The G20 and the G7 Must Work Together to End Hunger and Promote a Sustainable Future

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Abstract

Hunger and malnutrition are major global challenges. Since the 2007–2008 food price crisis, both the Group of Twenty (G20) countries and the Group of Seven (G7) countries have launched various programs and initiatives on food security to tackle the challenges. This brief introduces the programs and initiatives undertaken by the G20 and the G7 on food security, highlights areas where both groups can work together, and points out ways to strengthen collaboration between the G20 and the G7. The G20 agenda on food security and agriculture focuses on improving the policy environment for agricultural production and productivity, trade, technology, youth employment, food loss and waste, and resilient food systems, and the G7 has acted as a donor group and focused on social protection, women’s employment, nutrition, and responsible investment. The G20 and the G7 are particularly important international arrangements that can play a catalytic role if they join hands together. This brief
identifies six priorities for collaboration between the G20 and the G7, including embracing the food systems approach, increasing investment in science and innovation, reforming agricultural subsidies and trade, supporting the United Nations and other multinational agendas on food systems transformation, facilitating the science and policy interfaces, and ensuring accountability.

**Hunger and Malnutrition Are on the Rise**

Despite progress made over the past several decades, hunger has been on the rise since 2015. The number of people affected by hunger globally rose to as many as 828 million in 2021, an increase of about 46 million from 2020 and 150 million since the outbreak of the novel coronavirus disease (COVID-19) pandemic (FAO et al. 2022). The world is moving further away from its goal of ending hunger, food insecurity, and malnutrition in all its forms by 2030.

The short- and medium-term shocks that include extreme weather events, regional conflict, the pandemic, and high inflation have pushed more people to hunger. The long-term stresses such as climate change, natural resource degradation, the loss of biodiversity, and continued high population growth in developing countries are the root causes of chronic hunger and poverty. Failed and weak governance and policies at the global, international, and national levels exacerbated the impact of these shocks. Poor countries and poor populations in both developed and developing countries are the most vulnerable to these shocks and stressors. In the Group of Twenty (G20) countries including Brazil, Mexico, India, Indonesia, and South Africa, undernutrition (deficiency in both calories and micronutrients) and overweight and obesity have reached new heights, while the Group of Seven (G7) countries are facing an almost crisis level of overweight and obesity (FAO et al. 2022).

Since the 2007–2008 food price crisis, both the G20 and the G7 have launched various programs and initiatives on food security to tackle the challenges of hunger and malnutrition. They have played an important role in preventing a worse situation. It is safe to say that without the efforts of the G20 and the G7, there would have been more hungry people in the world. However, it is worrisome that the recent geopolitical divide among the G20 and the G7 countries has increasingly widened. Hunger has no country border, and all human beings can suffer. The G20 and the G7 are among the most influential international groups. If they can strengthen coordination and cooperation, the impact can be even greater and ending hunger could be within our reach soon.

This brief introduces various food security and agriculture programs and initiatives by the G20 and the G7, highlights areas where both groups can work together and points out ways forward to strengthen collaboration between the G20 and the G7 to accelerate progress to end hunger and malnutrition, while protecting natural resources and mitigate climate change.

**G20 Engagements on Food Security**

The G20 was created in 1999 to provide a forum for strategic economic dialogue between industrialized and developing countries in response to the economic crises of the late 1990s. The G20 economies are major actors in global food and agriculture, accounting for over 60% of all
agricultural land and 80% of world agricultural trade (European Commission n.d.). Food security was among the nine original priorities identified by the G20 in the Seoul Development Consensus in 2010, but food security was not visible in its agenda until 2011.

In 2007 and 2008, global food prices skyrocketed due to heatwaves and drought, high oil prices, the expansion of biofuel production, the depreciation of the US dollar, and food export restrictions (Headey and Fan 2010). High food prices and their volatility continued up to 2011 (FAOa n.d.). The G20 Ministers of Agriculture met for the first time and adopted a historical Action Plan on Food Price Volatility under the French presidency in 2011. One of the concrete actions was the launch of the Agricultural Market Information System (AMIS) to enhance food market transparency and policy responses for food security. Bringing together the major countries in agriculture, AMIS assesses global food supplies (mainly wheat, maize, rice, and soybeans) and provides a platform to coordinate policy action in response to market uncertainty (AMIS n.d.). Since then, AMIS has become one of the most visible initiatives of the G20 and is a useful tool to enhance the capacity of stakeholders for appropriate planning and timely decision making. But capacity building at the national level has not been actively implemented and this hinders the ability in managing the volatility of global food prices.

