Rising Global Food Insecurity: Assessing Policy Responses

A report prepared at the request of the Group of 20 (G20)

April 2023
The outbreak of the COVID-19 pandemic in early 2020 and the war in Ukraine have adversely affected the global economy and contributed to the further deterioration of the global food security situation. The FAO Food Price Index increased steadily since mid-2020 and surged by 12.6 percent from February to March 2022, reaching its highest historical level. International food and fertilizer prices have since declined but remained at a relatively high level.

The global community, including the G20, responded with humanitarian assistance, new initiatives and political commitments to mitigate the impacts of rising food prices and the disruptions to the food and fertilizer supply chains and markets.

This report was produced at the request of G20 Leaders, through their G20 Bali Declaration of November 2022, for the Food and Agriculture Organization of the United Nations (FAO) and the World Bank Group (WBG) to undertake a mapping exercise on the global responses to rising food insecurity, with the objective to identify any major gaps in these responses.

The present report was prepared by the Food and Agriculture Organization of the United Nations (FAO), the World Bank Group (WBG) and the World Trade Organization (WTO) and delivered to the G20 Troika in April 2023.
1. **Introduction**

At the beginning of 2022 global food security was already in a state of deterioration as a result of the measures adopted to contain the COVID-19 pandemic, new or pre-existing conflicts, weather shocks and global economic slowdown. Up to 828 million people were hungry in 2021 ([Figure 1, left panel](#)). The number of people affected by chronic hunger had grown by about 150 million since the outbreak of the COVID-19 pandemic. After remaining relatively unchanged since 2015, the prevalence of undernourishment in the world jumped from 8.0 in 2019 to 9.3 percent in 2020 and rose at a slower pace in 2021 to 9.8 percent.1

Severe food insecurity2 increased in every region of the world in 2021, including in high-income regions ([Figure 1, right panel](#)). Nearly 30 percent of the world population were moderately or severely food insecure in 2021 and 11.7 percent faced food insecurity at severe levels. The estimates also suggest that 3.1 billion people globally could not afford a healthy diet in 2020, an increase of 112 million more people than in 2019.3 Projections suggest that nearly 670 million people globally, equating to 8 percent of the world population, would still be undernourished in 2030, placing the world off track to achieve the Sustainable Development Goal 2 of Zero Hunger. Moreover, the disparity between men’s and women’s food security is 8.4 times as great as it was in 2018 and will likely increase with the compounding effects of the global food security crisis.4 The fact that severe food insecurity rose across all regions should prompt a reflection on national policy priorities, as well as on the global responses. Rising hunger has reverberations upon other dimensions of malnutrition, including micronutrients deficiency, and impacts peoples’ ability to engage productively in the broader economy.

At the same time, a confluence of factors led to increasing food prices in 2020 and 2021. As demand started to recover in mid-2020 from the dramatic decrease in economic activity at the beginning of the pandemic, agricultural commodity prices rebounded from a 10-year low in May 2020. Increasing fuel and transportation costs added momentum to the surge in food prices. On the supply side, weather-related production shortfalls and logistics bottlenecks also contributed, though less significantly than the demand-side drivers.5, 6

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2 Definitions and indicators related to hunger and food insecurity are provided in [Box 1](#).

3 Ibid.

4 Ibid.


Export restrictions contributed to increased price volatility and higher price levels in the early pandemic period.\textsuperscript{7,8} Fears of supply chain disruptions and production shortfalls because of pandemic-related restrictions led some countries to impose restrictions on exports of staple foods. However, compared to the 2007-08 global food price crisis, export restrictions affected a smaller share of world food trade as fewer countries had imposed restrictions and for shorter durations.\textsuperscript{9}

Just as global economic conditions appeared to be recovering from the pandemic slowdown, the outbreak of the war in Ukraine in February 2022 sent another shock through global food and agricultural markets. The Russian Federation and Ukraine are among the most important producers and exporters of agricultural commodities in the world.\textsuperscript{10, 11} In 2021, either the Russian Federation or Ukraine (or both) ranked among the top three global exporters of wheat, maize, rapeseed, sunflower seeds, and sunflower oil (Figure 2). In the same year, the Russian Federation also stood as a prominent exporter of fertilizers (see Section 6).\textsuperscript{12}

\textsuperscript{7} FAO. 2022. Information Note: The importance of Ukraine and the Russian Federation for global agricultural markets and the risks associated with the war in Ukraine. 5 December 2022 update. Rome.
\textsuperscript{9} Laborde, D. & Mamun, A. 2022. Food & Fertilizer Export Restrictions Tracker, IFPRI.
\textsuperscript{10} FAO. 2022. Information Note: The importance of Ukraine and the Russian Federation for global agricultural markets and the risks associated with the war in Ukraine. 5 December 2022 update. Rome.
**Box 1: Levels of Food Insecurity**

*Chronic hunger:* is defined as the long-term or persistent inability to meet minimum food consumption requirements and is measured by the Prevalence of Undernourishment (PoU).

*Hunger:* Hunger is an uncomfortable or painful physical sensation caused by insufficient consumption of dietary energy.

*Prevalence of undernourishment (PoU):* an estimate of the proportion of the population that lacks enough dietary energy for a healthy, active life. It is FAO’s traditional indicator used to monitor hunger at the global and regional level, as well as SDG Indicator 2.1.1.

*Severe food insecurity:* is the level of severity of food insecurity at which people have likely run out of food, experienced hunger and, at the most extreme, have gone for days without eating, putting their health and well-being at grave risk, based on the Food Insecurity Experience Scale (FIES).

*Moderate food insecurity:* refers to the level of severity of food insecurity, based on the FIES, at which people face uncertainties about their ability to obtain food and have been forced to reduce, at times during the year, the quality and/or quantity of food they consume due to lack of money or other resources. It thus refers to a lack of consistent access to food, which diminishes dietary quality, disrupts normal eating patterns, and can have negative consequences for nutrition, health and well-being.

*Food Insecurity Experience Scale (FIES):* is the experience-based food security scale used to produce a measure of access to food at different levels of severity that can be compared across contexts. It relies on data obtained by asking people, directly in surveys, about the occurrence of conditions and behaviours that are known to reflect constrained access to food. FIES is the indicator used to monitor hunger for SDG Indicator 2.1.2.

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**Figure 2: Shares in global production of selected crops (2021, percent)**

Source: FAO. 2022. The importance of Ukraine and the Russian Federation for global agricultural markets and the risks associated with the war in Ukraine.
Box 1: Levels of Food Insecurity

*Acute food insecurity:* food insecurity found in a specified area at a specific point in time and of a severity that threatens lives or livelihoods, or both, regardless of the causes, context or duration. These acute states are highly susceptible to change and can manifest in a population within a short amount of time, as a result of sudden changes or shocks that negatively impact on the determinants of food insecurity and malnutrition. Transitory food insecurity is a short-term or temporary inability to meet food consumption requirements related to sporadic crises, indicating a capacity to recover (for more definitions on acute food insecurity, see Box 2).


Ukraine and the Russian Federation are key suppliers to many countries that are highly dependent on imported foodstuffs and fertilizers.\(^1\)\(^3\)\(^1\)\(^4\) Wheat imports of many countries situated in North Africa and Western and Central Asia are highly concentrated towards supplies from the Russian Federation and Ukraine due to geographical proximity. Overall, more than 30 net importers of wheat have been dependent on both countries for over 30 percent of their wheat import needs (Figure 3). Numerous of these countries fall into the Least Developed Country (LDC) group, while many others belong to the group of Low-Income Food-Deficit Countries (LIFDCs).

**Figure 3: Wheat import dependency: Share of wheat imports from the Russian Federation and Ukraine in total wheat purchases by net importers (2021, percent)**


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The immediate impacts of the war were spikes in the world food and fertilizer prices and a sharp reduction in grain exports by the Ukraine and the Russian Federation as Black Sea trade routes were disrupted, affecting also the procurement of crucial food supplies for humanitarian assistance (Figure 4). Nevertheless, recent WTO analysis suggests that throughout 2022 many countries were able to diversify their sources of food imports to some extent, thereby partly cushioning the impact of the shock and mitigating the consequences for food security. Many of the countries hardest hit by this new shock were already suffering from previous conflict, climate, and economic shocks.

**Figure 4: FAO Global Food Price Index (left and center panel) and FAO Global Input Price Index (GIPI) (right panel)**


An early assessment of the impacts of the war in Ukraine and other developments on global food security in 2022 pointed to an additional increase of 10.7 million people facing chronic hunger compared with the pre-war baseline. Millions of people that had slid into extreme poverty due to the economic slowdown caused by COVID-19 were further affected by the increase in food prices that followed the war in Ukraine. This shock hit them just as the post-pandemic economic recovery process had begun, with a potential impact on their nutrition and serious long-term implications for their health and longer-term wellbeing. This is particularly the case for the nutrition of women, young children and older people, as well as those who are disabled, with both immediate and long-term consequences particularly for poorer social groups in all nations.

The UN Secretary-General established the Global Crisis Response Group on Food, Energy and Finance (GCRG) in March 2022 to help decision-makers find global and systemic solutions to an unprecedented three-dimensional food, energy and finance crisis. The GCRG estimated that 1.2 billion people live in countries affected by all three dimensions of the current crisis – finance, food,

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16 This initial analysis was conducted using the Aglink-Cosimo modeling system developed by OECD and FAO. Updated estimates will be released in July 2023.
and energy – simultaneously, and issued three briefs with recommendations. These highlight the pathways through which rising food, fertilizer, and energy prices, higher interest rates, and increasing debt burdens are affecting vulnerable economies and people. One recommendation being implemented is the reintegration of Ukrainian and Russian food and fertilizer supplies into world markets through the Istanbul Agreements, namely the Black Sea Grain Initiative, signed by the Russian Federation, Türkiye, Ukraine and the United Nations Secretariat on the Safe Transportation of Grain and Foodstuffs from Ukrainian Ports, and the Memorandum of Understanding between the Russian Federation and the Secretariat of the United Nations on promoting Russian food products and fertilizers to the world markets.

As alarming as the rise in the FAO Global Food Price Index was in 2022, it understated the economic pain inflicted upon the most vulnerable people and countries. Even though world price levels have decreased in recent months, net food importing developing countries continue to face affordability difficulties to meet their import needs. This is connected to the broader effects of both the pandemic and the war on global markets and macroeconomic conditions. The pandemic-induced economic downturn lowered the fiscal space available to many low-income countries to meet higher food and fuel import bills or to alleviate the impacts of higher costs on consumers through social programmes (Table 1). It was in response to this constraint that FAO put forward a proposal for the development of a Global Food Import Financing Facility (FIFF) to help countries pay for their import bills and meet their food import needs. Spillover effects of monetary policies in developed economies, namely raising interest rates, put pressure on the currencies of vulnerable food importing countries to depreciate. Although food prices in world markets have decreased since their peak in the spring of 2022, the transmission of lower international prices to the domestic markets of many low-income countries is incomplete, and local food prices remain high and continue to severely hinder access to food. While the global market situation may have improved over the past year, the economic situation of most low-income countries has not. The World Bank’s Food Price Inflation Dashboard shows that domestic food price inflation remains high across countries, and exceeds overall inflation in many.

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The need for coordinated action is as urgent in 2023 as it was in 2022. Understanding the current crises is crucial to developing effective measures that will halt the increase in global food insecurity, put the world back on track to achieving Zero Hunger, and strengthen resilience to future shocks. The remainder of this report examines the global responses to rising global food insecurity, identifies gaps and opportunities for future action and puts forward a set of recommendations for action.


