



Task Force 04

TRADE AND INVESTMENT FOR SUSTAINABLE AND INCLUSIVE GROWTH

Sustainability, Food Security and the Role of Trade

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TF04



Abstract

Food security, especially in emerging countries with limited resources, is a critical global issue, worsened by climate change. Sustainable production should integrate biodiversity conservation and emissions reduction. Imbalances between food production and consumption lead to increased reliance on imports, highlighting the need for strategic food trade to stabilize global food systems. This trade offers opportunities to reform environmentally harmful production methods. For the G20, prioritizing research and development for higher food productivity with fewer resources is crucial. Facilitating international trade through improved rules benefits importing nations. Strengthening enforcement mechanisms ensures compliance and fosters transparency in global trade. Basic sustainability guidelines should be adopted to promote trade from environmentally friendly producers to countries with food self-sufficiency constraints. G20 policies should aim to transform food systems toward sustainability while ensuring global food security and equitable trade.

Keywords: sustainability, food security, climate change, trade barriers, research and development, international cooperation, trade imbalances, G20, multilateral institutions, WTO



Diagnosis of the Issue

The sustainability agenda is crucial in reshaping global trade and production processes across various supply chains. Food supply chains are particularly significant due to their direct connections to food security, natural resource conservation, and biodiversity. Numerous initiatives aim to promote more productive, efficient, and environmentally responsible processes for long-term sustainability. However, trade and "green" initiatives often lack a common language, hindering constructive dialogue. Agricultural production faces several challenges that can either impede its development and contribution to environmental sustainability and food security or provide opportunities for improvement.

In recent years, food security has evolved into a pressing geopolitical concern, particularly in emerging countries grappling with insufficient natural resources and underdeveloped markets (Vicentin Masaro, Illescas, Vásquez, & Tejeda Rodriguez, 2022). The challenge intensifies amidst the backdrop of climate change-induced extreme weather events in some regions, placing additional strain on their food access (FAO, 2023). Therefore, innovations on productivity and resilience are crucial to deal with the new challenges.

After decades of steady decline, the number of people suffering from hunger – as measured by the prevalence of undernourishment– began to slowly increase again in 2015, and since then the number of hungry people has been increasing and COVID19 potentialized this situation when the world faced supply shocks in several regions. As a result, it is estimated that between 691 and 783 million people in the world faced hunger in 2022. Current estimates show that hunger affected around 9.2 percent of the world's population in 2022 (Figure 1). These numbers highlight the enormous challenge of

achieving Zero Hunger by 2030, as set out in the UN Sustainable Development Goals (SDG) (FAO, 2023).

