisis. Even before the pandemic, as many as 3 billion people across the world had diets that were insufficient to support their health and cognitive development.[29,30] Ensuring access to grains and other staples remains vitally important to support global Zero Hunger goals. Some countries have acted decisively to protect continued food supply and accessibility. For example, in March 2020 Bangladesh increased funds for its Open Market Sale Program to facilitate the purchase of rice at one third of the market price, which put a strain on the national budget but supported continued market flows of this staple grain.[31] Pakistan also earmarked resources (PKR 280 billion) for an accelerated procurement of wheat to support farmer incomes but also to secure grain stocks that can be used in public distribution programmes.[31] In Botswana, a COVID-19 relief fund was established which has been used in part to build up grain reserves.[31] Meanwhile in Egypt, stockpiles of staples have been increasing since the beginning of April to ensure a six-month reserve, in view of the country's dependence on imports.[32]

The government of Uganda has been distributing relief food to over 1.5m Ugandans in Kampala and the Wakiso districts, the aim being to protect basic levels of food intake among low income consumers. Families are being given 6kg of maize flour and 3kg of beans per person, and salt. Lactating mothers and the sick receive 2 kgs of powdered milk and 2kgs of sugar. The Government of India is also distributing one-off packages of 1kg of pulses, and 5kg of rice or wheat per person in low-income households.[33]

> **"The shift in consumption patterns in response to COVID-19 is a concern. The associated health risks of consuming highly processed foods with a longer shelf life, must be addressed. We should protect consumers against lasting damage to their health by promoting the availability and accessibility of nutrient-rich foods"**
>
> **K. Srinath Reddy**
> **Global Panel member and President of the Public Health Foundation of India**

However, it is critical that policy makers take a broad view of ensuring access to essential foods which goes beyond the quantity of staples. For example, the financial crisis in Indonesia in the late 1990s led to significant food price rises, and both women and children suffered long-lasting deficiencies of critical vitamins and minerals due to the loss of nutrient-rich foods in their diet.[34] Protecting healthy diets during the pandemic is made even more essential to the COVID-19 response by the link between malnutrition and severity of disease. Obesity and diet-related non-communicable diseases such as type 2 diabetes and cardiovascular disease have been linked to increased severity of COVID-19[35,36], while undernutrition increases overall susceptibility to, and mortality from infections.[37]

To protect the value chains of nutrient-rich, perishable foods, China introduced a fast-track 'green channel', in which vehicles transporting fresh food could pass through COVID-19 checkpoints easily by holding a government-issued pass.[38,39] Similarly, in Nepal a farmers' cooperative is using "agri-ambulances" to transport fresh food directly to consumers, who were previously struggling to access fresh, nutrient-rich foods.[40,41] Through this system farmers have received a better price for their vegetables as the 'middle-man' has been removed, and consumers are also paying less.[41] In some lockdown areas in Fiji, the Agriculture Marketing Authority bought fresh food from suppliers and delivered it straight to vendors every day.[42]

These initiatives are important because as noted earlier, changes in consumer behaviour in response to the pandemic have tended to shift consumption away from perishable foods, such as fresh fruit and vegetables, and towards foods that are more shelf-stable such as staples, and other foods which may be less conducive to healthy diets.

The need to support the health and integrity of entire food systems

Emergency distribution of foods may be necessary in the short term to protect the food intake of nutritionally vulnerable consumers as the crisis unfolds. But feeding populations in the longer term requires well-functioning and efficient food systems. In this respect, there are three key requirements:

- First, it is important to recognise that food systems have many components – from production, processing and packaging, to storage, transport, trade, and retail. It is important for policy makers to support all these elements in appropriate ways, so that they can continue to work together as an effective and integrated whole.

- Second, food systems need to be able to recover quickly from the damage caused by short term impacts from the pandemic, while also managing longer-term effects. For this reason, businesses throughout the food system (from farm to retail) need to remain viable. Food chains are vulnerable to any weak links.

- Third, it is not enough to merely ensure a rapid recovery of food systems from the impacts of COVID-19. Food systems were already in need of fundamental reform even before the present pandemic (discussed further in Section 4 below). Policy makers should view the rebuilding of food systems as an important opportunity to start the transition towards a food system that is better placed to deliver healthy diets for all. Here the challenge for policy makers is to leverage the substantial stimulus packages now being pledged – so that they are used judiciously to invest in new approaches and not merely in existing infrastructure and mechanisms. (See Section 4).