The G20 Mexican presidency in 2012 continued the French momentum as global food prices and volatility remained high at the time. Several initiatives, including the Tropical Agriculture Platform, the Platform for Agricultural Risk Management, the GEO Global Agriculture Monitoring, research initiatives for wheat, rice and corn, the Rapid Response Forum, and regional emergency food reserves were discussed and proposed. But very few of them were implemented and scaled-up to achieve any meaningful results. One exception is the Association of Southeast Asian Nations, the People’s Republic of China, Japan, and the Republic of Korea (ASEAN Plus Three) Emergency Rice Reserve (APTERR), which has played a critical role in ensuing rice market stability in Asia (Belesky 2014). Even during the COVID-19 pandemic and the Ukraine crisis, very few countries within ASEAN+3 imposed rice export restrictions.

MasAgro was launched by Mexico during its G20 presidency. It was designed as a model for coordinating research and development, innovation, technology transfer, as well as public-private partnerships in the agri-food sector (CIMMYT n.d.). Evidence has shown that smallholder farmers have benefited from the program (Van Loon 2020). Based on the success achieved in Mexico, African countries expressed a strong interest to learn from MasAgro through South–South cooperation. In addition, for the first time, the Business 20 group, which includes the private sector and representatives of the World Economic Forum began to be actively involved in agriculture and food security. Many multinational firms committed to improve smallholder livelihoods, consumer nutrition, and more sustainable food and agricultural production. All these laid a foundation for these firms to make concrete pledges to align their businesses to social and environmental development goals later (IFPRI 2014).

Global food prices became stable after 2012 and the G20’s agriculture agenda began to shift its focus away from food insecurity and hunger. In 2015, the G20 Turkish presidency initiated discussions on reducing food loss and waste and requested the Food and Agriculture Organization of the United Nations (FAO) and the International Food Policy Research Institute (IFPRI) to establish a Technical Platform on the Measurement and Reduction of Food Loss and Waste to collect and share the data and analyze options for countries to take action (Al-Khateeb 2021).
The G20 in 2016 in the People’s Republic of China emphasized the role of emerging technologies, particularly information and communication technology, artificial intelligence, robotics, etc., in promoting agricultural productivity and farmers’ income and proposed to set up a platform to share these technologies among member countries. Since then, almost all the G20 agriculture ministers’ meetings thereafter, especially under Japan’s presidency, reiterated the critical role of these technologies and their applications in agriculture. Indeed, they played a critical role in ensuring more resilient food supply during the COVID-19 pandemic (Fan et al. 2021; Boyacı-Gündüz et al. 2021).

It was under Germany’s leadership in 2017 and for the first time, the G20 ministers of agriculture committed to align their agriculture and food security programs to support the implementation of the 2030 Agenda for Sustainable Development as well as the United Nations Framework Convention on Climate Change and the Paris Agreement, through a declaration “Towards food and water security: Fostering sustainability, advancing innovation”. (G20 Information Center 2017)

The COVID-19 pandemic that began in early 2020 brought the global food system to its knees with more than 150 million new hungry people. Thus, it is not surprising that the G20 agriculture ministers meeting hosted virtually by Saudi Arabia very much focused on emergency and recovery from the COVID-19 pandemic. The ministers agreed that the measures in the context of the COVID-19 pandemic must be targeted, proportionate, transparent, and temporary; that they do not create unnecessary barriers to trade or disruption to global food supply chains; and are consistent with World Trade Organization (WTO) rules. This commitment from the G20 has restrained countries from using more trade restrictions when compared with the 2017–2018 food price crisis (IFPRI n.d.), with only a few countries implementing trade restrictions.

Although “food systems” were used in the Action Plan on Food Security and Sustainable Food Systems in 2015 during the Turkish presidency and resilient food systems were mentioned during the Japanese presidency in 2019, it was under the Italian presidency in 2021 where food systems were formally used and the G20 countries were urged to support the United Nations Food Systems Summit to be held in New York in September 2021. Indonesia launched an initiative to exhibit the G20’s concrete deliverables in strengthening more resilient and sustainable agriculture and food systems in the small island developing states of the Pacific.

