



Trade as a Key Enabler for the Transformation of Food Systems

May 2021

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Abstract

In a scenario of population growth, the global food system has been able to increase production and outpace population growth, to meet a growing demand for food also associated with an increase in average per capita income, especially in developing countries. World trade, together with the increase in agricultural productivity resulting from technological innovations, have played a fundamental role contributing to increase food supply and to reduce food prices as a long-term trend.

But there are still 690 million people suffering from hunger today, and there are new challenges related to improving diets and nutritional quality of food, environmental sustainability and biodiversity, quality of life of farmers, and rural development. Food systems and public policies will have to evolve to meet these new multiple and interrelated objectives.

In this regard, global trade becomes even more important, as it contributes not only to food security, but also to environmental sustainability. A smooth flow of trade without barriers will guarantee and enable the transformation of food systems in regions that lack the necessary natural resources, or have depleted them, or are implementing intensive and environmentally unfriendly production systems.

International trade is therefore essential to compensate the geographical differences regarding production vs. consumption; to serve as a stabilizer of international prices in the face of frequent weather events that affect regions around the world in different ways; and to promote natural resource efficiency and conservation from a global perspective.



A systemic vision of food system transformation processes such as the one proposed in the UNFSS implies maintaining a close public-private dialogue among all relevant stakeholders, from producers, to raw material, commercial and logistics services suppliers, to consumers and regulators. It is they who will have to lead the transformations and are best suited to participate from the beginning in the entire Summit process, including defining its scope and priorities. This process cannot be led by just a few links in the chains, and even less by external agents not actively involved in food systems. The absence of these stakeholders in the current institutional structure of the Summit, such as the Advisory Committee and the Action Tracks, does not seem logical.

The American continent has developed an efficient, dynamic and environmentally friendly production system, which makes it the largest net exporter of food globally. Food production in Latin America can grow significantly in the coming decades, on the basis of sustainable production systems with very efficient carbon balances.

The effectiveness of trade and related policies to support the transformation of global food systems in the long term depends not only on the type of policies used, but also on their design, enforcement and implementation. Some of the proposed measures are: complying with the relevant WTO provisions; not using NTMs in a way that impedes normal trade flows; adopting science-based measures; promoting transparency through notifications to the WTO; promoting the use of certifications developed in accordance with real facts in each region; adopting trade facilitation measures, avoiding the use of production support measures that generate distorting effects on trade; and promoting the reduction and progressive elimination of restrictive measures on import and export of food products, in order to facilitate the "matching" of supply and demand with low levels of uncertainty.



Contents

Abstract	1
Introduction	4
Food Systems and Sustainable Development Goals.	4
Freer trade and active involvement of stakeholders to facilitate global food systems transformation.....	7
The role of MERCOSUR and the Americas as net food exporters	10
Some proposals for action on trade issues to be integrated into the UNFSS process.....	12
Bibliography.....	14



Introduction

In 1950, five years after the creation of the UN, the world population was estimated at 2.6 billion people. By 1987 it had reached 5 billion and, in 1999, 6 billion. In 2011, the world population was estimated to be 7 billion people. This is expected to increase by 2 billion people in the next 30 years, from the current 7.7 billion to 9.7 billion in 2050, and may reach a peak of about 11 billion by 2100 (UN, 2021).

In such scenario, the global food system has been able to increase production and outpace population increase, to meet a growing demand for food also associated with increases in average per capita income, especially in developing countries.

This remarkable increase in food production has been possible due to a significant growth in productivity, especially in the most relevant crops in world trade, as a result of technological innovations coming from the global public-private R&D system.

Food systems have undergone major transformations during the past 70 years, as a result of improved crop production and management techniques; developments in genetics and agrochemicals, with strategic contributions from biotechnology and genomics, microbiology and other basic sciences; ICTs; and changes in transportation, packaging and processing of primary products.