Photo: World Bank / Sambrian Mbaabu

3. Priorities for mitigating the effects of the pandemic on food systems

All policy makers will need to prioritise their responses to the pandemic in the light of local constraints, circumstances and new opportunities (see Box 2). However, a number of general priorities follow from the requirements set out above. While low- and middle-income countries already faced significant economic challenges, including managing debt repayments, slow growth in productivity and rapidly expanding populations, there are actions which can be taken today and in the near future to make food systems more resilient, while enhancing the sustainability of resource-use across value chains, and better protecting the dietary intake of the poorest and most nutritionally-vulnerable households. The following section provides a checklist against which decisions and actions should be assessed.

Consumer-focused actions

1. **Protect all consumers (rural as well as urban) against lasting damage to their health by ensuring that immediate nutritional needs are met**. Measures involve directly delivering to those who are unable to get food (sourcing food locally wherever possible); ensuring that social protection measures (such as unconditional cash transfers and/or cash for work or food vouchers) put healthy diets at the forefront; ensuring that any tax or debt liability relief is at a level that can also address food needs (i.e. not just rent and other living expenses.). It is vital to ensure that access to support is context specific and available to all who need it - not just to those who are easy to reach.

2. **Monitor food prices and be prepared to intervene to protect affordability of healthy diets**. There are a range of interventions that can be made to affect market price, including exemptions from Value Added Taxes, price controls, and active interventions by government at market level to prevent speculation (see Box 1). Ongoing surveillance of food baskets is important to guide the timely introduction of cash transfers or vouchers, or direct distribution of specific foods to the most vulnerable.

3. **Ensure effective public messaging on the importance of consuming healthy diets during the pandemic, and accompanying this with information on steps being taken locally to promote access to foods containing essential micronutrients**. Evidence shows that when families are in crisis, they tend to spend more on calories and less on micronutrients, thereby worsening the quality of their diets. There is a need to step up campaigns to encourage consumption of foods that make an important contribution to healthy diets (especially fresh fruit and vegetables, pulses, dairy and eggs, seafood, wholegrains, nuts and seeds). Equally, messaging needs to encourage moderation of ultra-processed foods, foods high in salt and sugar, and sugar-sweetened beverages.

Box 1: Monitoring food prices during the crisis

Monitoring food prices during the crisis is an important step for ensuring that healthy diets are affordable, and mitigating the impacts of price shocks on household consumption. [43] Currently, there are few monitoring systems in place which provide real-time information on the impact of the pandemic on food prices. Governments must also be willing to intervene to mitigate the impacts of price increases. For example, in The Gambia, emergency powers have been invoked by the President to freeze prices on essential food, including rice, meat, fish, and cooking oil.[44]

4. **Actively regulate and prosecute fake claims on the safety of food products and food supplements**. The spread of the virus has led to false claims that some dietary supplements can prevent infection and that certain foods can be used to treat the virus.[45] These must be challenged. It is particularly important to address hoax claims that some fresh foods are implicated in spreading the virus.[9]

> **"This is the time to build more resilient food systems for all, which will not leave the vulnerable worse off."**
>
> **HE John Kufuor**
> **Co-Chair of the Global Panel and Former President of Ghana**

Actions to support food systems

5 **Keep trade in food commodities flowing**. Trade is a key mechanism for balancing supply and demand. At the national level, policy makers need to focus on ensuring a supply of food which is accessible and affordable to consumers, particularly the poorest.

6 **Promote an enhanced supply of nutrient-rich local foods as well as staples**. This includes ensuring the availability of necessary farm labour, and the continuation of relevant farm activities (carried out in line with social distancing regulations). Importantly, appropriate steps should be taken to ensure that harvests and the stores of agricultural commodities are protected against mycotoxin contamination as a result of inadequate drying, and not lost or wasted (for example, using institutional procurement). This is particularly important for many nutrient-rich foods which tend to be more perishable, and which may benefit from shorter supply chains.

7 **Protect the viability of small and medium sized businesses throughout the food chain**. Many small and medium enterprises are involved in food processing, storage and transport, and small-scale retail and it is essential that they remain able to function. This means ensuring that they have sufficient liquidity to keep operating, and can safely employ their workers, many of whom are women.

