

ASPECTS REGARDING GLOBAL FOOD SECURITY

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Abstract

At a time when global food security is of utmost importance, the Global Food Security Index (GFSI) shows that the global food environment is deteriorating. After hitting its peak in 2019, the GFSI has since declined amid skyrocketing food prices and hunger on an unprecedented scale. In GFSI 2022, affordability drags the index down. The index's affordability score has fallen by 4%, from 71.9 to 69, between 2019 and 2022 as shocks like the covid-19 pandemic and the war on Ukraine have led to rising costs for food. In addition, weakening trade freedom and an inability to fund safety nets have made it harder for people to afford food around the world. Meanwhile, social and political barriers to access have dampened the availability of food. In the past three years, the GFSI has shown rising risks from armed conflicts and political instability, indicators which have seen scores fall by 4% and 6% respectively. This has been accompanied by a growing dependency on chronic food aid, the score for which has dropped by 8% since 2019. Eight of the top ten performers in 2022 come from high-income Europe, led by Finland (with a score of 83.7), Ireland (scoring 81.7) and Norway (scoring 80.5). These nations score strongly on all four pillars of the GFSI. Japan (scoring 79.5) and Canada (scoring 79.1) round out the remainder of the top ten.

Key words: food security, Global Food Security Index (GFSI), risks, resilience

At a time when global food security is of utmost importance, the Global Food Security Index (GFSI) shows that the global food environment is deteriorating. After hitting its peak in 2019, the GFSI has since declined amid skyrocketing food prices and hunger on an unprecedented scale. Based on 11 years of data, the index highlights that the food system has been weakening over the years, with shocks in 2020-22, including the covid-19 pandemic and high commodity prices, showcasing this fragility. These shocks exacerbate the systemic issues that are threatening food security and weakening the resilience of the food system. The downward trend in food security is a reversal from the GFSI's early days, which saw eight years of strong growth before a slowdown began. This subsequent stalled progress reflects structural issues and significant risks in the global food system, which include, but are not limited to, volatility in agricultural production, scarcity of natural resources, increasing economic inequality, and trade and supply-chain volatility. The economic and socio-political shocks of the past few years have only exacerbated an already-weakening food environment. As these shocks become more frequent and severe, global food security will be increasingly threatened.

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4%, from 71.9 to 69, between 2019 and 2022 as shocks like the covid-19 pandemic and the war on Ukraine have led to rising costs for food. In addition, weakening trade freedom and an inability to fund safety nets have made it harder for people to afford food around the world. Meanwhile, social and political barriers to access have dampened the availability of food. In the past three years, the GFSI has shown rising risks from armed conflicts and political instability, indicators which have seen scores fall by 4% and 6% respectively. This has been accompanied by a growing dependency on chronic food aid, the score for which has dropped by 8% since 2019. However, new metrics incorporated in this year's GFSI model, including new metrics to gauge the inputs that farmers use on their farms and in the "first mile" (the segment that links farmers to the nearest market), show that agricultural inputs have seen some of the biggest increases in GFSI scores in the past few years (albeit, from a very low base, as these are some of the lowest-scoring indicators in the index). For example, scores measuring commitments to empowering female farmers and food security strategies have increased by 19% and 13% respectively. In addition, despite a 10% fall in public expenditure on research and development since the index's inception in 2012, there has been a strong reorientation towards innovation, with big

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improvements in access to agricultural technology, education and resources, and in commitments to using innovative technology. The growth in the use of these inputs is crucial in improving agricultural productivity and enhancing food security (these measures have proven critical in staunching further declines in the GFSI in 2022).

MATERIAL AND METHOD

This research is based on, online versions of several journals, brochures and book volumes to analyze the perspectives of different authors on the notion of food security. Quantitative research is carried out by the method of observation and by the procedure of analysis of statistical data (secondary data), which covers the national level and the international or global level. All data used were taken from the official websites of organizations, ministries and governments.