### Table 1: Import bills of total and food products by region (USD billion)

<table>
<thead>
<tr>
<th></th>
<th>World</th>
<th>LDCs</th>
<th>NFIDCs</th>
<th>SSA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animal and vegetable oils, fats</td>
<td>91.5</td>
<td>103.0</td>
<td>150.1</td>
<td>176.5</td>
</tr>
<tr>
<td>Beverages</td>
<td>119.7</td>
<td>113.3</td>
<td>133.8</td>
<td>140.1</td>
</tr>
<tr>
<td>Cereals and cereal preparations</td>
<td>195.1</td>
<td>207.2</td>
<td>256.5</td>
<td>296.4</td>
</tr>
<tr>
<td>Coffee, tea, cocoa, spices and products</td>
<td>109.9</td>
<td>125.2</td>
<td>125.5</td>
<td>137.4</td>
</tr>
<tr>
<td>Dairy products and eggs</td>
<td>94.9</td>
<td>95.7</td>
<td>107.9</td>
<td>120.2</td>
</tr>
<tr>
<td>Fish, crustaceans, and molluscs</td>
<td>164.5</td>
<td>131.9</td>
<td>175.9</td>
<td>194.7</td>
</tr>
<tr>
<td>Meat and meat preparations</td>
<td>154.7</td>
<td>159.7</td>
<td>177.0</td>
<td>193.9</td>
</tr>
<tr>
<td>Miscellaneous food</td>
<td>98.5</td>
<td>103.9</td>
<td>115.3</td>
<td>121.3</td>
</tr>
<tr>
<td>Oilseeds and oleaginous fruits</td>
<td>92.4</td>
<td>102.5</td>
<td>134.0</td>
<td>156.1</td>
</tr>
<tr>
<td>Sugar, honey, and products</td>
<td>49.3</td>
<td>49.5</td>
<td>56.8</td>
<td>62.7</td>
</tr>
<tr>
<td>Fruits and vegetables</td>
<td>284.0</td>
<td>294.9</td>
<td>323.2</td>
<td>339.1</td>
</tr>
<tr>
<td>Total</td>
<td>1 450.6</td>
<td>1 494.1</td>
<td>1 755.0</td>
<td>1 935.6</td>
</tr>
</tbody>
</table>

The need for coordinated action is as urgent in 2023 as it was in 2022. Understanding the current crises is crucial to developing effective measures that will halt the increase in global food insecurity, put the world back on track to achieving Zero Hunger, and strengthen resilience to future shocks. The remainder of this report examines the global responses to rising global food insecurity, identifies gaps and opportunities for future action and puts forward a set of recommendations for action.
2. Food Security Assistance

As of March 2023, food security funding requirements are estimated at USD 18.8 billion, with 58.5 percent of funding requirements met, amounting to just under USD 11 billion. Acute food insecurity continued to escalate in 2022, affecting up to 222 million people in IPC Phase 3 or above across 53 countries and territories, as of September 2022. Among those, around 45 million people in 37 countries were projected to have so little to eat that they would be severely malnourished, at risk of death, or already facing starvation and death (IPC Phase 4 and above). This was a new peak from 2021, when the number of people suffering from acute food insecurity had already surpassed all previous records, affecting close to 193 million people in IPC Phase 3 and above in 53 countries and territories.

Box 2: Acute Food Insecurity Levels

The IPC Acute Food Insecurity (IPC AFI) classification provides information to enable short-term actions by policy makers to prevent, mitigate or decrease severe food insecurity that threatens lives or livelihoods. The IPC Acute Food Insecurity classification differentiates between levels of severity of acute food insecurity, comprising five phases. Phase 1 indicates minimal to none acute food insecurity in a population; Phase 2 indicates stressed, Phase 3 indicates crisis level; Phase 4 indicates emergency levels; and Phase 5 indicates catastrophe or famine levels. The populations that require urgent action to meet their food needs are those in Crisis (IPC Phase 3), Emergency (IPC Phase 4) and Catastrophe (IPC Phase 5). Each phase has different characteristics and requires distinct interventions. In Crisis (IPC Phase 3), households are already facing food consumption gaps which are reflected in high or above normal acute malnutrition, or are only able to minimally meet their food needs by depleting essential livelihood assets or engage in crisis-level coping. People in Emergency (IPC Phase 4) face high levels of acute malnutrition and excess mortality due to lack of food, or resort to emergency coping strategies to mitigate large food consumption gaps. For populations in Catastrophe (IPC Phase 5), households have exhausted all coping strategies and face destitution, very high malnutrition, starvation and death. For more information on the IPC classifications, see https://www.ipcinfo.org/IPC Global Partners. 2021. Integrated Food Security Phase Classification Technical Manual Version 3.1. Evidence and Standards for Better Food Security and Nutrition Decisions. Rome.

Many of the countries experiencing the highest levels of food insecurity have suffered multiple compounding shocks. Out of 53 countries/territories affected by acute food insecurity, conflict is
identified as the primary driver in 24 of these, economic shocks as the primary driver in 21, and weather extremes in 8 countries.30

As of March 2023, prospects of persisting drought in East Africa have raised serious concerns about levels of acute food insecurity, with some areas of Somalia facing a risk of famine.31 Very early analyses show a probability that an El Niño event may materialize in the second half of 2023, with potential huge negative impacts worldwide, including dry spells during critical agricultural seasons in Southern Africa, West Africa, and Central America’s Dry Corridor, and flooding in the Horn of Africa.32 Map 1 illustrates early warning hunger hotspots across the world.33 This suggests that the needs will keep climbing in 2023.

Map 1: Global Hunger Hotspots


33 An update of the Hunger Hotspots report is due to be published in May 2023.
2.1 Emergency Food Assistance by WFP

The World Food Programme (WFP) reached a record 140 million people in 2022, a significant increase from the already record-high 128 million people reached in 2021. In 2022, contributions to WFP also reached a record USD 14 billion.\(^{34}\) WFP’s efforts to respond to the increasing demand for food and nutrition assistance was complicated by the outbreak of the war in Ukraine, which resulted in a surge in emergency food assistance needs for Ukraine, higher operational costs from rising food and fuel prices, and reduced access to critical food supplies from Ukraine and the Russian Federation.

The overall financial resources allocated to humanitarian assistance increased over the years, but their growth rate did not keep pace with the growing needs. In 2021, the humanitarian assistance requested for the food sectors through the United Nations Appeals and Response Plans reached a record high of USD 16.8 billion.\(^{35}\) However, available humanitarian resources per person facing high levels of acute food insecurity decreased from USD 85 in 2018 to USD 51 in 2021. In 2021, only 47 percent of the financial resources needed to meet food security and nutrition needs were mobilized, compared to 70 percent in 2019.\(^{36}\) As the levels of acute food insecurity continue to climb due to compounded crises, a commensurate growth in funding will be needed to meet the additional need for food assistance.

WTO members contributed to supporting WFP’s activities by adopting, at their twelfth Ministerial Conference in June 2022, a Decision exempting from export prohibitions or restrictions food procured by the WFP for humanitarian purposes.\(^{37}\)

2.2 Emergency Livelihood Assistance by FAO

FAO continued to scale up its humanitarian and resilience programming, which provides people reached with urgently needed, life-saving and cost-effective agricultural assistance. FAO advocates for putting investments in agriculture at the core of humanitarian response to the global food crisis. At a conservative estimate, two-third of people experiencing acute food insecurity rely on agricultural livelihoods.\(^{38}\) However, agricultural livelihoods remain severely underfunded in crisis

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\(^{34}\) WFP. 2023. Global Operational Response Plan 2023, Update #7.
contexts, with just 4 percent of humanitarian food security funds allocated to time-sensitive emergency agricultural interventions that are essential for survival.\textsuperscript{39}

In 2022, FAO assisted over 35 million people through emergency and resilience programming. FAO’s largest ongoing humanitarian and resilience programmes are in Afghanistan, Somalia, Yemen, South Sudan, Sudan, Syria and the Democratic Republic of the Congo, countries that are also home to some of the largest populations in IPC AFI Phases 3 and above acute food insecurity.

In 2022, FAO received 54 percent of the USD 1.9 billion requested under the Humanitarian Response Plans. Yet, this share conceals an enormous imbalance of funds, with appeals for Afghanistan fully funded while those for Nigeria were only funded at 25 percent and those for the Syrian Arab Republic were barely over 10 percent of requirements. FAO has also been active in Ukraine in the context of the war, providing policy support and emergency assistance to maintain the productive capacity of the Ukrainian agricultural sector (Box 3). FAO’s analytical work on the impact of the war on global food security served to inform FAO’s emergency interventions as well as global interventions.

In 2023, FAO requires USD 1.9 billion to assist 48 million people. Agricultural interventions, especially when combined with cash and food assistance, have enormous impacts on food availability, nutrition and displacement, and can significantly reduce other humanitarian costs. More importantly, such interventions are geared towards meeting the needs and priorities of affected communities, allowing people to gain access to a steady supply of nutritious food, remain in their homes when it is safe to do so, facilitate their recovery and lay the foundations for resilience to future shocks.

Box 3: FAO Support to the Ukrainian Food and Agricultural Sector

Emergency Needs

In 2022, FAO in Ukraine mobilized USD 102.4 million to assist 1 million people and address 30 percent of the grain storage deficit in the country (of a total USD 180.4 million required). In 2023, FAO will focus its activities on the support to rural households and small-scale farmers by providing seeds, generators, and other agricultural production inputs. The appeal for 2023 is estimated at USD 205 million and aims to support 500 000 agriculture-dependent households, and farmers in front-line oblasts and areas directly impacted by the war. So far, USD 28.3 million has been mobilized. FAO is also undertaking a number of assessments, including an assessment on the war’s impact on agricultural enterprises with land up to 200 hectares. According to the preliminary results of the analysis, by the end of 2022 at national level, agricultural enterprises reported a 9 percent decrease of grain and oil crops cultivated area compared to the same period of the previous year. Agricultural enterprises along areas in the front-line oblasts are the most affected, recording almost a 20 percent decrease of area cultivated of grains and oil crops. Approximately 12 percent of the agricultural enterprises reported having part of their land potentially contaminated by unexploded ordnance. Oblasts along the front-line appeared to be the most affected, with over one every three (32 percent) respondents reporting so. The overall estimated damage and loss for the agricultural enterprises interviewed amounts to USD 3.85 billion in both crops and livestock sectors. Crops account for USD 2.71 billion, while livestock account for approximately USD 1.13 billion.

Finalization of 2022 year activities

In 2023, FAO has finalized the distribution of 30 000 grain sleeves and 105 sets of the supporting equipment, such as loaders, unloaders and bunkers. The support provided allowed to cover over 5 million tonnes of storage, or 30 percent of the country deficit.

Support to the Livestock Sector

FAO has been providing 60 000 kits of animal feed and health supplements to vulnerable livestock-keeping families in 13 oblasts of Ukraine. This will enable most affected households to meet their food and nutrition needs. FAO has targeted approximately 2 200 vulnerable rural livestock-keeping households from Sumska, Mykolaivska and Odeska oblasts with a livestock shelter winterization programme. Each household received a voucher worth approximately USD 300 to purchase tools and building materials for repairing damaged livestock shelters.

Support to Livelihoods

In the coming weeks, FAO will support around 52 000 vulnerable rural families from front-line oblast, distributing vegetable seeds and seed potatoes. Since the beginning of 2023, FAO provided cash assistance to 552 families (1 550 people) from rural areas of Mykolaivska oblast and 411 families (1 386 people) from Khersonska oblast. The value of the cash transfer is based on household size, providing each person with UAH 6 660 (approximately USD 180) to cover basic needs for three months. By the end of 2023, FAO plans to support over 18 000 rural families (54 000 people) in the nine most-affected oblasts with unconditional cash assistance to address their immediate needs while allowing them to protect, re-start and promote their livelihoods. In the coming weeks, FAO will start a new agricultural input voucher programme targeting rural families in 11 hromadas of Lvivska oblast, including displaced households, host families, households who have lost livelihoods due to the war, and other vulnerable categories. This programme will benefit approximately 2 200 households with a voucher worth approximately USD 300 to enable them to purchase agricultural production inputs, including tools, machinery, building materials, seeds, pesticides, and other items. In total, by the end of 2023 FAO plans to support over 17 000 rural families and small-scale farmers (about 50 000 people) with agricultural inputs, animal health products and construction materials through vouchers.