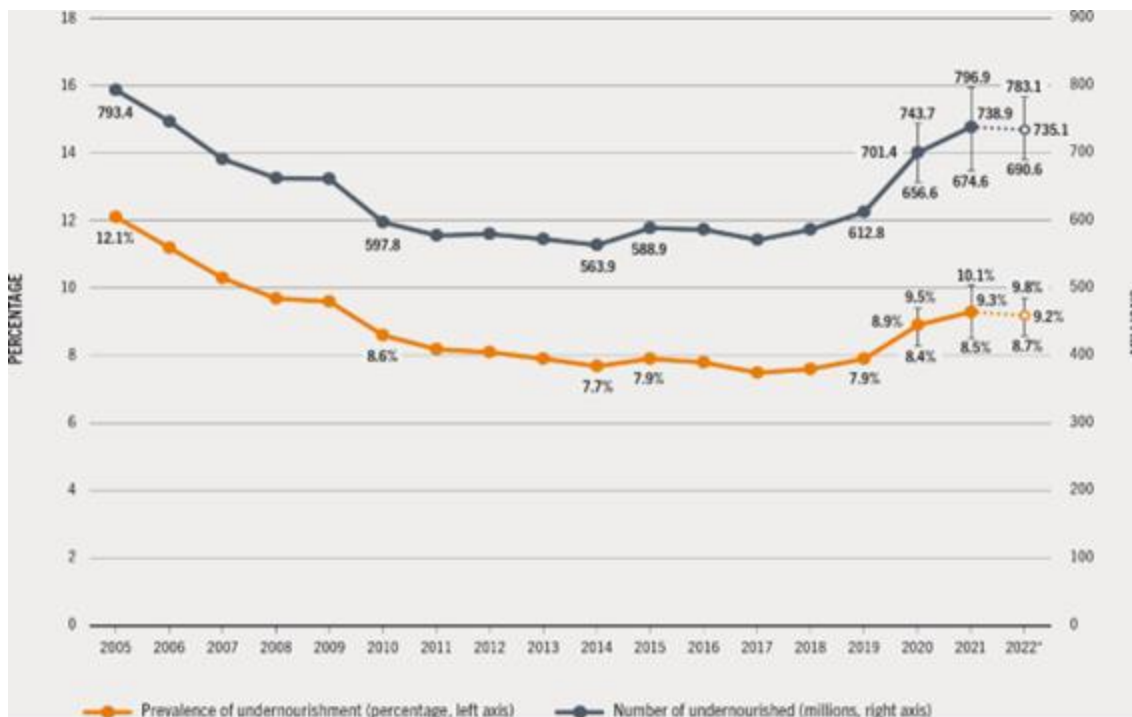


FIGURE 1. Undernourishment and number of undernourished people (FAO) (% of world population and millions of people)

Source: FAO (2023)

It is important to highlight that access to food is still limited for part of the world's population, even though there is not a real global food supply problem. Other factors, like economic and financial crises, significant disparities in income distribution, lack of credit, infrastructure problems, lack of effective social protection policies, extreme weather phenomena, and trade barriers, among others, are reasons behind the recent rise in hunger (Illescas, Regunaga, & Tejada Rodriguez, 2021).

Food systems must increase the supply of nutritious food while conserving natural resources and reducing GHG emissions per unit produced. Many regions face rising



restrictions on resource availability, use, and biodiversity conservation, necessitating a reinvention of production systems to produce more food with fewer resources in an environmentally friendly manner. These challenges vary among regions due to differing natural resource endowments and production systems. Therefore, trade is crucial for food security, allowing regions to reform production systems as needed.

Local impacts of climate change are often more severe than global impacts, making efficient international trade essential for reducing volatility by enabling countries to access the international market during domestic shortages. To ensure healthy and adequate diets, many countries will increasingly rely on imports from net-exporting nations.

In addressing these challenges, food trade becomes vital for food security and sustainability. Expanding food trade is a strategic approach to balancing global food production and consumption, reducing the risk of disruptions. Trade supports food security by balancing net-exporter and net-importer regions, ensuring the production of adequate, varied, and nutritious food at stable prices.

Trade also enhances nutrition by diversifying food baskets from various suppliers, promoting specialization, increasing productivity, and facilitating technology and innovation transfer. Additionally, it provides poor farmers access to high-value markets and strengthens value chains (Piñeiro, Valeria, et al. 2023).

Furthermore, trade is crucial for global sustainability, offering import opportunities to countries needing to reform unsustainable production systems. World trade supports transforming food systems in regions lacking necessary natural resources or employing environmentally harmful practices. Smooth, barrier-free trade ensures these countries can transition to sustainable models.

New challenges arise from these dimensions, including compliance, coordination among supply chain actors, and developing policies and institutional frameworks to promote technological advancements, build capacities, and harmonize the institutional environment between countries. Food systems and public policies must evolve to address these interconnected objectives and challenges effectively.

Relevance to G20

Trade plays a pivotal role in bolstering food security and fostering equilibrium within the global food system, serving as a catalyst for transitioning towards sustainable and environmentally friendly paradigms. However, the effectiveness of trade and associated policies in ensuring the sustainable provision of food, feed, fiber, and other biobased products hinges not solely on regulatory frameworks but also on their meticulous design, enforcement, and implementation.

New trade barriers often include arbitrary bans on imports of agricultural products, supposedly due to health risks without scientific evidence, as witnessed during the COVID-19 pandemic. Similarly, excessive tariffs on specific goods, justified by national security concerns, were evident in the trade war between the USA and China. Additionally, restrictions on exports of certain goods, under the guise of ensuring domestic supply or controlling prices, can distort global trade flows and impact food security in importing countries, as seen during the early months of the conflict in Ukraine. The implementation of the European Green Deal also proposes significant reductions in the use of fertilizers, promotion of agroecological production, and certifications of deforestation-free products, extending beyond its borders.

Some current and potential unilateral barriers to trade and agricultural protectionism represent a major limitation to global food security and the needed transformation of some production systems around the world into a more sustainable way. It is therefore important not to add new unilateral NTBs to imports based on environmental standards that have no scientific basis and could lead to unnecessary restrictions on the future development of the global production system.