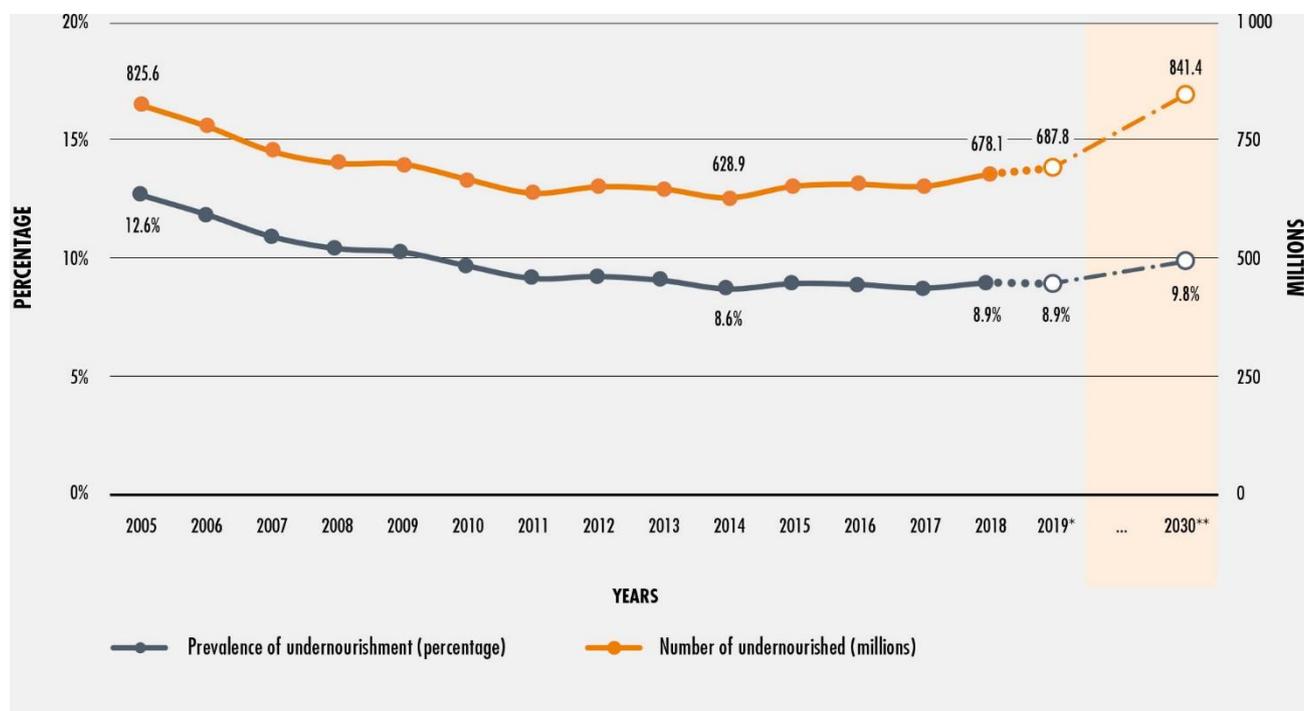
This evolution of food systems was favored by improved global trade regulations, providing for more open markets with rules agreed on by multiple parties. Today, international trade plays an important role in food systems, as it contributes with approximately 20% of the food consumed in the world (OECD/FAO, 2020).

Food Systems and Sustainable Development Goals.

After decades of steady decline, the number of people who suffer from hunger – as measured by the prevalence of undernourishment – began to slowly increase again in 2015, remaining virtually unchanged in recent years, and current estimates show that a little less than 9% of the world's population suffers hunger (Figure 1). In recent years the number of hungry people has been slowly increasing. As a result, around 690 million people in the world remain hungry today, which highlights the enormous challenge of achieving Zero Hunger by 2030, as set out in the UN Sustainable Development Goals (SDG) (FAO, 2020).