Energy for food

FAO jointly with the Ministry of Agrarian Policy and Food of Ukraine is supporting the Federal Agency for Technical Relief (THW) to identify suitable recipients and distribute 41 generators among those food producers that need assistance the most. So far, 29 generators have already been transferred to a number of bakeries and milk factories in the front-line oblasts. In the coming months, FAO will also distribute additional 125 generators to the food producers from the most affected oblasts.
Box 3: FAO Support to the Ukrainian Food and Agricultural Sector

Seeds distribution for successful spring season

FAO has been distributing spring cereal crops seeds to small agricultural enterprises from nine front-line oblasts, such as Chernihivska, Sumska, Kharkivska, Donetska, Dnipropetrovska, Zaporizka, Mykolaivska, Khersonska and Odeska. In total, 5 700 tonnes of spring wheat, spring barley and peas have been distributed to around 3 000 farmers, while each beneficiary has received 2 tonnes of either type of seeds. In the coming weeks, FAO will support 4 600 farmers from the front-line oblasts by distributing maize and sunflower seeds. In addition to this, 455 farmers from Kharkivska oblast will receive in total 95.3 tonnes of maize and sunflower seeds, out of which 320 farmers will be benefiting from 10 sowing units of sunflower seeds each, and 135 farmers will receive 20 sowing units of maize seeds each.

Demining

FAO and World Food Programme (WFP) are launching a new joint project on clearing agricultural plots of 300 ha or less of mines and other ordnance and helping farmers restore their livelihoods through delivery of agricultural inputs and capacity building. The project will be implemented in three phases. FAO will focus its activities on mapping lands that need to be cleared and restored, testing soil, training farmers on climate-smart agriculture, and providing cash, vouchers, seeds, animal feed and other agricultural constructions inputs.

Trade Facilitation

FAO is providing technical support to the State Service of Ukraine on Food Safety and Consumer Protection to strengthen the government’s capacity to carry out testing and certification for food commodities for export at border facilities. FAO is also supporting six national laboratories with the equipment required for the detection of nucleic acids of infectious diseases by the method of real-time polymerase chain reaction.

Protection of Plan Genetic Resources

FAO is assisting the National Academy of Agrarian Sciences to preserve a unique national collection of plant genetic resources, which is not only of national but also of global importance in terms of the volume and diversity of genetic materials. The relocation of unique genetic materials was successfully carried out from war-affected Kharkiv to the doublet depository in the west of Ukraine.

FAO Ukraine. 2023. Internal monitoring systems data provided as of 6 April 2023.

In 2023, FAO is scaling up its efforts to actively reduce humanitarian needs and break the cycle of recurring famine risks – through a strong focus on risk reduction, anticipatory action and impactful, cost-effective humanitarian response linked to resilience building programmes and fully informed by evidence of greatest needs and greatest impacts.

2.3 Gaps in Food and Livelihoods Support

While record levels of food assistance suggest a strong response to the humanitarian impacts of rising hunger, further analysis is needed to assess the amount and effectiveness of humanitarian assistance resources in offsetting the impacts of the food-energy-finance crisis.

The annual increase in the number of people facing acute food insecurity indicates a growing gap between humanitarian assistance needs and resources available. In 2021, 83 percent of humanitarian assistance to food sectors went to food crises driven by conflict and insecurity, an
increase of more than 35 percent compared to the previous year. Allocations to countries primarily affected by economic and weather shocks went down significantly.\textsuperscript{40}

The unabated increases from 2016 to 2021 in the same countries as assessed by the Global Report on Food Crises 2022 - Mid-Year Update indicate a failure to adequately address the underlying causes of food insecurity.\textsuperscript{41} This results in an expanding humanitarian crisis, which in turn leads to an ever-increasing share of resources being devoted to humanitarian assistance. Fragile contexts receive insufficient levels of development assistance, and less than 11 percent is devoted to the food sectors in food crisis contexts, reflecting development actors’ reluctance to step up action in these contexts.\textsuperscript{42}

The analysis of causal factors and the related financing flows is complicated by the fact that many countries are affected by multiple shocks that are mutually reinforcing, including conflicts and extreme weather conditions with direct impacts often (but not always) tending to be more localized and aggravating conditions at the local level.

Nevertheless, given the increasing share of resources devoted to conflict situations, it is reasonable to question whether the humanitarian assistance system is adequately prepared to address a future in which overlapping economic and weather shocks are more probable. The availability of adequate financial resources is a major consideration, but not the only one. Economic and weather shocks may be shorter-lived than the impacts of conflicts but reducing the susceptibility of vulnerable populations to economic and weather shocks would reduce the need for emergency assistance in response to future shocks.

The ability of the IPC to provide timely, consensus-based and context-specific information has never been more important than in the context of the current global food and nutrition crisis, driven by persistent conflict, natural disasters and high food prices. With global acute food insecurity and malnutrition on the rise, IPC is renewing its strategy and undergoing a transformation process to expand its geographic coverage and, at the same time, maintain the high quality of information that decision makers require for planning interventions in response to food and nutrition crises. To meet the unprecedented demand for actionable information for decision support to counter food insecurity and malnutrition, the IPC requires USD 48.6 million between 2023 and 2026, currently funded at only 26 percent. The USD 35.6 million required funding will allow the IPC to expand its reach, assure continued quality and improve processes of acute food

\textsuperscript{40} \textit{GNAFC. 2022. 2022 Financing Flows and Food Crises Report - Analysis of humanitarian and development financing flows to food sectors in food crisis countries. Rome.} \\
\textsuperscript{41} An update to the report is forthcoming in May 2023. \\
\textsuperscript{42} \textit{GNAFC. 2022. 2022 Financing Flows and Food Crises Report - Analysis of humanitarian and development financing flows to food sectors in food crisis countries. Rome.}
insecurity and malnutrition analyses.\textsuperscript{43} The third IPC Global Strategic Programme (2023-2026) aims at addressing critical gaps in the coverage of food and nutrition crises and envisions a substantial geographic expansion of the IPC, borne of global demand for the IPC in every region that has also been discussed within the GCRG.\textsuperscript{44}

3. Financial Measures

As part of a comprehensive, global response to the food security crisis, in May 2022 the World Bank announced that it is making available up to USD 30 billion over a period of 15 months, including USD 12 billion in new projects. World Bank support is expected to benefit 296 million people, targeting at least 50 percent women. From April through February 2023, the Bank has committed USD 16 billion, with over USD 12 billion from International Bank for Reconstruction and Development (IBRD) and the International Development Association (IDA), split between the crisis response at USD 6.1 billion and slightly more long-term resilience at USD 6.3 billion in order to address both the outcomes and the structural causes of the global food crisis. The International Finance Corporation (IFC) has made USD 3.5 billion in food and nutrition security-related commitments, with about USD 2 billion under its Global Trade Finance Program (GTFP) to support trade, and about USD 1.5 billion for long-term financing instruments. Support from the Multilateral Investment Guarantee Agency (MIGA) amounts to USD 50 million and is expected to grow in the coming year to complement the World Bank and IFC in ramping up support for investments in food security and nutrition. Since April 2022, disbursements from the World Bank’s existing food security and nutrition portfolio have totaled USD 5.3 billion. Most of this support is in Africa, which is one of the regions hardest hit by food crises. The World Bank Group has active food security and nutrition interventions in 90 countries, including 22 of the 24 hunger hotspot countries identified in the FAO-WFP Hunger Hotspots Report (see \textbf{Figure 5}). The World Bank Group financing will include efforts to encourage the realignment of policies and public support, maximize the efficiency of public spending, increase food and fertilizer production, enhance food systems, facilitate greater trade, and support vulnerable households and producers.

\textsuperscript{43} IPC. 2023. The IPC Renews its Strategy to Meet Global Demand for Actionable Information on Acute Food Insecurity and Malnutrition, Calls for Increased Funding. March.

\textsuperscript{44} IPC. 2023. IPC Global Strategic Programme 2023 – 2026.
In addition, the Bank has allocated USD 748 million from its USD 1 billion Early Response Financing modality of the IDA Crisis Response Window (CRW) to mostly address growing needs and is mobilizing additional funds for the CRW. The CRW provides IDA countries with a dedicated source of additional resources to (a) respond, as a last resort, to the impact of severe natural disasters, public health emergencies, and economic crises; and (b) respond at an earlier juncture to slower-onset crises, namely disease outbreaks and food insecurity. CRW support is part of IDA’s overall response to a crisis, complementing the roles of other development partners, and based on IDA’s comparative advantage and development mandate. About 50 percent of CRW resources have been allocated, reflecting high financing needs of IDA countries facing multiple crises (high fuel and food prices, COVID-19 pandemic impacts, record high debt). World Bank management is currently in discussions with IDA participants to create an IDA Crisis Facility leveraging voluntary donor contributions for additional crisis financing to IDA countries including Ukraine and Moldova.

The Global Agriculture and Food Security Program (GAFSP) hosted by the World Bank launched its Seventh Call for Proposals as part of the global response to growing food insecurity. In March 2023, the Program allocated USD 220 million in new investment grants for 15 countries, which are expected to support countries overcome the food security crises and enable the long-term transformation of agrifood systems towards more resilience and sustainability. GAFSP will also allocate at least USD 45 million for the producer organization-led financing modality, for which the Call is still ongoing and expect to close in July 2023.

Figure 5: World Bank Group Food and Nutrition Security Support

Sixty percent of the low-income countries are in, or at high risk of, debt distress.\textsuperscript{45} Twenty-five percent of emerging economies are at high risk. Rising food prices are a contributing factor. The tools used by the \textbf{International Monetary Fund} to address crises include policy advice, capacity building assistance, and support to balance-of-payments (BoP) needs. Through its policy advice and capacity building assistance, the IMF seeks to pro-actively identify food-related BoP pressures and support policies to better assist vulnerable households, the phasing out of distortive trade measures, and more efficient public investment to foster climate-resilient agriculture. IMF is also providing financing to assist its member countries during the current food shock by augmenting existing Upper Credit Tranche (UCT)-quality arrangements, approving new ones, and standing ready to provide emergency financing where a UCT-programme is either not feasible or not needed to address an urgent, transitory or short-lived food shock-related balance-of-payments need.\textsuperscript{46}

Aware of the tools available to financial institutions to respond to shocks, FAO was an early advocate for the establishment of a new \textbf{Food Import Financing Facility (FIFF)} to support countries in managing soaring food import bills.\textsuperscript{47} The proposal was envisioned to support those countries particularly at risk, namely poor and economically vulnerable countries with large food import needs. FAO thus proposed to equip these countries with a financing facility to help ease their immediate food import financing burdens. By tapping into the FIFF, vulnerable countries could mitigate long-lasting impacts on their agrifood systems and reduce future needs for emergency assistance.