On the other hand, promoting trade facilitation measures, curtailing subsidies that distort agricultural markets, and gradually eliminating tariffs on food products are paramount. Initiatives like digital certification and streamlined procedures facilitate trade processes, reducing associated costs and time. Moreover, avoiding subsidies that distort production and trade is essential, as they not only fail to bolster global food security but also destroy natural resources and affect the environment. Ultimately, reducing tariff measures on agricultural products promotes the efficient and sustainable utilization of natural resources while facilitating the movement of food from surplus to deficit regions.

Innovations are another crucial tool to increase productivity, sustainability, and resilience to the increasing impacts of weather events, which are the main global challenges to contribute to food security and reduce political disruptions in some developing countries. Therefore, G20 countries should also get involved in assigning an increased global priority, particularly within developed countries, to compromise significant public investments in R&D on food and other bioeconomy goods and services and for the funding of international cooperation through the CGIAR network.

The recent stagnation witnessed at the WTO Ministerial Conference underscores the importance of global governance, with G20 nations reaffirming their commitment to promote a smooth global trading system. The G20 must uphold this pledge, ensuring that countries do not impose unilaterally new trade barriers non based on scientific evidence and maintain transparency by peremptorily notifying relevant WTO bodies of any actions affecting the food system.

The world faces the challenge of guaranteeing food security while transforming the global food system to promote an improved performance of the global trading system (WTO plus), aimed at facilitating the aggregation of national food systems and subsystems within the framework of a revitalized multilateral agreement at the WTO.

Therefore, the proposal for the G20 leaders imply considering three dimensions: a) gradual trade liberalization for agrifood products, involving the reduction and elimination of tariff and non-tariff barriers; b) elimination of unfair competition (subsidies); and c) compliance with the Sanitary and Phytosanitary (SPS) scientific requirements mandated in the SPS Agreement. To this end, regulations must be based on scientific evidence, as it is mandated by the WTO agreement.

Recommendations

The strategic importance of two key factors for the future should be recognized by the G20 leaders: (a) Technological and organizational innovations in food and bioenergy production, and (b) Ensuring smooth international trade. The first factor is necessary to meet the demand for higher productivity while also conserving natural resources in an environmentally friendly manner. The second factor is crucial, as improved regulations are needed to reduce unnecessary costs that drive up prices for consumers in net importing countries. Additionally, facilitating trade from countries with the potential for supply growth based on environmentally friendly production systems to countries facing limitations in achieving food self-sufficiency due to constraints on natural resources or the need to reform their production systems towards more sustainable models is essential to deal with such global solutions. (Illescas, Regunaga, & Tejada Rodriguez, 2021).

(a) **Research and Development (R&D)**. Globally, there is an increasing need to produce more food and other bioeconomy products, such as biofuels and bio inputs, with fewer resources and with a heightened environmental consciousness. Increased public and private investments in R&D in food production and other bioeconomy industries must receive a higher priority than what has been assigned during the last decades. In food production and bio-energies, the relevance is bigger than in other economic sectors because the production systems are a strategic component for the solutions to the energy transition process and to food security with climate-smart strategies; and there is not a single strategy: sustainable solutions for different regions should be specific to the respective ecological and socio-economic conditions.

However, during the last decades, public investments in food systems R&D in most of the world have declined (Beintema, Nin Pratt, & Stads, 2020). This process has been

critical in many developing countries, because innovations are crucial to bring contributions to secure food availability and building local capacity, especially to small producers. Figure 2 shows that global public research intensity has declined since 2000, despite the increases in some selected large developing countries such as Brazil, China, and India. But the situation is critical for low and middle-income countries, in which food security and resilience are becoming increasingly affected by climate change events.