In summary, the G20 agenda on food security and agriculture has been largely driven by host countries interest and strength, and global food prices and the hunger situation (Figure 1). They focus on improving the policy environment on issues around agricultural production and productivity, trade, technology, youth employment, food loss and waste, and more recently resilient food systems.
THE G20 AND THE G7 MUST WORK TOGETHER TO END HUNGER AND PROMOTE A SUSTAINABLE FUTURE

G7 Food Security Initiatives

Originating from an ad hoc gathering of finance ministers in 1973, the G7 has since become a forum for discussing major global issues in the areas of trade, security, economics, and climate change. The group originally comprised six countries, with Canada added in 1976 and the Russian Federation in 1997. The Russian Federation was excluded in 2014 due to its annexation of Crimea.

The group had not engaged on food security issues until 2008. In the middle of the food price crisis in 2007–2008, the G8 countries in 2008 committed over $10 billion to support food aid, nutrition interventions, and social protection activities and measures to increase agricultural output in affected countries. The most significant development was in 2009 in Italy when the “L’Aquila”...
Joint Statement on Global Food Security of the G8 was issued. The G8 countries committed $20 billion over 3 years through a coordinated, comprehensive strategy focused on sustainable agriculture development, while keeping a strong commitment to ensure adequate emergency food aid assistance. The Global Agriculture and Food Security Program was proposed as a multilateral mechanism to assist in the implementation of pledges made at L’Aquila. Its purpose is to scale-up support to help poor countries alleviate poverty, improve rural livelihoods and food security by raising agricultural productivity, linking farmers to markets, reducing risk and vulnerability, and improving nonfarm rural livelihoods, and through technical assistance (GAFSP 2009). The evaluations of the program indicate that results and impact of the program are mixed (GAFSP 2021), however.

In 2012, the G8 engaged with African partners to address the challenges and opportunities for inclusive and sustainable development under the United States’ leadership. The New Alliance for Food Security and Nutrition was formed, and Feed the Future served as the United States’ contribution to this partnership (Feed the Future n.d.). Feed the Future was created in 2010 in response to the global food price crisis of 2007–2008. The United States pledged to spend more than $1 billion a year helping select countries in Africa, Latin America, and Asia develop agricultural programs for ending hunger and poverty (USAID 2022).

In 2015, under Germany’s leadership, the G7 countries committed to lift 500 million people in developing countries out of hunger and malnutrition by 2030. The G7 Broad Food Security and Nutrition Development Approach was developed. Together, the G7 members were committed to strengthen efforts to support dynamic rural transformations, promote responsible investment and sustainable agriculture, foster multisectoral approaches to nutrition, and safeguard food security and nutrition in conflicts and crisis (G7 2015).

In 2022, under Germany’s leadership, the Global Alliance for Food Security was launched with the World Bank as a coordinated and solidarity response to the challenges ahead, particularly the Ukraine crisis. The G7 countries committed $4.5 billion for a basket of actions to mitigate the shocks. Such actions include catalyzing an agile, immediate, and coordinated response, creating solidarity lanes to help Ukraine export agricultural goods, and avoiding further hunger with country-led needs assessments, humanitarian responses, and expanded social safety nets. The G7 countries also pledge to boost sustainable agricultural production for upcoming harvests, provide regular agricultural market information, and develop a dashboard or interactive map to consolidate and present data, track financial resources, and share research.

In summary, the G7 acted as a donor group and focused on social protection, women’s employment, nutrition, and responsible investment, particularly in response to global food security crises such as the 2007–2008 food price crisis and the more recent Ukraine conflict.

Key Priorities Where the G20 and the G7 Should Work Together

The more intensive and extensive hunger and malnutrition often result from complex challenges, many of which are human made and can be solved together through human efforts. The G20 and the G7 are particularly important international arrangements that can play a catalytic role if they join hands together. Given the complex challenges that global food security is facing, the
two groups must proactively use the food systems concept and approach instead of an ad hoc, piecemeal, passive, and reactive mode to ensure that hunger is eliminated and natural resources are protected.

**Embracing Food Systems Approach**

Hunger and malnutrition occur largely due to a malfunctioning global food system. Food systems will face even more and complex challenges including frequent and intense weather events like droughts, floods, cyclones, heatwaves, plant and animal diseases and pests, zoonic diseases such as COVID-19 and avian flu, regional conflicts, and distorted global trade and markets. Food systems are the sum of actors and interactions along the food value chain, from input supply and production, to transportation, processing, retailing, wholesaling, and preparation of foods, to consumption and disposal. Massive externalities on the environment, climate change, and health are part of the food systems. Food systems also include the enabling policy environment and cultural norms around food (Fan et al. 2021).