Inspired by FAO’s FIFF proposal, the IMF Executive Board approved on September 30 a new, temporary \textbf{Food Shock Window (FSW)} under its emergency financing instruments (Rapid Credit Facility-RCF and Rapid Financing Instrument-RFI). The Food Shock Window will provide, for a period of 12 months, a new channel for emergency financing to member countries that have urgent balance-of-payment needs associated with acute food insecurity and experience a sharp increase in their import bill due to rising costs of cereal and fertilizer imports, or a shock to their cereal exports. This new channel for emergency financing is specifically targeted at the food crisis and safeguards the financial space available for emergency financing under other windows. The IMF’s preliminary assessment is that around 50 countries would meet the qualification criterion of either acute food insecurity, a negative import price shock of at least 0.3 percent of GDP, or a qualifying export shock, though not all of these would ultimately draw on this emergency credit window. At

\footnotesize{\textsuperscript{45} This corresponds to approximately 41 countries at high risk of, or in debt distress.}

\footnotesize{\textsuperscript{46} Upper Credit Tranche originally referred to credit available from the IMF in an amount between 25 and 100 percent of a country’s quota. Since access to IMF credit is now permitted substantially above 100 percent of quota, the upper credit tranches now refer to any use of IMF credit above 25 percent of quota.}

\footnotesize{\textsuperscript{47} FAO. 2022. A Global Food Import Financing Facility (FIFF): Responding to soaring food import costs and addressing the needs of the most exposed. See \url{https://www.fao.org/3/cb9445en/cb9445en.pdf}}
the time of writing of this report, six countries have accessed additional financial resources through this emergency financing window.\footnote{At the time of writing, these countries included Burkina Faso (with whom the IMF reached staff-level agreement in February 2023, and whose request was to be discussed by the IMF Executive Board in March 2023), Guinea, Haiti, Malawi, South Sudan, and Ukraine for a combined USD 1.7 billion, of which 1.3 were destined to Ukraine.}

In April 2022, the IMF established a \textbf{Resilience and Sustainability Trust (RST)} to provide long-term financing to support countries’ efforts to build economic resilience and sustainability, including to climate change and pandemics. The RST complements the existing IMF lending toolkit, helping low-income countries and vulnerable middle-income countries build resilience to external shocks and ensure sustainable growth. Since climate-related events such as the rising frequency and intensity of droughts, floods, cyclones and higher temperatures are key factors that exacerbate food insecurity in many low-income countries (in particular in sub-Saharan Africa), the RST can contribute to efforts to tackle chronic food insecurity in these vulnerable countries.

The \textbf{International Fund for Agricultural Development (IFAD)} is building on its experience in responding to the COVID-19 pandemic to design its response to the global impacts of the war in Ukraine. IFAD aims at protecting the development gains and livelihoods of poor rural households and producers within its projects, while reinforcing their resilience to this new shock, focusing on the poorest and most affected countries. IFAD is repurposing existing resources to the extent possible and is also launching a new \textbf{Crisis Response Initiative (CRI)}. The CRI targets those most affected by the impacts of war in Ukraine, while already dealing with other shocks (e.g. COVID-19), weather extremites (e.g. droughts, floods, cyclones) and/or conflict. The CRI leverages IFAD’s ability to respond to the crisis with speed by channeling additional grant resources through existing projects to countries where the impact of the crisis is most acutely felt by poor rural people and small-scale farmers, and where alternative funding sources are limited. To date, IFAD has raised about USD 52 million for interventions in 15 countries. The CRI was conceived as a time-bound response and is now being internalized within IFAD’s portfolio.

In May 2022, the \textbf{African Development Bank (AfDB)} launched a USD 1.5 billion \textbf{Emergency Food Production Facility} to help African countries avert a looming food crisis. The facility is designed to help African smallholder farmers' access high-quality seeds and fertilizers to boost production and fill the shortfall in Africa’s food imports that was induced by the war in Ukraine. The initiative aims to reach 20 million farmers over four farming seasons. The Facility will also create a platform to advocate for critical policy reforms to solve the structural issues that impede farmers from receiving modern inputs. This includes strengthening national institutions overseeing input markets.

The \textbf{Inter-American Development Bank (IDB)} is supporting countries requesting assistance to broaden and deepen social programmes that target the food insecure, including through conditional and unconditional cash transfers, food vouchers, school meals, and other. Where
relevant, the IDB will work to target support to women, minorities, migrants, and hard to reach populations in rural and urban areas. The IDB is engaged in dialogue with most countries in the region and is responding to specific requests as they arise. It is also providing policy assistance on markets and trade, financing to support food production, technical assistance on fertilizer use, and supporting projects to reduce dependency on chemical fertilizers.

The Asian Development Bank (ADB) is supporting social safety net programmes throughout the region, in cases partnering with WFP and FAO. Where possible, ADB is using trade finance guarantees to support imports of essential foods. It is also providing financial support to agribusinesses and agricultural value chains. ADB is working with countries to promote the efficient use of fertilizer. Climate-smart agriculture is being promoted as a key priority in the ADB climate action plan. In September 2022, the Asian Development Bank announced plans to provide at least USD 14 billion over 2022–2025 in a comprehensive programme of support to ease a worsening food crisis in Asia and the Pacific and improve long-term food security by strengthening food systems against the impacts of climate change and biodiversity loss. ADB’s assistance will seek to leverage an additional USD 5 billion in private sector co-financing for food security. The assistance expands ADB’s already significant support for food security and nutrition in the region, where nearly 1.1 billion people lack healthy diets due to poverty and record-high food prices. The funding will be channeled through existing and new projects in sectors including farm inputs, food production and distribution, social protection, irrigation, and water resources management, as well as projects leveraging nature-based solutions.

The European Bank for Reconstruction and Development (EBRD) is increasing the volume of trade finance commitments for Ukraine and neighboring countries, which includes agricultural inputs, agricultural commodities, and foodstuffs. It is also making infrastructure investments in grain storage and logistics, both in Ukraine and as part of the post-war reconstruction, and in importing countries of North Africa and the Middle East. EBRD is providing a loan to pioneer a green ammonia manufacturing facility in Egypt. When fully developed, the facility will use renewable energy to deliver up to 15,000 tonnes of green hydrogen annually. This, in turn, will be used as an input for the production of green ammonia to be sold on the Egyptian and international markets.

The International Financial Institutions (IFIs) are utilizing existing and new mechanisms to support both countries and vulnerable populations. They are also providing policy advice and technical

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49 According to WHO, a healthy diet protects against malnutrition in all its forms, as well as non-communicable diseases (NCDs) such as diabetes, heart disease, stroke and cancer. It contains a balanced, diverse and appropriate selection of foods eaten over a period of time. In addition, a healthy diet ensures that a person's needs for macronutrients (proteins, fats and carbohydrates including dietary fibres) and essential micronutrients (vitamins and minerals) are met, specific to their gender, age, physical activity level and physiological state. See FAO, IFAD, UNICEF, WFP and WHO, 2020. The State of Food Security and Nutrition in the World 2020. Transforming food systems for affordable healthy diets. Rome, FAO.
assistance to strengthen the capacity of countries to respond to the crisis. The International Financial Institution Action Plan to Address Food Insecurity provides a detailed list of their programmes and activities.\(^{50}\)

The financing needs of countries include supporting food import bills, social protection, trade facilitation, sustaining food production, mitigating fertilizer shortages, and continuing to invest in climate-resilient agriculture for the future. The mechanisms being deployed by IFIs to address these needs include programmes specifically targeted at food security (e.g., IFAD’s Crisis Response Initiative) and projects focused on urgent food security needs under broader support activities (e.g., ADB and EBRD trade facilitation programmes). Most of the projects and programmes are in the planning or early implementation phase.

### 3.1 Financial Needs

One of the most urgent needs arising from the limited fiscal space many countries have for responding to food price shocks is additional support for vulnerable populations. The World Bank reports a fourfold increase in the number of social protection measures announced or implemented across 170 countries in response to food price inflation since April 2022.\(^{51}\) An IMF analysis of 48 countries highly exposed to food insecurity revealed that the use of cash transfers is relatively rare despite evidence showing that social protection programmes are more effective at mitigating the impacts of price shocks on the poor than subsidies.\(^{52}\)

There is need to act now to minimize the likelihood and consequences of households reducing the cost of food purchases by skipping meals or shifting consumption from highly nutritious to less nutritious foods as a way of coping with increased prices. People living in poverty need access to universal social protection and primary health-care services, which include nutritional support programmes that focus on both the prevention of acute malnutrition and its treatment. Improved access to targeted gender-responsive and nutrition-sensitive social protection is needed, particularly for women and children, including through safety nets in the form of cash and, if necessary, nutritious food.\(^{53}\)

Many IFIs and international organizations are supporting social safety net programmes. Social protection measures should be targeted, gender-responsive, focused on the nutritional needs of at-

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risk groups and include access to primary health care. Countries need coordinated efforts from the international community for financial and technical assistance to extend the coverage of social protection programmes. The SPIAC-B Joint Statement on Social Protection Responses to Food Price Shocks (August 2022) makes four recommendations for strengthening social protections systems: (i) expand social protection programmes giving priority to reaching the poor and most vulnerable; (ii) leverage humanitarian responses to rapidly expand coverage and strengthen social protection systems; (iii) place social protection at the heart of global responses to the crisis and create fiscal space; and, (iv) continue to invest in strengthening sustainable social protection systems. The World Bank Social Protection and Jobs Global Practice has delivered approximately USD 2.3 billion for food security and nutrition since April 2022, across 42 operations. Nearly 41.6 million individuals are expected to benefit from these operations, with almost half in Africa alone. Existing social protection schemes – for example in Rwanda, Bolivia, and Pakistan – are being leveraged to address shocks, vulnerabilities, and immediate food security needs, while also increasingly being positioned to complement longer-term macroeconomic priorities. There is a notable role for these interventions to boost women’s agency and economic empowerment, especially given targeting approaches to female headed households.

Yet the rapid acceleration of this crisis has challenged the capacity of the international community to respond. The UN Global Crisis Response Group raised concerns that the financial commitments to the World Bank and the IMF are inadequate to allow these institutions to fully utilize their rapid response capabilities. The IMF Food Shock Window provides transitory relief to countries experiencing balance-of-payments needs as a result of shocks related to the food crisis. It was envisioned as a third line of defense after increased donor funding and concessionary lending. The Food Shock Window was conceived to meet the needs of countries whose situation does not warrant an upper credit tranche (UCT)-quality programme due to the transitory nature of the shock, the urgency of needs, or because a country is not able to develop/implement a full programme. To date, six countries have been approved for programmes under the Food Shock Window. While others are in the pipeline, the number of beneficiaries is likely to be constrained by debt burden requirements and other considerations.

FAO’s proposal for a Food Import Finance Facility, which preceded the establishment of the IMF Food Shock Window, should be reconsidered given the experience with the latter. The multi-dimensional nature of this crisis has highlighted the linkages between food security and financial security. Lower international food prices are not necessarily being transmitted to local markets. Macroeconomic drivers will continue to play an important role in food security in part because of the economic implications of climate change. Further analysis is needed of whether food security considerations are adequately addressed in the existing financial rapid response mechanisms. The

international community must unite forces to support all countries affected by rapidly rising hunger regardless of their development status or indebtedness levels.

Given already high debt levels in many vulnerable countries, there have been calls to consider debt relief for countries with debt that is assessed as being unsustainable. One model to consider is the temporary debt service relief provided under the G20 Debt Service Suspension Initiative (DSSI) implemented at the time of the COVID-19 pandemic. The DSSI was established in May 2020 to help countries concentrate their resources on fighting the pandemic and safeguarding the lives and livelihoods of millions of the most vulnerable people. Forty-eight out of 73 eligible countries participated in the initiative before it expired at the end of December 2021. According to the latest estimates, from May 2020 to December 2021, the initiative suspended USD12.9 billion in debt-service payments owed by participating countries to their creditors.\textsuperscript{55, 56} The DSSI did not cover debt to private creditors.

Development agencies and International Financial Institutions can help lead the way with the investments they are making to support food systems in the current crisis. The GAFSP, for example, is using its current call for proposals to overcome the current crisis and enable the long-term transformation of global agrifood systems towards more resilience and sustainability. Similarly, the World Bank's Global Food Crisis Response and IFAD'S Crisis Response Initiative are directing resources to programmes that will support producers and address climate change threats. The research agendas of the FAO, CGIAR and other research organizations are delivering new tools and innovations to enable the transformation of food systems.

Short-term efforts need to be aligned with national priorities and policies and long-term sustainability objectives. Many countries made commitments at the UN Food Systems Summit to develop national plans to transform their food systems. The Global Alliance for Food Security and its public information- and resource-sharing platform, the Global Food and Nutrition Security Dashboard, which maps the latest global and country-level information on food crisis severity, global food security financing and innovative research, have been established to improve coordination of the current global food crisis response while also helping to advance food security preparedness and food systems resilience interventions (see Section 7).