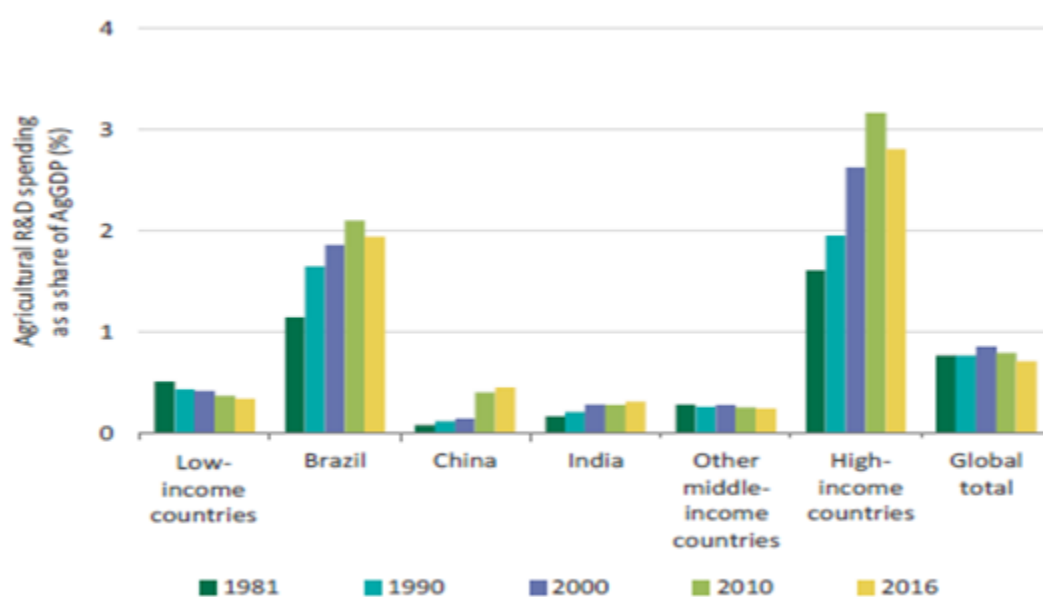


FIGURE 2. Agricultural research intensity ratios by income group, 1981–2016

Source: Beintema, Nin Pratt, & Stads, 2020.

Figure 3 illustrates the potential underinvestment in agricultural R&D across countries based on their economic size, income levels, and access to technology spillovers from other nations. The gaps between potential and actual investments indicate spending below benchmark levels achievable compared to countries with similar status. Globally, the investment gap in agricultural research was estimated to be 34% in 2016, with high-income countries averaging 25%, while low- and middle-income countries averaged 39%.

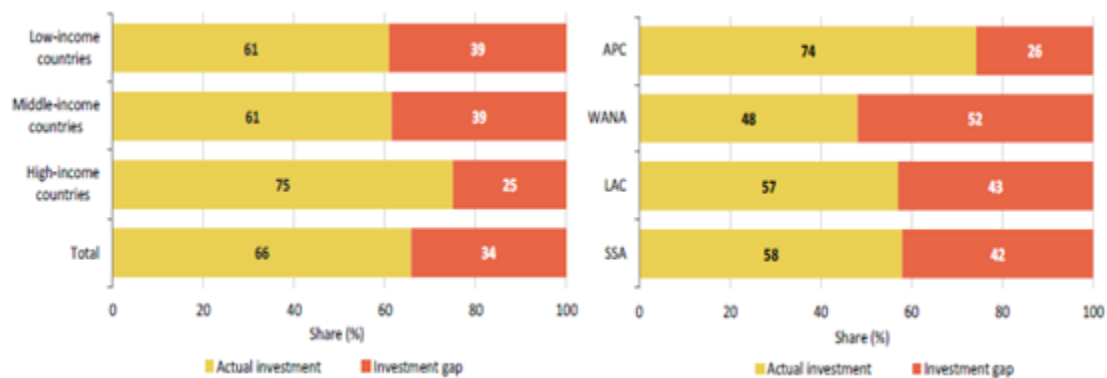


FIGURE 3. Agricultural research investment gap by income level and region, 2016

Source: Beintema, Nin Pratt, & Stads, 2020.

Notes: *Data indicate the investment gap in terms of its share of actual 2016 investment.*

APC = Asia–Pacific; LAC = Latin America and the Caribbean; SSA = Africa south of the Sahara; and WANA = West Asia and North Africa.

The gaps between different regions show that international cooperation is very relevant, particularly to contribute to finding solutions adapted for developing countries that lack sufficient financing destined for these aims. However, the budgets assigned by some of the main supporters of the international research institutions' network (CGIAR) have also declined substantially since 2014 (the centers expenditures declined 29% in constant US Dollars from 2014 to 2019), aggravating the problems in the developing world. Although the CGIAR plays an important role in agricultural research in developing countries, it accounts for only a small share of global agricultural research spending: in 2016, CGIAR spending accounted for less than 2 percent of total global agricultural research spending (Beintema and Echeverría, 2020), as can be appreciated in Figure 4