The G20 has begun to use the food systems approach. For example, under the 2019 Japanese presidency, resilient food systems were called for, in 2021 the Italian presidency requested member countries to support the United Nations Food System Summit, and in 2022 the Indonesian presidency emphasized the food systems approach to tackle climate change and food security challenges in the Pacific island countries. But translating the concept to actual implementation including strategies, policies, technologies, trade, and investment will have to be closely monitored in future G20 events.

The G7 food security initiatives have in the past focused on aid and investment. But the impact on broader issues such as climate change, natural resources, and biodiversity, and inclusive growth must also be part of the targets in addition to traditional approach of supporting smallholders, empowering women, and engaging private sector small and medium-sized enterprises.

It is even more important for both the G20 and the G7 to use the food system approach to coordinate their efforts to maximize synergies given the limited financial resources all countries are facing.

**Investing in Innovation and Technology**

Both the G20 and the G7 have mentioned the role of new technologies in tackling food insecurity and in more recent years digital agriculture and artificial intelligence have been prioritized in the G20 agriculture and food security statements. But these technologies and innovations must come from concrete innovation programs and investment. It is still the case that many developing countries underinvest in agricultural research and development (R&D) (agricultural research intensity ratios are often less than 0.5%, compared to more than 2% in developed countries). Even within the limited R&D investment, priorities are given to staples, while investment in more nutritious and sustainable foods and novel technologies in biotechnology and digital applications is lacking. Investments in agri-food innovation must be scaled-up and targeted toward environmental sustainability, nutrition, and climate change related issues. R&D should be directed to the new trends in international agri-food science and technology, such as advanced breeding, precision agriculture and digitalization, protein alternatives, sustainable packing, and food waste reduction.
Instead of focusing public support solely on increased production, funding should be gradually increased to reach four development goals: higher yields and efficiency, nutrition and health, environmental sustainability, and climate adaptation.

While ensuring government investment in agri-food R&D, developing countries should also introduce a more diversified agri-food R&D strategy and encourage more private investment in the sector. The innovation system can be strengthened by providing incentives for private sector innovation, and by enabling private technology transfer through public–private partnerships, as well as financial support and tax incentives, especially for agri-tech start-ups. The private sector, in turn, can stimulate more rapid access to new technologies for farmers.

Reforming Agricultural Subsidies and Trade

The G20 countries account for most of the world’s agricultural subsidies. These subsidies distort global food and agricultural markets, and they contribute to more greenhouse gas (GHG) emissions and environmental degradation. These subsidies could be repurposed to support more sustainable and more healthy foods by reprioritizing R&D and value chains development. Some of the saved funds could also be used to support direct income support and rural infrastructure development. The G20 and the G7 countries should reach a consensus and bring this issue to the next round of WTO negotiations on agriculture.

The case study from the PRC shows that reforming the PRC’s agricultural subsidies to further improve green agricultural technologies, reducing food loss and waste, and shifting dietary patterns could reduce GHG emissions by 47% by 2060, compared to the 2020 level, while ensuring food security for all as the top national priority. When coupled with the carbon sequestration of land use, land-use change, and forestry, agri-food systems can contribute significantly to achieving carbon neutrality (AGFEP 2021).

Food export bans increase global food prices and exacerbate food price volatility. Despite commitments made by countries including those in the G20 and the G7, restrictions on food exports continue to occur (IFPRI Global Food Security Portal n.d.). The G7 and the G20 countries should take the lead in restraining distorting food markets and bring this issue to the next WTO ministerial meetings.