With healthy diets out of reach for 3.1 billion people and 500 million mostly poor smallholder farmers facing an uncertain future because of climate change, national policies need to support a transformation of agriculture and food systems to enable them to promote healthy lives, prosperous rural communities, and climate-resilient production.\textsuperscript{57} The current crisis reinforces the growing call for repurposing agricultural and food policy support. Currently, most agricultural and


\textsuperscript{56} See: World Bank, Debt Service Suspension Initiative.

food policy support from national governments is not effectively targeted at meeting challenges related to sustainability objectives, such as climate change and nutrition, and preparing for the future. Redirecting these resources to ignite the sustainability transition can address multiple challenges in high- and middle-income countries. Low-income countries will need access to additional concessional resources to implement their transition. In the current context of constrained fiscal space, the countries with the most urgent need for transforming food systems have the least resources available to invest. There also remains scope for better inter-agency coordination on the ground to combine investments for scaled-up impact.

While governments are expending significant amounts of public resources to support food and agriculture, more can be achieved with these resources. The different support measures being used can distort prices, trade, production and consumption decisions. Worldwide support to food and agriculture accounted for almost USD 630 billion per year on average over 2013–2018, and about 70 percent of this support was destined to production. About USD 111 billion were spent yearly by governments for the provision of general services to the sector, while food consumers received USD 72 billion on average every year. Most of the support producers get is through price incentives. This includes border measures on imports and exports (such as import tariffs, quotas, export taxes, bans or licensing, etc.) and market price controls (administered prices at which governments procure food from farmers, or minimum producer price policies).

Import tariffs - taxes imposed on imported goods and services - are the most commonly used border measure, often employed to shield domestic producers from competition. Non-tariff measures (NTMs) are also widespread, while tariffs in agrifood trade have declined. Examples include export restrictions mostly targeting staple foods that are considered important for food security, such as rice, wheat, maize or pulses. Overall, support to agricultural production largely concentrates on staple foods, dairy and other animal source protein-rich foods, especially in high- and upper-middle-income countries. Rice, sugar, and meats of various types are the foods most incentivized worldwide, while producers of fruits and vegetables are less supported overall, or even penalized in some low-income countries.

FAO, in the 2022 edition of The State of Food Security and Nutrition in the World presents evidence that if governments repurposed their current composition of food and agriculture support resources to incentivize the production, supply and consumption of nutritious foods, they will contribute to making healthy diets less costly and more affordable, equitably for all. In addition, there will also be improvements towards reducing hunger and extreme poverty.

The results suggest that with the same money countries can unambiguously improve the affordability of healthy diets. This was the case for three modelling scenarios up to 2030, where simulations in which all countries in the world (i) reallocate fiscal subsidies from producers to

consumers to bridge gaps in healthy consumption patterns; (ii) reallocate fiscal subsidies among producers to bridge gaps in healthy consumption patterns; and (iii) reallocate support through border price incentives (border measures and market price controls) to bridge gaps in healthy consumption patterns.

Trade-offs and negative outcomes could emerge from this repurposing in terms of GHG emissions, agricultural production levels and farm income. The magnitude and direction of the trade-offs do vary by region and income group, and therefore results and solutions will necessarily be country and context specific.59

4. Enhanced Market Analysis and Information

The Food and Agriculture Organization of the United Nations (FAO) is instrumental in framing responses to growing hunger as a provider of neutral and timely information on markets, food security and nutrition, as a reliable partner in global food security governance. The Organization also provides targeted policy proposals, as well as a set of concrete emergency and humanitarian response measures at country level. FAO also supports the development of national analytical capacities through training in various areas, including agriculture and food security monitoring and trade policy.

FAO is responsible for and/or contributes to data and information products that are critical for decision-makers across the UN system and at national, regional, and local levels. FAO provides timely and objective data and information on market developments and outlook through a number of outputs, most notably the FAO Food Price Index and the FAO Cereal Supply and Demand Brief. FAO also hosts the Agricultural Market Information System (AMIS), a G20 initiative to promote global food market transparency and policy dialogue and coordination.

FAO provides food security and nutrition analysis through contributions to the Global Food Crises Report and Hunger Hotspots report. It also contributes to the Integrated Food Security Phase Classification system (IPC), an essential tool for determining the severity and magnitude of acute and chronic food insecurity and acute malnutrition situations in many countries, as well as the emergency response by the international community. FAO also hosts the Global Information and Early Warning System on Food and Agriculture (GIEWS), which monitors global production prospects of cereals and food security situations in all countries of the world. GIEWS reports on prevailing conditions and provides early warnings of impending food crises at country or regional level. GIEWS also plays an important role in global food security through its Crop and Food Security Assessment Missions (CFSAMs). These missions, fielded at the request of national authorities and

performed jointly with WFP, serve to gather evidence for policy decisions and inform the planning of interventions by other development partners, including humanitarian aid.

FAO helped frame the response to the global food, energy and finance crisis through a wide range of actions. Frequent briefings by FAO as well as other UN agencies and programmes and IFIs contributed to information sharing, transparency and building a common understanding of the link between global markets, macroeconomic conditions and the food security situation. Presentations to the UN Security Council and the General Assembly, the G7 and G20, and the Committee on World Food Security informed the global response to the crisis. A consistent message emerged from these multilateral fora on the key steps needed to contain the crisis, which included the importance of keeping global food supply chains functioning, avoiding export restrictions, re-opening Black Sea trade routes, strengthening social safety nets, and continuing to invest in building sustainable food systems. FAO collaborated with the International Monetary Fund, the World Bank Group, the World Food Programme and the World Trade Organization on three Joint Statements on the Global Food Security and Nutrition Crisis; and plays an active role in the food work stream of the UN Global Crisis Response Group.60 FAO also published a number of information notes that covered global food and fertilizer markets in the context of the war in Ukraine.

The robust suite of market analysis tools, mechanisms and technical capacity already in place, enabled FAO to provide rapid and accurate analysis of the impacts of the crisis in Ukraine on global markets and prices. One of the critical lessons from the 2008 food price crisis was the importance of accurate and timely information to guide policy decisions and enable markets to continue to function efficiently, containing unjustified policy responses that could result in extreme volatility.

AMIS was established to provide reliable market information and analysis and to facilitate communication among policy-makers during periods of increased market uncertainty. AMIS fulfilled these functions in the aftermath of the invasion of Ukraine through market analysis, regular meetings and an extraordinary meeting of its Rapid Response Forum, as well as through topical seminars on fertilizer markets, Black Sea grain exports, export restrictions, and price volatility. Since its creation in 2011, AMIS has developed into a critical pillar of the global food security infrastructure. Its global analysis covers 80-90 percent of production and trade of four globally key food commodities, namely wheat, maize, rice and soybeans.

A critical component of market information to enhance predictability and the efficiency of markets relates to transparency on policy measures that may affect trade and markets for food and

agriculture, by promptly sharing relevant information through relevant notification requirements and participation in other relevant mechanisms for information exchange.61

FAO’s Food Price Monitoring and Analysis (FPMA) Tool consists of an advanced technical solution for dissemination and analysis of price information. FPMA provides the most recent information and analysis on domestic prices of basic foods mainly in developing countries, complementing FAO analysis on international markets. It provides early warning on high food prices at country level that may negatively affect food security.62

The WTO has been monitoring closely trade-related measures since the global financial and economic crisis of 2008. It publishes two reports biannually: the monitoring report on G20 trade and investment measures in cooperation with UNCTAD; and the OECD and the WTO wide monitoring report. The WTO has also developed a trade monitoring database that is regularly updated. In the wake of the looming food security crisis, exacerbated by the war in Ukraine, the WTO has given particular attention to trade measures, both trade restricting and trade facilitating, applied to food products and fertilizers (see Section 4). The monitoring process is dynamic, as countries continue to initiate or terminate measures as the situation evolves.

Another central component of the WTO monitoring of trade related measures for food products and fertilizers consists of its notification process and peer review by Members of all forms of support, regulations, market access or export related measures covered by the WTO Agreements in the relevant Committees. Enhancing transparency by encouraging Members to promptly notify their measures and improving access to this information has been a constant objective in the WTO. As part of the WTO peer review process, Members can ask questions in relation to any measure, even if not notified.

The International Comparison Program (ICP) is a global initiative led by the World Bank to collect comparative price and expenditure data in participating economies and to subsequently produce purchasing power parities (PPPs) and price level indexes (PLIs) for each economy. Food prices, consumption shares, and expenditure data from the ICP inform studies on how income and prices influence dietary patterns, the prevalence of undernutrition and overnutrition or obesity, and the gap in healthy and nutritious diets between rich and poor. ICP data is also used to investigate how the share of actual individual consumption expenditure spent on food differs with increasing consumption or income per capita.

FAO, working with Tufts Food Prices for Nutrition Project, developed new global indicators on the cost and affordability of a healthy diet (CoAHD) which provide an operational measure of people’s economic access to locally available foods in the proportions needed for health. The indicators rely

61 WTO. 2022. Ministerial Declaration on the Emergency Response to Food Insecurity. WT/MIN(22)/28; WT/L/1139. Geneva. See also next section on trade measures.
on observed consumer prices and household expenditures sourced from the ICP and income
distribution data from PovcalNet. FAO first published the indicators in 2020 edition of *The State of
Food Security and Nutrition in the World*, and since updates and publishes annually the CoAHD
indicators alongside the SDG2 food security and nutrition monitoring indicators in *The State of Food
Security and Nutrition in the World* report. Since 2023, FAO also publishes the regularly updated
CoAHD indicators on FAOSTAT and in five FAO Regional Overview of Food Security and Nutrition
reports. The CoAHD indicators assess the economic access to and affordability of a healthy diet at
the global level, suggesting that more than 3 billion people in the world are unable to afford the
least-cost healthy diet. FAO is continuing to engage in the Food Prices for Nutrition Project, which
has established as a partnership between Tufts University, the World Bank, and the International
Food Policy Research Institute (IFPRI), to continue to improve and refine the CoAHD
methodological approach that supports long-term monitoring objectives of the CoAHD indicators.

The *Food Prices for Nutrition project* develops and applies new ways of measuring access to a
healthy diet around the world. It shows how changes in food availability, price and nutritional
composition affect the cost and affordability of meeting dietary requirements, supporting the work
of national governments, international organizations, educational institutions, and civil society to
transform food systems and achieve global development goals. The project also launched a Food
Prices for Nutrition DataHub in July 2022, providing easy access to statistics on the cost and
affordability of diets and related indicators, including FAO’s global statistics on CoAHD.

### 4.1 Analytical Gaps

The current crisis has highlighted the need for better market data and analysis of agricultural
inputs, particularly fertilizers. In response, steps have been taken to strengthen AMIS’ analytical
capacity to expand its work to include fertilizers. It is important that such efforts continue to be
supported over time, ensuring that the technical capacity is built up and remains in place once the
current crisis is overcome.

At the same time, food price inflation and income shocks have pushed the affordability of healthy
diets further out of reach for millions of people in every region of the world. Many of the key
components of healthy diets (fruits and vegetables, animal-sourced proteins, legumes, etc.) are
heterogeneous, produced to cater to local preferences, and traded in larger volumes on local and
regional markets than on global markets. Better market data - including robust, reliable and
comparable domestic price series - and timely analysis are needed to support efforts to assess the
impact of prices on food security and address the affordability of healthy diets. But given the
different characteristics and significant fragmentation of these markets, the AMIS global market
monitoring model may not be suitable for providing the needed data and analysis. AMIS can make a
valuable contribution to this discussion by sharing its expertise and experience, but alternative models, such as FAO’s FPMA, should be explored to fill this knowledge gap.63

The outbreak of both the COVID-19 pandemic and the war in Ukraine also underlined the critical importance of trade hubs and logistics for global food security. Extending AMIS’ capacity to cover logistics could prove valuable to manage future crises. With additional support from its members, AMIS could build up its expertise to assess potential disruption risks at key trade hubs, collate data on trade hubs performance (such as throughput and congestion) and identify vulnerabilities of trade hubs to inform decision making.