8 **Avoid measures that cause longer term harm to food system viability**. Ensure that public sector intervention in food systems forming part of COVID-19 responses is planned together with actors from private sector food supply chains, to avoid inadvertent damage to livelihoods and SMEs. Responses to COVID-19 should not risk damage to food systems in the long-term by closing borders to trade in food or restricting imports and exports of food, which erode trust in market-based systems.[46] Care must be taken that policies do not revert to a focus on the production of 'cheap calories' which could work against the health of populations in the longer term – a clear focus is needed on actions to protect the vulnerable today, but using strategies that will increase the resilience of food systems for tomorrow. There is a risk of increased deforestation to bolster foreign exchange; a weakening of controls on dangerous chemical inputs or on food additives as short-cuts; and of ending school meals programmes following temporary school closures.

9 **Assess and monitor policies and actions in real time**. The pandemic has led to a multitude of interventions. A major effort is required to build a credible evidence base to assess the effectiveness of specific policy actions in responding to specific needs – and to determine what could work better in future.

10 **Monitor medium-term projections closely**. There are persisting fears that the summer 2020 harvests and food marketing channels could be seriously affected in the southern Hemisphere, leading to food shortages at national and regional levels into 2021. Food systems and related social support mechanisms need to be ready for those challenges.

"Nutrient-rich foods are particularly vulnerable to the current pandemic. It is important for policymakers to understand and support all components of food systems – from production, packaging and storage, right through to transport, trade and retail. Food systems need to be able to recover from both the short and longer term impacts of the pandemic."

Agnes Kalibata
Panel member and President, Alliance for a Green Revolution in Africa (AGRA)

***Box 2:* Case Study: Food system policies in Brazil**

In Brazil the Minister of Agriculture and Food Supply established a crisis committee at the start of the pandemic to ensure continued flow of food, both for the domestic population and for export.

Although the Brazilian Government has struggled to contain and manage the health impact of the virus, the direct impact on food systems was reduced by implementing a number of measures including: [47]

- Emergency economic measures to meet the needs of smallholders.
- Supplying essential foods to poor populations in the peripheries of big cities and to minorities.
- Declaring food production activities as essential services.
- Setting up a liaison network with other government bodies, to enhance co-ordination.
- Consulting with private sector stakeholders in agribusiness, supermarket associations and food distributors.
- Developing personal and food safety protocols for agricultural activities.
- Developing prevention and containment protocols for cold storage facilities, agroindustries, agricultural trade fairs, and cargo transportation.
- Monitoring flows of trade at warehouses, ports, and airports.
- Supporting cashflow for companies in the agribusiness sector, including small businesses.

Despite significant health impacts of the pandemic in Brazil, the measures above appeared to have limited price fluctuations and disruptions to supply in the domestic market. International trade flows of some agricultural commodities actually increased during this time.

4. Looking beyond the pandemic

The current human tragedy and economic crisis offer an opportunity for policymakers to think differently about how food systems function in their countries. The key challenge is how to make diets, food businesses, farming practices, storage technologies, regulatory systems, and price instruments better able to sustain food systems which deliver healthy diets for everyone. A cross-sectoral, system-wide lens must be applied to weigh up the impacts and trade-offs for different interventions.

Greater equity in access to healthy diets needs to be embedded much more firmly in food system strategies, as well as enhanced resilience to shocks of many kinds. Approximately three billion people already had inadequate diets even before the pandemic. How far that number will have risen due to income loss and reduced consumption is not yet known, but it is likely to be significant. At the same time, food systems are increasingly threatened by climate change, and the rapid deterioration of environmental resources – biodiversity loss, soil depletion, deforestation, and more.

The Global Panel is preparing to launch a major new Foresight report* that will argue for a major transformation of food systems, to provide healthy diets for all, and to do so in ways that operate within planetary boundaries. The report will set out the essential steps that policy makers need to take and the pandemic provides an opportunity to begin that transition.

The COVID-19 pandemic has exposed the fragility of food systems, and the reliance that we all place on them to deliver the food we need. The World Health Organisation has called for the promotion of healthy, sustainable food systems [48] as an important component of a global recovery from the virus. In looking to the future, priority needs to be given to strengthening resilience to future pandemics and other shocks, including the impacts of climate change, that will inevitably arise.

* The Foresight 2.0 report will become freely available from the Global Panel website: www.glopan.org

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