Figure 1. Undernourishment and number of undernourished people (FAO)

(% of world population and millions of people)



NOTES: Projected values in the figure are illustrated by dotted lines and empty circles. The shaded area represents projections for the longer period from 2019 to the 2030 target year. The entire series was carefully revised to reflect new information made available since the publication of the last edition of the report; it replaces all series published previously.

* See Box 2 for a description of the projection method. ** Projections to 2030 do not consider the potential impact of the COVID-19 pandemic.

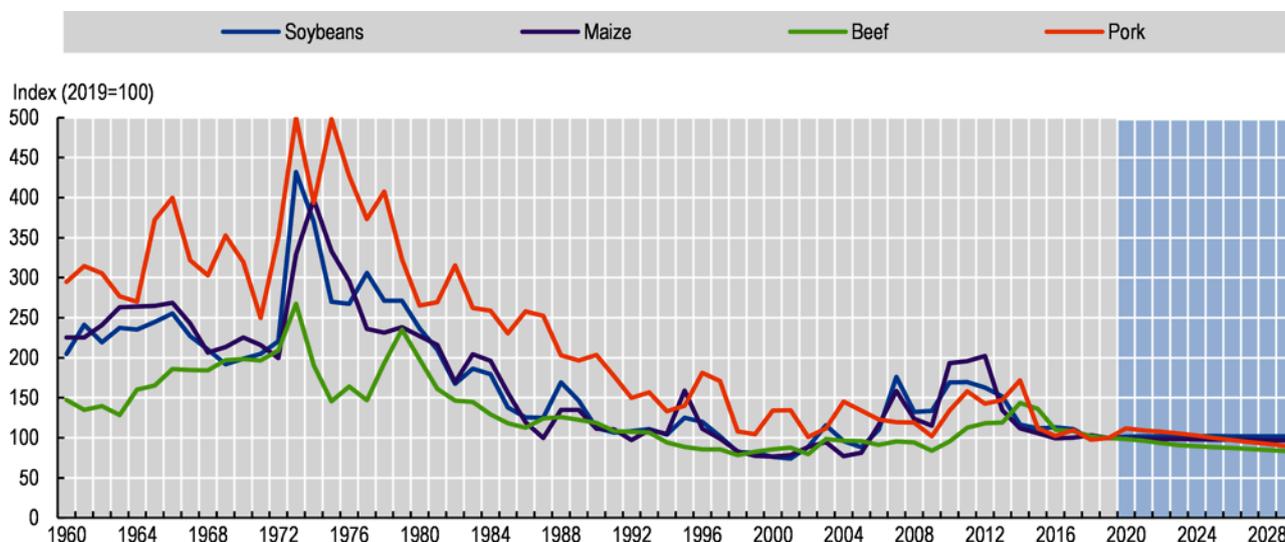
SOURCE: FAO.

Although access to food is still limited for part of the world's population, this is not attributable to a lack of global supply, but to multiple factors. Economic and financial crises, significant disparity in income distribution, lack of credit, infrastructure problems, lack of effective social protection policies, extreme weather phenomena, among others, are reasons behind the recent rise in hunger.

The improved performance and growth of world trade and the increased productivity of agriculture over the last 70 years resulted in a more efficient use of natural resources available worldwide. As a result, world supply increased and food prices declined significantly as a long-term trend, as shown in **Figure 2**. This not only caused an increase in food supply for the growing world population but also resulted in lower food prices in constant currency¹. Therefore, it does not seem plausible to say that food systems have failed and that it is therefore necessary to propose disruptive transformations, as pointed out in some preliminary documents prepared for the UN Food Systems Summit (UNFSS).

¹ Although shortcomings persist, the number of food insecure people has decreased and diets have become significantly more globalized and diversified in many regions of the world.

Figure 2. Long-term evolution of real agricultural prices



Note: Historical data for soybeans, maize and beef from World Bank, "World Commodity Price Data" (1960-1989). Historical data for pork from USDA QuickStats (1960-1989). Source: OECD/FAO (2020), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), <http://dx.doi.org/10.1787/agr-outl-data-en>.