More timely and precise estimates on retail prices across countries are need to estimate food purchasing power parities, price level indexes, and the affordability of healthy diets. There is a growing need to conduct more frequent International Comparison Program (ICP) comparisons, and to set up a global data infrastructure to source and compile retail food price data from the national statistical offices as well as from private sector sources. International organizations such as FAO or the World Bank are well equipped to lead efforts in this area.

Finally, the crisis also underlined the need to better understand and address issues deriving from the linkages between global markets and local food security needs and concerns. This includes international price transmission to local markets, analysis of import dependencies, and consequent actions. FAO, the World Bank and other relevant international organizations could lead this work.

5. Trade Measures

From the start of the war in Ukraine, the UN Secretary-General highlighted the need to restore global access to food and fertilizer supplies from Ukraine and the Russian Federation. With successful mediation by the United Nations and Türkiye, two agreements were signed in Istanbul on July 22, 2022, jointly referred to as the Istanbul Agreements. The Initiative on the Safe Transportation of Grain and Foodstuffs from Ukrainian Ports, commonly referred to as the Black Sea Grain Initiative, provided a framework for the resumption of exports of grain, other foodstuffs, and fertilizer (including ammonia) from Ukrainian ports. It allowed for the resumption of exports from three key Ukrainian Black Sea ports through a safe maritime humanitarian corridor. The agreement foresaw a duration of 120 days, renewable. In March 2023, the Black Sea Grain Initiative was further extended for an additional 60 days. Reducing uncertainty around the renewal and duration of the initiative would further contribute to market stability. To implement the Black Sea Grain Initiative, a Joint Coordination Centre (JCC) was established in Istanbul, comprising senior representatives from the Russian Federation, Türkiye, Ukraine and the United Nations.

63 For more information on FAO’s Food Price Monitoring and Analysis, see: https://www.fao.org/giews/food-prices/home/en/
The Memorandum of Understanding between the Russian Federation and the Secretariat of the United Nations on promoting Russian food products and fertilizers to the world markets, commonly referred to as the Memorandum of Understanding (MoU), provides assurances that the Russian Federation’s exports of food and fertilizer will not be impeded by measures imposed upon the country. This has a duration of three years.

The resumption of exports of grains and other foodstuffs under the Black Sea Grain Initiative increased predictability and helped to ease global price pressures. Under the Initiative, Ukrainian grain exports recovered significantly, but Ukrainian exports for the period between January and November 2022 remained 22 percent below those seen in 2021. As of 12 March 2023, approximately 24 million tonnes of grains (predominantly wheat and maize) and other foodstuffs were exported under the Initiative. According to UNCTAD, about 49 percent of maize exports were destined to developing countries, while 65 percent of total wheat cargo were destined to developing countries and least developed countries. In addition to benefitting Ukrainian farmers, the agreement has allowed shipments to resume to traditional importers of Ukrainian grains, including countries in the Middle East, North Africa and sub-Saharan Africa, as well as increasing the availability of grain supplies for humanitarian assistance in Yemen, the Horn of Africa, Afghanistan and other hunger hotspots. At the time of writing of this report, ammonia exports have not resumed through Ukrainian ports.

In June 2022, at the 12th Ministerial Conference of the World Trade Organization (WTO), Members agreed on a Ministerial Declaration on the Emergency Response to Food Insecurity, the first Declaration on this topic in the Organization’s history. In this, WTO Members recognized the vital role trade plays in improving food security and nutrition and resolved to make progress in promoting sustainable agriculture and food systems. Members also committed to take concrete steps to facilitate trade and improve the functioning and long-term resilience of global markets for food and agriculture. Members further committed not to impose export prohibitions or restrictions in a manner inconsistent with relevant WTO provisions.

The WTO Ministerial Declaration also provided a dedicated work programme in the WTO’s Committee on Agriculture (CoA) on the particular needs and concerns of Least-Developed Countries (LDCs) and Net Food-Importing Developing Countries (NFIDCs). Since then, WTO Members have submitted responses to a needs assessment questionnaire, and participated actively in workshops to identify the needs of these countries. The questionnaire aimed to guide and inform discussions under the four thematic areas identified in the work programme, namely (i) access to

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international food markets; (ii) financing food imports; (iii) agricultural and production resilience of LDCs and NFIDCs; and (iv) a set of horizontal issues to foster collaboration. The responses will help build upon existing work undertaken by WTO members and provide an evidence-based approach to discussions.

In addition to the Declaration, Members agreed on a Ministerial Decision exempting from export restrictions and prohibitions food purchased for humanitarian purposes by the World Food Programme.68

Food security is also high on the next agenda of the WTO 13th Ministerial Conference, scheduled to take place in Abu Dhabi in February 2024. Members have expressed the importance of having a food security outcome at the Conference, as well as the need to make progress on the outstanding issues in the agriculture negotiations, including domestic support and public stockholding, noting the long-term contribution a successful outcome could make in relation to the four dimensions of food security, namely availability, accessibility, utilization and stability.

Several studies have established that disciplining and reducing trade distorting domestic support, while encouraging policies that support sustainable agricultural practices will promote fair competition, support the development of sustainable and resilient food systems, and provide opportunities for farmers in developing countries to increase production, enhance their earnings, including from exported products such as cotton, thereby improving rural livelihoods and contributing to domestic and global food security.

Improving market access would generally reduce the price of food and make it more accessible to poor consumers, particularly in developing countries. Likewise, the enhancement of transparency-related practices in connection with export restrictions, in conjunction with the commitment already undertaken at the 12th Ministerial Conference by WTO Members to sparingly resort to export restrictions and exempt purchases by the WFP for humanitarian purposes from such measures, would greatly enhance predictability and further improve the food security of importing countries.

Following the outbreak of the war in Ukraine, the UN, the G20, and the G7 were among the leading global voices calling for keeping international markets and trade in food and fertilizer open. They called for a resumption of exports from Ukraine and the Russian Federation and restraint in the use of export bans or restrictions that could add further volatility to markets. According to an analysis by IFPRI, export restrictions peaked in late May 2022 with measures by 23 countries covering 17 percent of global food and feed exports (on a caloric basis). By mid-July the amount of trade affected had fallen to 7.3 percent.69 According to the WTO Secretariat, since the beginning of the

68 WTO. 2022. Ministerial Decision on World Food Programme Food Purchases Exemption from Export Prohibitions or Restrictions. WT/MIN(22)/29; WT/L/1140. Geneva.
69 Glauber, J.; Laborde, D. & Mamun, A. 2022. Food export restrictions have eased as the Russia-Ukraine war continues, but concerns remain for key commodities. IFPRI Blog Post, January 23, 2023.
war up until 14 March 2023, 100 export restrictions have been imposed on essential agricultural commodities by 29 WTO members and 6 observers. Of these, 92 applied to food and feed and 8 on fertilizer exports (Figure 6). Over the past 12 months, 29 measures have been phased out, meaning that there are currently 71 measures in force (66 on food and 5 on fertilizers) by 27 WTO members and 5 WTO observers. The export restrictions in force cover approximately USD 85 billion worth of goods.

As of 14 March 2023, the WTO had also identified 74 trade facilitating measures by importing members in respect of food, feed, and fertilizers. Whereas 66 applied specifically to food and feed, 7 to food, feed, and fertilizers combined, and one specifically to fertilizers. These measures were introduced by 62 WTO members and 2 observers (including as members of economic/customs unions). Twenty-five of these measures have been phased out, bringing the total number of currently applied measures to 49 (42 on food and feed, 6 on food, feed, and fertilizers, and one on fertilizers), imposed by 59 WTO members and 2 observers.

Tracking trade measures implemented in response to the war remains a challenge, in particular as the direct link to the crisis is becoming less clear and because measures often undergo minor adjustments on a very regular basis. The WTO’s Trade Monitoring Exercise actively and regularly engages WTO Members in the verification of trade measures implemented so as to ensure the most up-to-date information is recorded.
5.1 Enhancing the Role of Trade Policies

The UN Secretary-General’s urgent focus on restoring global access to food and fertilizer supplies from Ukraine and the Russian Federation was instrumental in securing a timely solution through the Istanbul Agreements.

The conclusion of the Black Sea Grain Initiative and the creation of the Joint Coordination Center (JCC) represent a unique situation for the UN. In exercising its multilateral diplomacy function, the UN has negotiated an agreement to enable commercial activity to resume and mitigate the collateral economic damage caused by the conflict. The UN Office for the Coordination of Humanitarian Affairs (OCHA) typically negotiates humanitarian corridors to move supplies into a conflict region, while the Black Sea Grain Initiative is creating a corridor to move supplies out. The JCC brings together a diverse range of expertise from across the UN system - maritime, mediation, humanitarian, operational support, inspection, border control - to carry out its mission.

Given the unique circumstances that led to the Black Sea Grain Initiative, this may have limited value as a model for responding to future crises. The experience should nevertheless be instructive. The UN System acted quickly and with great flexibility and innovation to bring together the
expertise that enabled a successful implementation of the Initiative. This bodes well for the institution, demonstrating it is capable of innovating. Nevertheless, the continued uncertainty about the future of this initiative remains a risk factor for global markets and Ukrainian farmers. The experience from the 2008 food price surge suggests that the imposition of food export restrictions by major exporters can have strong destabilizing effects on international markets. As more countries follow the first movers, volatility can be exacerbated and upward price movements can be amplified. In the past, food export restrictions proved extremely damaging to third countries, especially the poorest food import dependent countries.

Enhancing transparency on policy measures that may affect trade and markets, including export restrictions, by making full use of current WTO consultation, notification and data collection processes, could help minimize the adverse food security implications of trade measures in the future. Exploring ways to clarify and enhance relevant provisions is being discussed in the WTO Committee on Agriculture, as well as in the ongoing WTO negotiations, along with other topics that also have important implications for global food security.70 Governments should therefore consider trade reform outcomes that would deliver concrete results on food security in various areas of trade policy making in both the immediate future and in the medium to long term.

With this in mind, governments will need to take concrete steps to improve the functioning and long-term resilience of global markets for food and agriculture, including by reducing distortions, improving competition, and – in the longer term – ensuring that the true costs of food and farmed goods are reflected when traded internationally.71 This also means strengthening the provision of public goods that can help improve farm productivity sustainably, for example by improving the availability of extension and advisory services, investing in research, and improving infrastructure in rural areas.72

AMIS and other transparency tools put in place after the 2008 crisis, combined with the frequent and assertive calls to refrain from export restrictions, undoubtedly contributed to minimizing the adverse food security impacts of export restrictions in the current crisis. However, calling attention to these adverse impacts should not be considered adequate protection against their recurrence in the future. Efforts to promote the consultation and notification processes currently in place at the

70 Topics on the negotiating agenda include: domestic support given to agricultural producers; specific negotiations on cotton, a product of particular importance to many LDCs; access to agricultural markets; a proposed permanent solution to difficulties faced by some developing countries when buying food at government-set prices under public stockholding programmes for food security purposes; a proposed “special safeguard mechanism” to allow developing countries temporarily to raise tariffs in response to a sudden surge in import volumes or a price depression; “export competition” talks on measures seen as comparable to agricultural export subsidies; export prohibitions and restrictions; and improvements to transparency – an issue which cuts across different negotiating topics.

71 Future editions of FAO’s flagship report The State of Food and Agriculture will focus on the true cost of food.

WTO to clarify and strengthen the WTO provisions concerning export restrictions will be important.

In addition, more attention needs to be focused on providing countries with alternatives when faced with the choice between export restrictions and significant food shortages or price spikes in their domestic markets. For net-importing countries, financial tools, such as a food import finance facility, should be part of the solution. To be effective, countries need to have confidence that such tools can be easily accessed and will provide the needed relief when the next crisis hits.
6. Fertilizer Markets

Similar to global cereal exports, fertilizer exports originate from few countries, rendering world fertilizer markets concentrated and vulnerable to shocks (Figure 7). The Russian Federation is the largest exporter of nitrogenous fertilizers, the second largest supplier of potassic fertilizers and the third largest exporter of phosphorous fertilizers. Most major exporting countries of nitrogenous fertilizers are also energy exporters, which is explained by the fact that its production is a highly energy-intensive process. While Ukraine did not feature as a key producer, it served as an important transit point, particularly for ammonia.