RESULTS AND DISCUSSIONS

Also key in halting the index's slide in 2022 are big jumps in political commitments to agricultural adaptation and sustainability, especially related to financing. On average, scores for political commitments to adaptation increased by 10% from 2019 to 2022. In 2022 89 countries

have a current climate strategy in place with specific measures for agriculture or food security, compared to just 74 countries in 2019. Improvements in political commitments to adaptation also include score increases in environmental economic accounting, risk management coordination and climate finance flows as central banks around the world push for green finance. Eight of the top ten performers in 2022 come from high-income Europe, led by Finland (with a score of 83.7), Ireland (scoring 81.7) and Norway (scoring 80.5). These nations score strongly on all four pillars of the GFSI. Japan (scoring 79.5) and Canada (scoring 79.1) round out the remainder of the top ten (*Fig. 1*). Consistent with previous years of the index, six of the bottom ten scoring nations in 2022 come from Sub-Saharan Africa. The Middle East and North Africa, along with Latin America, are home to the three worst performing nations. Syria sits at the bottom of the list (with a score of 36.3), followed by Haiti (scoring 38.5) and Yemen (scoring 40.1). The gap between the best performing country and the worst performer is stark—Syria scores less than half the score of Finland. The difference between the top performer and the country at the bottom of the ranking has continued widening since 2019, reflecting the inequity in the global food system.

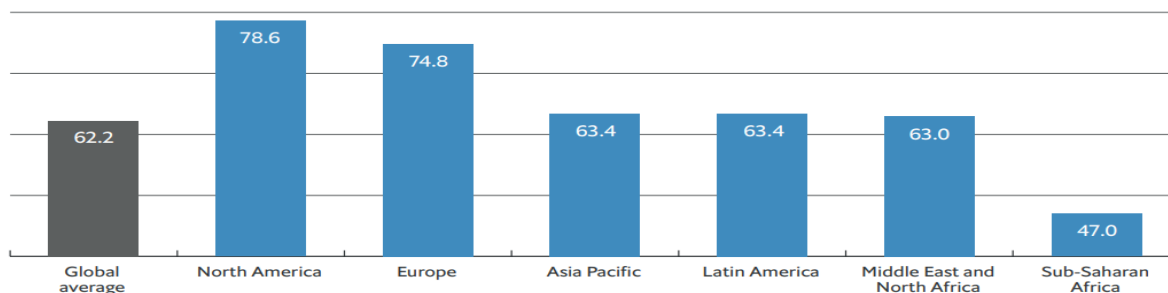


Figure 1. Overall GFSI 2022 scores, by region

Source: Global Food Security Index 2022

The early years of the GFSI (2012-15) saw the biggest improvements, with the average overall food security environment score jumping by 6%. However, the GFSI saw slower growth between 2015 and 2019 and then has weakened from 2019 to 2022, plateauing over the past three years as the world faces its highest-ever food prices and hunger on an unprecedented scale (<https://www.wfp.org/publications/global-report-food-crises-2022>). The GFSI score topped 62.6 out of a possible 100 in 2019 but currently stands at 62.2. In 2022 the index was dragged down by falls in two of its strongest pillars—affordability, and food quality and safety—and saw continued weakness in its other two pillars—availability, and sustainability and adaptation. In this report, the

theme of resilience will be examined as it plays into each of the four pillars of the GFSI: economic resilience (affordability), production and agricultural resilience (availability), nutritional resilience (quality and safety), and environmental resilience (sustainability and adaptation). This report will examine this data to see what works best, especially when it comes to helping stakeholders to navigate an increasingly volatile world.

Affordability is a key component of food security. Whenever safe and nutritious food is not available at a price affordable to all, it jeopardises people's welfare. Affordability, the top-scoring pillar of the GFSI, dropped by 4% in 2019-22, from 71.9 to 69.0, dragged down by sharp rises in

food costs, declining trade freedom and decreased funding for food safety nets. Meanwhile, big falls in nutritional standards, particularly in national nutrition plans and monitoring, triggered a drop in scores, from 67.1 to 65.9, for the quality and safety pillar. Countries from all regions have dropped the ball on nutritional plans in 2022. Around onethird of countries (35 out of 113) have no national nutrition plan or strategy in 2022, nearly double

the number that lacked one in 2019. In addition, 25 of 113 countries are not regularly monitoring the nutritional status of their population (compared with 15 in 2019). Without regular monitoring, policymakers cannot identify nutritional deficiencies and deploy resources where needed. Concurrently, the index's remaining two pillars—availability, and sustainability and adaptation—remain weak.