The concepts mentioned above point out the fact that, as per capita income increases in developing countries lifted hundreds of millions of people out of poverty and led to significant growth in food demand globally, food systems responded positively by increasing the supply of high-protein and calorie products beneficial to human health. This resulted in substantial increases in average life expectancy of the world population during that period².

The scope of world food security has been evolving since the concept was first coined in the 1970s at the World Food Conference (Rome, 1974). It now refers not only to access to food, but also includes other objectives such as improving diets and nutritional quality.

Furthermore, the growing restrictions on availability, use and conservation of natural resources and biodiversity, as well as the impacts of production and trade on climate change, now raise the need to produce more food with fewer resources and in a more environmentally friendly manner. These new dimensions also pose new challenges for food systems, involving all participants in food chains, from raw material and technology suppliers to consumers, as well as policies and institutional frameworks that regulate technological developments, food production and trade.

To this purpose, food systems and public policies should evolve to meet these new multiple and interrelated objectives. The strategic importance of two fundamental factors in the future must be

² Global average life expectancy increased by 24 years between 1950 and 2020, from 46 years to about 72 years. It should be noted, however, that this average conceals important differences between regions and countries, based on their income levels and economic and social development.



taken into account: (a) technological innovations required to meet the demand for higher productivity preserving natural resources and in an environmentally friendly manner; and (b) smooth international trade flows, with improved rules of the game to reduce unnecessary costs that increase prices to consumers in net importing countries, and to enable trade flows from countries with the greatest potential for supply growth based on environmentally friendly production systems to countries with the greatest limitations in achieving food self-sufficiency.

There are currently significant imbalances between food production and consumption in many countries and regions and, as projected by specialized agencies, these will tend to grow in the coming years, with many countries finding it difficult to sustain their production growth rate, and becoming net importers or increasing their current import needs.

Also, local impacts of climate change tend to be more frequent and more severe than global impacts. For this reason, efficient performance of international trade also plays an important role in reducing volatility, by allowing countries to resource to the international market in the event of occasional domestic shortages. In this sense, improvements in infrastructure (transport and storage) and transparency in supply, demand, stocks and prices can contribute to improving trade performance (OECD, 2021).

To ensure the supply of healthy and adequate diets for their populations, many countries will have to rely increasingly on imports from net exporting countries. And this is why improving trade performance is a key component of the transformations that must be promoted for the future evolution of food systems. An adequate food system transformation strategy cannot be conceived without including trade performance as an essential component of food systems.

Freer trade and active involvement of stakeholders to facilitate global food systems transformation

Freer trade is strategic to facilitate global food systems transformation and relevant stakeholders must be actively involved to enhance this process.

The UNFSS underlines the need to move towards healthier, more sustainable and equitable food systems that enable the achievement of the 17 SDGs. It is therefore expected that global trade rules are assigned the highest priority during the Summit process, given the multiple roles of trade in food production and consumption.

Trade should contribute to food security, and allow the world food system to achieve the necessary regional balances between net exporter and net importer regions, thus enabling the system to