The outbreak of the war pushed the prices of energy and energy-intensive products sharply upwards, resulting in severe decline in the affordability of fertilizers. To address high prices and supply shortages, FAO has developed tools to help countries navigate the complexities of fertilizer markets, enhance their ability to access scarce supplies, and ensure more efficient fertilizer use with soil nutrient maps. Fertilizer prices have declined by more than 40 percent since hitting record highs in nominal terms in 2022, especially due to recent drops in natural gas prices and the reopening of fertilizer plants in Europe. Though prices remain almost twice the level of two years ago, this development is welcome news for producers.

While trade volumes from the Russian Federation remained largely unaffected in the first half of 2022, those from Belarus, a major supplier of potassic fertilizer, have shrunk notably. Rather resilient fertilizer exports from the Russian Federation were an important factor in containing fertilizer prices in the course of 2022. Exports from the Russian Federation found new destinations in 2022, with India emerging as the largest destination market.

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75 See FAO and WTO. 2023. Global Fertilizer Markets and Policies. In this study Russia’s fertilizer exports are depicted by all other countries’ imports from the Russian Federation. Recourse to mirror statistics is necessary given the delay of export notifications by the Russian Federation. This mirroring may therefore underestimate the actual exports by the Russian Federation in recent months as imports by some of its trading partners, notably those of Belarus, are also not available. Other estimates put the decline in fertilizer exports from the Russian Federation at around 20 percent volume terms.
76 According to the WTO, exports of primary sector goods (which include fuels, fertilizers and cereals) by the Russian Federation had a relatively small decline in volumes, while exports of other goods has fallen sharply. See: WTO. 2023. One Year of War in Ukraine: Assessing the impact on global trade and development. Geneva.
Despite this recent decline, fertilizer prices remain elevated, albeit with notable differences between different nutrients (sharp price declines in nitrogenous fertilizers, smaller declines for potassic fertilizers). While most large food producing countries have secured their fertilizer needs for the 2022/23 season, there remains unmet import needs in many LDCs, notably in sub-Saharan Africa (Figure 8). This includes countries with already food insecurity problems such as Malawi, Zimbabwe, Tanzania or Kenya. Higher input prices translate into higher production costs, lowering the use of inputs, yields and/or quality, and eventually leading to higher food prices.77

77 For information on fertilizer access by country see: https://www.fao.org/in-focus/remaining-fertilizer-trade-tracker/en
The **Global Fertilizer Challenge** was launched by the United States of America, the European Union, and Germany, among others, at the June 17 Major Economies Forum, to raise USD 100 million by COP27 to help low- and middle-income countries address the global fertilizer shortages. As of November 2022, the Challenge had raised USD 135 million in new funding for fertilizer efficiency and soil health programs to combat fertilizer shortages and food insecurity. Of this amount, USD 109 million is new public funding that will be used to expand fertilizer and soil health programs in sub-Saharan Africa and in key middle-income countries outside the continent.

In September 2022, France launched the **Save Crops Operation**, which aimed at facilitating fertilizer access by vulnerable countries. The initiative reiterated that fertilizers were exempt from the sanctions regime and committed to addressing potential over-compliance to sanctions by the private sector through outreach and letters of comfort. It committed to provide financial and logistical support to the Africa Trade Exchange (ATEX) mechanism to facilitate the purchase of fertilizers. The initiative also launched an emergency fertilizer purchasing mechanism to ease African farmers’ access to fertilizers and facilitated donations for fertilizer procurement to Africa. Within the context of the Save Crops Operation, FAO and the WTO published a joint report on global fertilizer markets and policies, which provided a global outlook on markets, export restrictions, and policy recommendations.

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The World Bank is supporting several countries in West and Central Africa acquiring fertilizers (about 206,000 tonnes). This activity is closely coordinated with private sector actors who have the requisite supply and distribution capacity of fertilizers in the region. Beyond the supply of fertilizers, the Bank is also supporting the development and operationalization of the e-voucher system for improved targeting of beneficiaries. As part of the Food System Resilience Program, the World Bank is currently discussing a soil health and fertility initiative, in partnership with a number of partners; including the fertilizer industry. This initiative aims at: (i) strengthening the enabling environment and investing in critical infrastructure; (ii) improving soil health and fertility to increase crop productivity and profitability (support to improved application of fertilizers and organic inputs, strengthening digital soil information systems and building capacity for last-mile delivery); (iii) improving Market Linkages and Access to Finance (promoting efficient input market and delivery systems, strengthening output market linkages and facilitating access to finance), and (iv) promoting domestic production of fertilizers with a specific focus on biofertilizers. Several countries are rethinking their approaches to fertilizer subsidy programs by recognizing the need for more holistic soil health and fertility restoration, to enhance fertilizer use efficiency, while simultaneously addressing the issues related to building climate resilience. In East Africa, the World Bank is focusing on supporting fertilizer subsidy reforms and related agricultural support programs, through a repurposing agenda in a number of African countries through Development Policy Operations, Program-for-Results Financing and policy advisory.

FAO is working on projects in Central America and in sub-Saharan Africa for digital soil nutrient mapping supported by a USD 20 million contribution from the Government of the United States of America. The use of soil mapping can improve fertilizer use efficiency and support food security and nutrition. FAO has already initiated the scaling up of a similar pioneering project in Ethiopia, where agriculture is a pillar in the economy.80

6.1 Further Actions Needed Across Fertilizer Markets

Fertilizer is one of the most complex stories to emerge from the Ukraine crisis. The disruptions in global fertilizer markets are severe, wide-ranging, and likely to continue long enough to impact multiple growing seasons. The sector’s complicated structural dynamics defy easy or quick solutions. Short-term solutions to fertilizer shortages come with significant trade-offs. Supply constraints in global markets limit the ability to support any group of countries without affecting the availability of fertilizer for other countries.

In Africa, contractions in fertilizer use would have severe ramifications on the food security of some agriculture-dependent rural areas where food insecurity challenges are particularly pronounced.

80 For more information, see: https://www.fao.org/3/cb9452en/cb9452en.pdf
Prohibitive international prices, fast depreciation of currencies against the US dollar, appreciation of the Russian ruble (which makes Russian exports more costly), high levels of indebtedness, as well as inefficient transportation and marketing infrastructure, give rise to concerns that many African countries will not be able to afford purchasing fertilizers in international markets without external support.

Food and fertilizer exports from the Russian Federation are excluded from the sanctions that have been imposed by 33 countries following the war in Ukraine.\(^1\) They are also largely excluded from associated restrictions on financial transactions and transport, though restrictions on individuals and/or companies can reverberate upon these. Despite these exclusions, overall uncertainty about the application and operation of sanctions may have had a hindering effect on fertilizer trade. The United States and the EU have attempted to counteract the uncertainty through official communications and written assurances to shippers (e.g., comfort letters) clarifying the application of sanctions.\(^2\)

More efforts are needed to reassure the private sector on this matter and thus enable the continuation of business and, where necessary, the establishment of alternative trading hubs and routes. These efforts are particularly important for the African continent that relied on European trading hubs and routes to access food and fertilizers prior to the outbreak of the war (as seen for instance in Figure 3). Such efforts should go together with actions to support importing countries to meet higher transaction costs resulting from market disruption and fragmentation. In this context, it is important to underline that the international community is well-equipped to address food crises that emerge from affordability issues, and that food crises that derive from availability constraints must be prevented.

While the IMF’s Food Shock Window eligibility criteria allows countries to draw on these resources to meet rising fertilizer import costs, at the time of writing this report, only four African countries had a Food Shock Window approved. Of these, three countries had drawn on these additional funds to meet rising costs of both food and fertilizers.\(^3\) More analysis is needed to shed light on the

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\(^2\) See also:


\(^3\) However, sanctions do affect trade in potash products from Belarus, and these sanctions predated February 2022. See: https://www.europarl.europa.eu/RegData/etudes/ATAG/2022/729428/EPRS_ATA(2022)729428_EN.pdf.

\(^4\) IMF. 2023. See: imf.org/News/Press Releases.
underlying causes for apparent low response by countries to take up these funds, their policy options and choices as well as the constraints faced by African countries and to enable them to access the agricultural inputs. The African Union is organizing the Africa Fertilizer and Soil Health Summit in June 2023. The Summit will adopt a 10-year action plan to address Africa’s expanding fertilizer crisis. The action plan will focus on improved efficiency, financing, fertilizer policy, and soil health. In this regard, every effort must be made to support this dialogue and the implementation of meaningful actions.

FAO has developed a "fertilizer neediness index" to inform international efforts to support and prioritize initiatives that aim to ensure that African countries are able to access international fertilizer markets, either through the provision of financing facilities to purchase fertilizers or through outright donations. This index considers a number of indicators, including country’s balance-of-payment situation, the severity of food insecurity, as well as other factors that shape the ability to purchase fertilizer at market conditions.

Urgent steps need to be taken to make fertilizer more accessible and affordable. Especially within Africa, internal trade and logistics barriers raise intra-regional trade costs of African-produced fertilizer and undermine trade efficiency within the continent. Investments in trade infrastructure and trade facilitation measures will help the regional market to function more efficiently.

For resource-poor smallholder farmers, targeted and tailored interventions are needed to provide support in weathering the crisis and planting for upcoming seasons with enough fertilizers and other agricultural inputs, while maintaining livelihoods. However, the search for longer-term solutions should also focus on increasing soil fertility and fertilizer use efficiency and reducing the environmental impact of fertilizers. There is no single solution to all soil fertility problems, but a portfolio of options can be employed. Recycled nutrient sources are alternatives to increase soil fertility. Animal manure, urban wastes, wastewater, algal biomass, compost, and digestates, among other sources, can be recycled to the plant nutrient cycle after consumption by humans or animals, as by-products of food processing or as plant residues returned to the soil. More – and longer-term – efforts and investments are needed to develop these options into viable alternatives for farmers.

7. Other Multilateral Measures

The President of the General Assembly and the Committee on World Food Security (CFS) co-convened a High-Level Special Event, on July 2022, to foster coordinated global policy responses to the current global food crisis supported by – and in support of – the UN Secretary-General’s Global Crisis Response Group on Food, Energy, and Finance. CFS leveraged its convening power to bring

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85 For more information, see: Fertilizer Allocation Methodology; Fertilizer Allocation for Africa; and Trade tracker for Nitrogen, Phosphorus and Potassium fertilizer.

together key stakeholders to discuss policy responses to the multiple dimensions of the ongoing
global food crisis. This high-level event contributed to building synergies and connecting the
multiple efforts being developed, advanced a shared understanding of the main issues and
challenges, deliberated on options for policy responses, identified emerging areas of convergence in
response to the food crisis, and fostered coordinated action on the food crisis.

On May 19, 2022, the Global Alliance for Food Security (GAFS) was launched during the Group of
Seven (G7) Development Ministers’ meeting as a way to address the emerging global food security
and nutrition crisis. GAFS is jointly convened by the World Bank Group and the German G7
Presidency with active engagement and support from over 60 bilateral and multilateral
humanitarian and development partners, regional organizations, governments and the civil society.
The objective of GAFS is to catalyze an agile, immediate, and coordinated response to the unfolding
global food and nutrition security crisis as an act of solidarity in support of those most affected.
GAFS partners agreed on priority actions in three focus areas: Advice (regular just-in-time
knowledge-sharing on latest food security crisis developments), Action (tracking financial needs
and responses) and Advance (forward looking research and analysis on food security and
resilience).