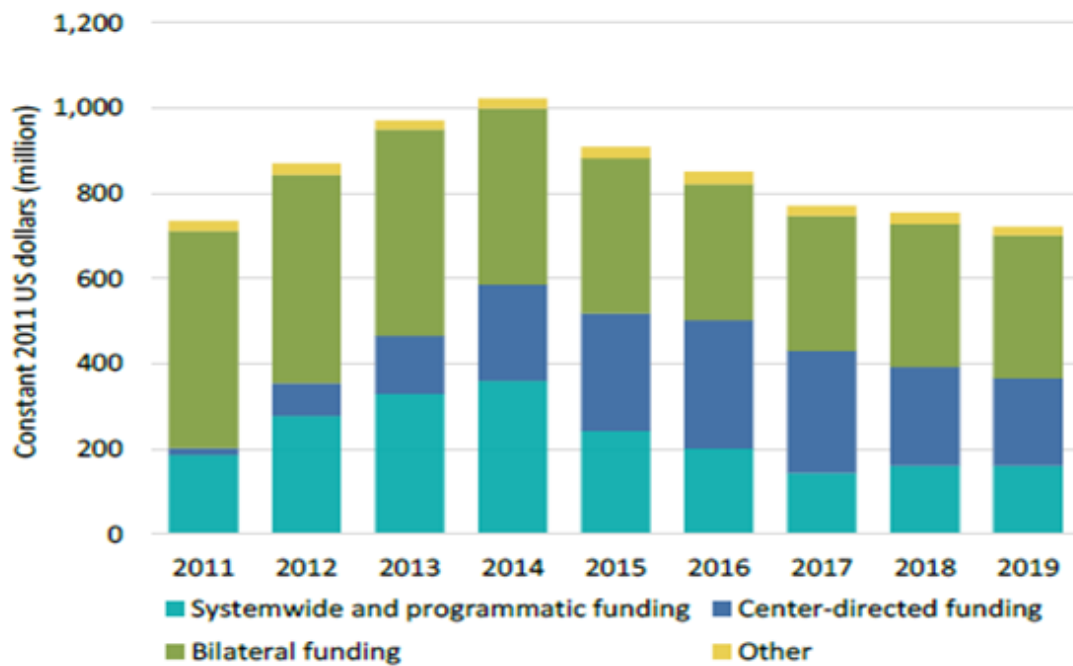


FIGURE 4. Total CGIAR funding by type, 2011–2019

Source: Nienke M. Beintema and Ruben G. Echeverría (2020)

(b) **Trade.** The global landscape faces significant imbalances between food production and consumption, with many countries expected to shift towards becoming net importers due to struggles in sustaining production growth, as can be seen in figure 5 and 6. This trend is projected to worsen in the coming years, making trade essential to meet import needs. According to OECD-FAO projections, many regions and countries lack the natural resources necessary for sustainable food production at reasonable costs. This is evident in parts of Asia and Africa due to population growth, increased food consumption, and supply constraints.

International trade becomes crucial to bridge these gaps between production and consumption, stabilize prices amid frequent weather events, and promote global natural resource efficiency and conservation. In summary, trade serves as a vital mechanism to

address geographical disparities, stabilize prices, and ensure sustainable resource management on a global scale.

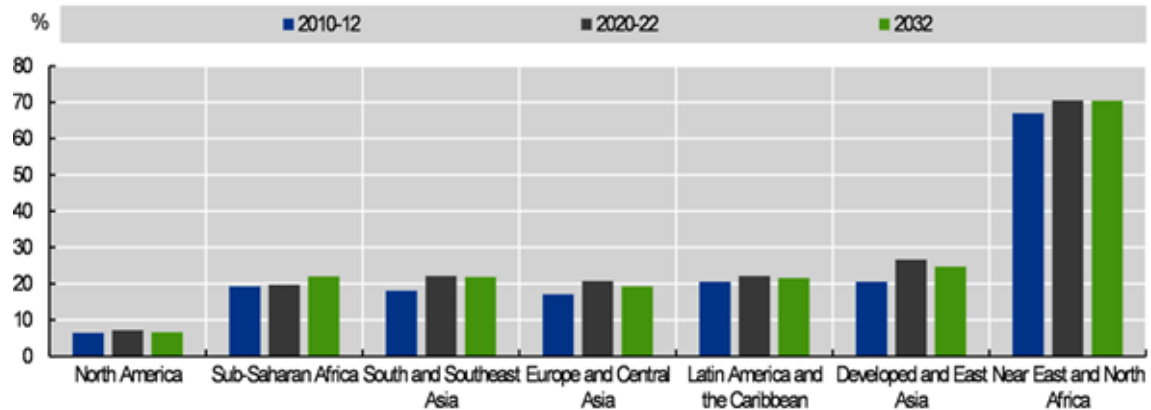


FIGURE 5. Trade as a share of total consumption by region, in calorie equivalents