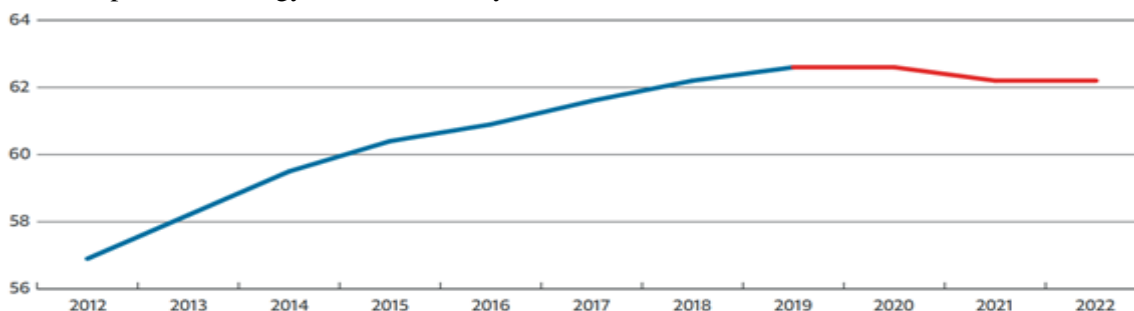


Figure 2. GFSI average overall score, global 2012-22

Source: Global Food Security Index 2022

To boost availability, farmers need inputs like finance, but also community support, extension services and strong infrastructure, both on the farm and in supply chains. In 2022 the score for the availability pillar is only 57.8, while sustainability and adaptation trail behind at 54.1. Farmers need political and social support to access markets and infrastructure, but the 2022 index shows that armed conflicts and political instability are being accompanied by a growing dependency on chronic food aid. Moreover, political upheaval and worsening climate change threaten to pull these pillars down further. This weakening of the index's overall food security score comes as the world is experiencing an unprecedented level of global shocks. These shocks are placing great pressure on food security with the UN World Food Programme (WFP) seeing the highest number of people in crisis (or worse) since it started releasing its food crisis reports six years ago. Already, 811m people face hunger, and in 2020 one in three global citizens did not have access to adequate food. Experts say that shocks such as pandemics, conflict and extreme weather events due to climate change are going to become the new norm in a global food system of 600m food producers and 8bn consumers living in a degrading environment. Even before the impacts of these unpredictable, recent shocks were being felt, longer-term stresses were adversely affecting the global food system, both directly and indirectly. The most advanced countries were not immune to these structural risks in the global food system, which include volatility in agricultural production, scarcity of natural resources, and trade and supply-chain

volatility. Looking ahead, most respondents to a recent World Economic Forum survey on global risks ranked “climate action failure” as both the top long-term threat to the world and the risk that had the potential for the most severe impacts over the next decade, with a disorderly climate transition exacerbating inequalities. To counter these stresses and shocks, and to ensure food security in the future, stakeholders will need to adopt a systemic approach and build resilience in the supply of food and in the environment upon which food is grown and distributed. Looking at the effects of covid-19 on the food supply system, the longer-term issues highlighted by the pandemic—such as the limitations of cost-efficient and streamlined supply chains and lack of agility in redistributing supplies between parts of the food sector—will have to be addressed to build resilience to future shocks. To be resilient, a food system needs to deliver desired outcomes, even when exposed to these stresses and shocks. Research shows that a resilient food system is robust (resists disruptions), is able to recover quickly after any disruption (bounces back) and re-orient (bounces forward) towards more sustainable food system outcomes. All of these responses involve reorganising and adapting to the way that the food system operates. However, given the complexity and connectedness of the food system, multiple stakeholders need to work together to overcome the different food system stressors and shocks, and to define resilience collectively. Conflict is one of the main drivers of food insecurity, as evidenced in the GFSI, which shows that armed conflict is strongly linked to lower food security scores. Conflict negatively