A main output and public information- and resource-sharing platform of the GAFS is the Global
Food and Nutrition Security Dashboard, which was launched in November 2022 following a
multi-stakeholder consultative process among GAFS partners.87 The Dashboard brings together and
maps the up-to-date global and country-level information on food crisis severity, based on FAO and
IPC data, on global food security financing, and makes available global and country-level innovative
research to inform a coordinated global food crisis response while also helping to advance medium-
to long-term food security interventions. It provides an overview of the breadth of the response and
a convenient means to track the current state of food insecurity and malnutrition. By linking
 disparate and vast information developed and shared by over 40 GAFS partners in one place, the
Dashboard reduces transaction costs, improves transparency, and strengthens analysis to help
speed up financing by highlighting funding needs and gaps. The Dashboard also helps facilitate and
disseminate forward-looking research and generate new knowledge on topics such as food security,
early warning analytics, policy response effectiveness and resilience-building innovations to enable
the development of sound national policies. At the national level, the GAFS and its partners support
countries as they develop and operationalize Food Security Crisis Preparedness Plans (FSCPPs).88
These national operational plans define what constitutes a major food security and nutrition crisis
for a country, explain how crisis risks are actively monitored and identified, and detail step-by-step
protocols, roles, and timelines for mobilizing additional funding and scaled up early action. GAFS

87 For more information see: www.gafs.info.
effectively-respond-to-emerging-major-food-and-nutrition-crises?cid=SHR_SitesShareLI_EN_EXT
partners such as Global Network Against Food Crises, FAO, ICRC, OCHA, UNICEF, WFP, and the UN Famine Prevention and Response Coordinator are supporting the rollout of the FSCPPs in 26 countries.\(^9\)

On January 12, 2023, five UN agencies namely, the Food and Agriculture Organization (FAO), the UN Refugee Agency (UNHCR), the United Nations Children’s Fund (UNICEF), the World Food Programme (WFP) and the World Health Organization (WHO) called for decisive and timely action on the **Global Nutrition Action Plan on Child Wasting** to protect the most vulnerable children in 15 countries hardest hit by the unprecedented food and nutrition crisis.\(^9\) Currently, more than 30 million children in the 15 worst-affected countries suffer from wasting and 8 million of these children are severely wasted, the deadliest form of undernutrition. The Call to Action highlights the need for a multi-sectoral approach and priority actions across maternal and child nutrition through the food, health, water and sanitation, and social protection systems. In response to increasing needs, the UN agencies identified five priority actions that will be effective in addressing acute malnutrition in countries affected by conflict and natural disasters and in humanitarian emergencies. Scaling up these actions as a coordinated package will be critical for preventing and treating acute malnutrition in children and averting a tragic loss of life.

France launched the **Food and Agriculture Resilience Mission** (FARM) initiative in March 2022. The initiative is based on three pillars: i) preserving the global flow of agricultural commodities, including by supporting the Ukrainian agricultural sector; ii) ensuring, with the help of the World Food Programme (WFP), food supplies for the most vulnerable; and iii) investing locally to develop sustainable and resilient food systems, particularly on the African continent.

In June 2022, a group of private actors launched the **Global Business Coalition for Food Security**, with the support of France, the European Commission, the European Investment Bank, WFP and the International Fund for Agricultural Development (IFAD). Through the coalition, businesses pledge, each according to their ability, to ensure that the three pillars of FARM are implemented in a spirit of solidarity. Pillar 2 is addressed by the “solidarity mechanism”, which offers a platform to match food surpluses with the countries most in need. The private sector is encouraged to collaborate with WFP by providing food commodities, supply chain solutions and agricultural inputs at favourable costs to ensure that WFP operations are sustained and able to reach countries and people most in need. IFAD is hosting the Secretariat for Pillar 3 with support from France. Pillar 3 prioritizes action in four areas to transform food systems: (i) increasing local production capacity; (ii) supporting the consumption of safe and quality local products; (iii) developing domestic markets and integrating regional markets; and (iv) combating food loss and waste. IFAD will

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\(^9\) See: [https://thedocs.worldbank.org/en/doc/aba6d1c8dec00a3e29900a3ed03e2969ccadccd74154-0320082023/original/Food-Security-Crisis-Preparedness-Plan-FSCPP-English.pdf](https://thedocs.worldbank.org/en/doc/aba6d1c8dec00a3e29900a3ed03e2969ccadccd74154-0320082023/original/Food-Security-Crisis-Preparedness-Plan-FSCPP-English.pdf)

conduct value chain assessments for target countries and develop roadmaps to address bottlenecks. Implementation of the roadmaps will depend on the commitment of countries to transform their food systems with aligned support from donors and the participation of the private sector.

Over 100 countries have endorsed the **Roadmap for Global Food Security** that was agreed at the Global Food Security Ministerial Meeting at the United Nations in May 2022, chaired by the United States. The Roadmap affirmed the commitment of the signatories to act with urgency, at scale, and in concert to respond to the urgent food security and nutrition needs of millions of people in vulnerable situations the world. It calls for additional contributions for humanitarian assistance, boosting fertilizer production and efficiency, refraining from trade restrictions, and supporting the transformation of food systems.

The leaders of Spain, the United States, the African Union (AU), the EU, Colombia, Germany, Indonesia, and Nigeria co-hosted a **Leaders’ Summit on Global Food Security** on the sidelines of the 77th session of the UN General Assembly (UNGA) to catalyze global action to advance global food security. The summit declaration calls for increased humanitarian assistance; keeping markets open and avoiding export restrictions; increasing fertilizer production, scaling up innovations, and increasing fertilizer use efficiency; supporting sustainable agriculture and food systems through increasing productivity and resilience; increasing investment in research and technology for science-based and climate-resilient agricultural innovations; and monitoring markets affecting food systems.

In January 2023, the U.S. Department of State, Office of the Special Envoy for Global Food Security, in partnership with the African Union and FAO, launched the **Vision for Adapted Crops and Soils (VACS)**. The initiative will seek to support African governments, farmers, agricultural researchers, and civil society organizations as they prepare the continent’s food systems for the challenges posed by climate change. VACS will identify the most nutritious crops in each of the African Union’s five subregions, assess the expected challenges posed to those crops by climate change, and seek to boost public and private investments to adapt those crops to anticipated effects of climate change.91

Launched during the 2016 World Humanitarian Summit, the Global Network Against Food Crises is an alliance of humanitarian and development actors working together to prevent, prepare for, and respond to food crises. The Global Network seeks to reduce vulnerabilities associated with acute hunger, achieve food security and improved nutrition, and promote sustainable agriculture and food systems. The initiative is supported by the European Union, FAO, the United States, WFP, and the World Bank. The Global Network works at country, regional, and country level to support partnerships within existing structures and to improve advocacy, decision-making, policy and programming along the following three dimensions: i) building greater consensus and promote

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evidence-based food security and nutrition analyses; ii) leveraging strategic investments and improve coherence between humanitarian, development and peace actions (the HDP ‘nexus’); and iii) fostering political uptake and coordination across clusters/sectors to address the underlying multi-dimensional drivers of food crises.
8. Conclusions and Recommendations

The currently fragile food security situation is one dimension of a global food, energy, and financial crisis affecting every region of the world. Our humanitarian assistance system, already overstretched by ongoing conflicts and climate-related disasters, is facing even greater demands in 2023. Financial support, while increasing, has not kept pace with the needs.

The consequences of soaring inflation and mounting debt burdens are spreading the food security crisis well beyond those countries that have been suffering from acute food insecurity for successive years. Countries that were on a positive path to achieving the food security and nutrition targets of the SDGs are seeing poverty levels rise, while their ability to provide assistance to their populations is undermined by increasing debt, falling revenues, and deprecating currencies.

The global community, including the G20, has responded to the current crisis with humanitarian assistance, new initiatives and political commitments. The global response prioritized keeping food supply chains functioning, avoiding export restrictions, re-opening Black Sea trade routes, strengthening social safety nets, and continuing to invest in building sustainable food systems. Progress has been made on all these fronts, but any additional supply shocks could turn the current food access crisis into an availability one.

The main drivers of food crises – lack of adequate investments in agrifood systems and rural areas, research and development, direct impacts from conflict and insecurity, extreme climatic events, and economic slowdowns and downturns - are all expected to persist in 2023 and beyond.

A return of global economic growth will ease the crisis, but it is not sufficient either to alleviate the current suffering or to prevent future shocks from piling additional pain on vulnerable populations. Much more needs to be done to address the root causes of hunger, food insecurity and malnutrition and to make safe, healthy diets more affordable for all.

The current multi-dimensional crisis underscores the potential for global macroeconomic conditions to undermine food security and nutrition goals and the need for a swift and coordinated global financial and policy response. The G20 is uniquely positioned to move beyond a sector-specific discussion of food security and consider how the development finance architecture can be improved to support investments that will address the underlying causes of food insecurity, promote sustainable and inclusive economic growth in rural areas and reduce the potential for financial stress to lead to increased hunger and food insecurity.
Recommendations

1. **Emergency humanitarian assistance**: Funding must keep pace with the needs. More funds are needed for emergency food and livelihood operations and for other emergency measures that preserve livelihoods and reduce future short-term needs.

2. **Social safety net programmes**: An integrated, people-centered policy approach is needed, which must include food-related policies. The countries with the greatest need have the fewest resources and the smallest capacity to protect vulnerable households. Social safety net programmes need to be improved and expanded to contribute towards the realization of the right to food, facilitate access to food for the poor and vulnerable, alleviate hardship and promote well-being.

3. **Increasing resilience**: Key to building the shock-absorptive capacity of an agrifood system is diversity in food sources, diversity in actors in food supply chains, including small and medium agrifood enterprises, efficient transport networks, effective early warning systems, early action plans and social protection, and affordability of a healthy diet for all households, particularly the poorest and most vulnerable.

4. **Fertilizer**: Urgent action is needed to facilitate access to fertilizers for farmers in vulnerable areas, while also increasing investment in long-term solutions. Efforts must also be deployed to improve fertilizer use efficiency, for instance by investing in and using soil nutrient maps, and reduce dependency on mineral fertilizers. The Africa Fertilizer and Soil Health Summit will be key to set priority actions for the continent, and its outcomes should be supported with concrete actions.

5. **Finance**: Countries need to be provided with fiscal space to protect their populations from the impacts of the soaring food price inflation. Donor funding, concessional loans, and emergency relief through the IMF Food Shock Window are critical. A broader food import financing facility, such as that proposed by FAO, which will expand the IMF Food Shock Window, will ease their immediate food import financing burden of vulnerable countries and help them mitigate long-lasting impacts on their agrifood systems, reducing future needs for emergency assistance. While recommendations on debt relief and restructuring are beyond the scope of this report, there is no question that such actions would provide more fiscal space to offset the impact of elevated food, fuel and fertilizer prices on poor households.
6. **Markets and trade:** Governments must take concrete steps to improve the functioning and long-term resilience of global markets for food and agriculture, including by reducing distortions, improving competition and food safety standards, and – in the longer term – ensuring that the true costs of food and farmed goods are reflected when traded internationally. This also means strengthening the provision of public goods, for example by improving the availability of extension and advisory services, investing in research & development, promoting access to technologies and innovation, and improving infrastructure in rural areas. In the immediate future, AMIS should be provided with adequate support to enable it to monitor world fertilizer markets and assess global supply chain logistical constraints. Regional efforts should improve market data and analysis of commodities that contribute to the affordability of healthy diets. Governments should also enhance transparency on trade policies and measures affecting markets, exercise restraint in the use of export restrictions, and revitalize the WTO ongoing agriculture negotiations to address both short- and long-term food security challenges, while new financial tools to give policy-makers viable alternatives are also needed.

7. **Agrifood systems transformation:** We must address the underlying causes of hunger, food insecurity and malnutrition. The right investments now in transforming food systems to be more climate-resilient and less resource intensive will help to overcome the current crisis and build resilience to future crises - while responding to climate change challenge. To meet the targets of SDG 2 by 2030, agrifood systems must be transformed in ways that they deliver lower cost and safe nutritious foods that make healthy diets more affordable for all. To continue to drive poverty reduction and protect incomes and livelihoods in the face of future shocks, agrifood systems need to be more diverse, more climate-resilient and less resource intensive. Repurposing agricultural support would provide leverage to implement policies that will prompt the transformation of agrifood systems to become more sustainable and resilient and make healthy diets more affordable for all.