Source: OECD/FAO

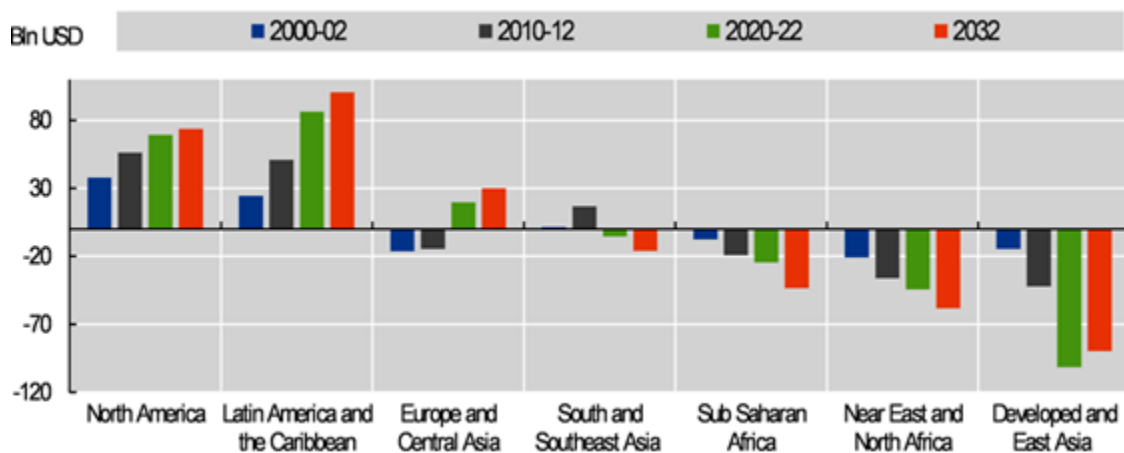


FIGURE 6. Net trade by region, in constant values

Source: OECD/FAO

International trade terms have improved during the second half of the previous Century as the result of the multilateral (GATT and WTO) and regional agreements (multiple free trade agreements and economic and trade cooperation initiatives). However, such a

process has not shown improvement in recent decades, particularly in the multilateral system; there are still relevant restrictions on access to many relevant markets, despite the proposals made by many exporting countries in the WTO.

Scenario of Outcomes

Summing up, G20 policies should strategically address four paramount considerations amidst the intricate challenges at hand:

(a) Prioritizing Research and Development (R&D) on food production alongside international cooperation is essential for fostering the technological innovations necessary to meet the escalating demand for food productivity based on production systems with low GHG emissions impact, consequently being a solution to climate change. These include precision agriculture, biotechnology, integrated pest management, agroforestry, water-efficient irrigation systems, among others. These innovations should aim to preserve natural resources and bolster resilience in agricultural systems.

(b) Streamlining international trade is critical for minimizing costs and enhancing efficiency, ultimately benefiting consumers around the world. This can be achieved through the refinement of trade rules to reduce barriers, like those mentioned above, and ensure smoother trade flows. Additionally, robust enforcement mechanisms must be established within these rules to uphold compliance standards, thereby fostering a transparent and accountable global trade environment that safeguards the interests of all participating nations.

(c) Embracing fundamental sustainability guidelines internationally agreed is imperative, coupled with the promotion of trade from environmentally responsible producers which are net exporters, considering that food systems are local and have their

specificity in production systems and their evaluations (indicators). This approach facilitates access to sustainably produced goods for nations grappling with food self-sufficiency constraints and operating within less sustainable production systems. By prioritizing sustainability in trade practices, the G20 can contribute to the long-term health of both global ecosystems and economies.

d) Strengthen WTO for solutions and resolution matters. There is a crisis in multilateral institutions and there is no benefit for global sustainability and trade in following this polarized path. Multilateral institutions can mediate multiple scenarios and balance disparities between countries toward a common goal. Going green and meeting sustainability in supply chains and achieve food security should be aligned with trade premises, not on the opposite way. However, trades rules and barriers could be commonly created based on different paradigms of production and understandings about sustainable systems. Common measures somethings are impossible to be achieved due this kind of local differences and informal institutions, leading to polarized opinions in food production systems that could lead to the collapse of food supply flux and induce to more insecurity. In this sense, global forums and WTO could be closer to these diverse sort of supply systems and enforce “green” in local paradigms looking to reduce distances in trade and avoiding unfair barriers. Enforcing their role is a must-have to balance disagreements and reconcile trade and “green” with a common language and rules.

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