Supporting the United Nations and Other Multinational Institutions on Food Security

In 2015, more than 190 national leaders committed to achieving the 17 Sustainable Development Goals and in 2021 many ministers of agriculture also committed to transform their food systems for both human and planetary health. Similarly, most countries in the world including the G7 and the G20 countries, have signed the Paris Agreement to significantly reduce GHG emissions. To date these goals are not on track. The lack of country capacity and investments have been a bottleneck in implementing these pledges. The G7 and the G20 countries are critical in working with the United Nations (UN) side by side in supporting developing countries not only through aid and investment which is still far from adequate, but also through south–south, south–north, and tripartite collaborations to enhance the capacity of developing countries in reaching these goals.
The Ukraine crisis has been the major cause of the latest round of food price spikes. The G20 and the G7 must support the UN effort in resolving food and fertilizer exports from Ukraine and the Russian Federation. The UN Secretary General brokered a deal with Ukraine, the Russian Federation, and Turkey. Partly because of this effort, global food prices have stabilized. The G20 and the G7 countries should continue to work with the UN to facilitate food and fertilizer exports from both countries including lifting sanctions and restrictions directly and indirectly related to food and fertilizer exports.

CGIAR is a global agricultural research organization with a mission of transforming food systems for improving food security and nutrition for all and reducing environmental and carbon footprints, but it suffers severely from lack of funding. During the G20 summit in 2022, the PRC foreign affairs minister urged the G20 countries to support CGIAR. As the G7 countries are the major donors and the G20 countries are the major beneficiaries of CGIAR, funding support from both the G7 and the G20 must be scaled-up to ensure that national partners beyond the G7 and the G20 can access data, knowledge, technology, and know-how to transform food systems at all levels.

Supporting Science and Policy Interfaces

To support ending hunger and malnutrition through food systems transformation, there is a need for a neutral independent platform that can facilitate the sharing of data, knowledge, research-based evidence, and best practices across countries and stakeholders. The United Nations Food Security Summit called for a transformation of food systems that guarantees equitable access to affordable, healthy, and safe food produced in fair and environment-friendly ways. Efficient science–policy interfaces that effectively bridge the local to global span of food systems in a coordinated way will be key to this transformation. Effective science–policy interfaces need to support six key functions: forecasting and monitoring, capacity building, data collection, independent assessment, engagement, and diplomacy (Singh et al. 2022).

Ensuring Accountability

In 2012, the G7 Canadian presidency developed an accountability mechanism to ensure that the G7 countries are accountable to their commitments in the areas of agriculture and food security. It is clear that the majority of the G7 countries have not met their pledges, with Canada the only exception. For example, in 2015, the G7 committed to “lift 500 million people in developing countries out of hunger and malnutrition by 2030.” Emergency food assistance increased, but the overall spending needed to lift 500 million people from hunger and malnutrition is only an average of $12 billion per year, with the G7 contribution at $7.5 billion per year, far lower than the required investment. Thus, even before the current crisis, the G7 failed to make additional resources available to achieve the commitment (Laborde and Smaller 2022). The real test of the G7’s $4.5 billion pledge in 2022 to support the Global Alliance on Food Security is whether these ambitions are implemented.

The G20 could have even more impact as it covers more countries, and it is more relevant than the G7 in the areas of agriculture and food security. However, to date, there is no accountability mechanism to track and monitor how the G20 countries have implemented their commitments and statements. One particular disappointment is that many G20 countries, particularly the...
Russian Federation and India, continue to use food export bans during the COVID-19 pandemic and the Ukraine crisis (Glauber, Laborde, and Mamun 2023).

Conclusions

Both the G20 and the G7 have held discussions, meetings, and summits and made various statements and declarations on agriculture and food security since the 2007–2008 food price crisis. They focus on different issues with the G20 more on improving the policy environment in technology, productivity, and trade and the G7 as donors more on social protection, women’s employment, and nutrition. But they both lack serious tracking and monitoring mechanisms to ensure accountability. In addition, only until recently, a food systems approach was mentioned.

Despite the fact that all the G7 countries are also members of the G20, the lack of coordination and cooperation between the two groups is disturbing, largely due to the escalated geopolitical divide between the G7 and non-G7 countries.

One concrete proposal is to set up a joint working group on agriculture and food security using the food systems concept and approach. Thus, food systems can be transformed to achieve multiple goals including ending hunger and malnutrition, promoting low carbon and more sustainable, inclusive, and resilient food supply through coordinated efforts of the G20 and the G7. The food systems approach will also combine short-term relief with long-term development, ending hunger and malnutrition with climate mitigation, production, and productivity growth with inclusion. The following priorities could be the starting point of this working group:

1. Embrace the food systems approach
2. Increase investment in science and innovations
3. Reform agricultural subsidies and trade
4. Support the UN and other multinational agendas on food systems transformation
5. Facilitate the science and policy interfaces
6. Ensure accountability
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