affects almost every aspect of the food system, from production, harvesting, processing and transport to input supply, financing, marketing and consumption. The GFSI shows that armed conflict most negatively impacts supply-chain infrastructure, which is key to moving food from farm to fork. Hunger and food insecurity were already concentrated in conflict zones even before the Ukraine invasion. The GFSI shows that 17 out of 113 nations were already at high or very high risk of conflict (Fig.3). Indeed a 2022 WFP report said that the war in Ukraine is “supercharging a three-dimensional crisis—food, energy and finance—with devastating impacts on the world’s most vulnerable people, countries and economies.” Conflict is also closely connected to climate change. Of the 25 nations most vulnerable to climate change, 14 are mired in conflict. The ability of these countries to adapt to climate change is weakened when more urgent short-term issues such as safety and daily access to food are at stake and authorities and institutions are preoccupied with security. The natural environment can also be a casualty of conflict if it is attacked or damaged by warfare, leading to water, soil or land contamination, or air pollution. Those living in conflict areas are more vulnerable to food insecurity. The GFSI shows a link between armed conflict and water pollution, with conflict impacting the quality and availability of this key resource for agriculture.

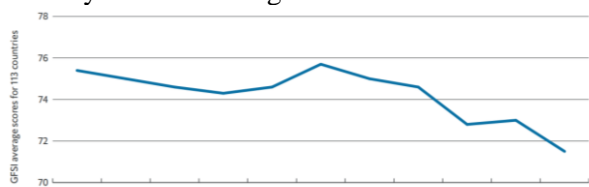


Figure 3. Risk of armed conflict, 2012-2022

Source: Global Food Security Index 2022

Food price shocks are both an effect and a determinant of conflict. Robust demand, spurred by a recovery from covid-19 contractions, was pushing up food prices even before Russia’s invasion of Ukraine, but the war has pushed prices even higher with the added pressure of supply constraints. The 2022 GFSI data show that armed conflict has had a negative effect on affordability. The costs of energy, fertiliser and commodity prices have surged since the Ukraine conflict started, triggering price increases of up to 30% for staple foods. Some areas in the US are reporting 300% increases in fertiliser costs. Higher prices for agricultural inputs such as fertiliser and fuel are being felt on the global markets through higher transport costs, logistical hurdles and disruption of supply chains, with the GFSI showing armed conflict has had a particularly

harmful effect on supply chain infrastructure. Systemic issues in the food system, including excessive commodity speculation, have also contributed to record prices. The 2022 GFSI data shows that the affordability of food has declined by 4% relative to 2019. GFSI scores measuring average food costs are poor—performance has plummeted by 11.4%, indicating soaring food prices between 2019 and 2022 (Fig.4).

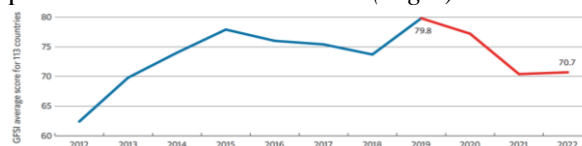


Figure 4 Change in global average food costs, 2012-2022

The world is now facing the third global food price crisis in 15 years and policymakers are keen to avoid a repeat of 2008, when food prices also reached record highs. But they face a daunting task. “Climate change, widespread poverty and conflicts are now combining to create ‘endemic and widespread’ risks to global food security,” the International Panel of Experts on Sustainable Food Systems has noted, “which means higher food prices may be the new normal unless action is taken to curb the threats.”

CONCLUSIONS

The scores in the 2022 GFSI reflect a fragile global food system that is under immense pressure and facing some of its worst outcomes ever. Food prices and hunger are hitting record highs, while affordability is plummeting as shocks like the covid-19 pandemic, armed conflict and climate change compound systemic stresses. These stresses and shocks pose risks that could get worse as threats to food security become the new normal.

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