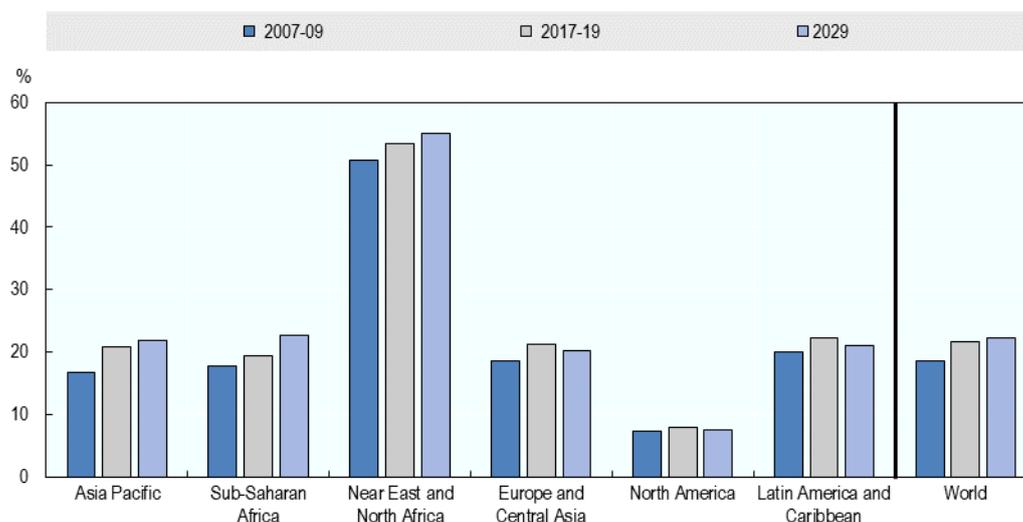
produce the necessary amount, variety and nutritional quality of food to meet world demand at reasonable and stable prices over time.

Trade also contributes to improving nutrition through the diversification of food baskets produced by different kinds of suppliers. It facilitates the specialization of producers and thus increases productivity and sustainability, streamlining technology and innovation transfer. In some cases, smooth trade helps to give poor farmers access to high-value markets, and helps to make value chains more robust.

World trade should contribute to the transformation of food systems in regions that lack the necessary natural resources, or have depleted them, or are implementing intensive and environmentally unfriendly production systems. In addition, trade transparency and fluidity should facilitate compensation of short-term supply and consumption imbalances in some regions resulting from the increasingly frequent climate variations. Smooth and barrier-free trade, which has to be further improved as part of the food system transformation process, will provide guarantees to countries that must transform their systems towards more sustainable and environmentally friendly models.

Figure 2 shows that at present and over the next decade, many regions and countries lack the natural resources needed to produce, in an environmentally sustainable manner and at reasonable costs, the amount of food required to meet the consumption needs projected for the future. This is the case in some Asian and Eastern countries, due to population growth and increased per capita food consumption resulting from higher incomes. The same happens in some African countries, which face supply constraints due to various logistical, cultural and technological restrictions. In sum, international trade is therefore essential to compensate for geographical differences between production and consumption; to serve as a stabilizer of international prices in the face of frequent weather events that affect regions around the world in different ways; and to promote from a global perspective natural resource efficiency and conservation.

Figure 3. Imports as a percentage of total calories availability for selected regions.



Source: OECD/FAO (2020), “OECD-FAO Agricultural Outlook”, OECD Agriculture statistics (database), <http://dx.doi.org/10.1787/agr-outl-data-en>.

In this regard, there is a growing profusion of literature on the impact of trade on hidden flows of water and land. These resources, embedded in traded commodities, can be used to mitigate regional shortages. By purchasing food from regions with greater resource availability and sustainability, land and water are made available to be used for other purposes in countries facing renewable natural resource constraints. The unequal regional distribution of resources underlines the important role of trade in making better use of these resources globally. In other words, the global food system can become more productive and sustainable through trade, as it facilitates the flow of production from countries with higher productivity and lower carbon footprints to those with lower productivity and poorer environmental performance.

It should be noted that international trade terms have improved as a result of multilateral (GATT and WTO) and regional agreements (multiple free trade agreements and economic and trade cooperation initiatives). However, there are still restrictions on access to some markets, despite the efforts made by exporting countries in the World Trade Organization (WTO). Therefore, the challenge of transforming the global food system must promote a better performance of the global trading system (WTO plus), to facilitate the aggregation of national food systems and sub-systems within the framework of current or future multilateral agreements at the WTO. This implies considering three dimensions: a) gradual trade liberalization for agrifood products; b) elimination of unfair competition (subsidies); and c) compliance with Sanitary and Phytosanitary (SPS) requirements. In this regard, environmental, labor, sanitary and phytosanitary, food safety and public health regulations shall not be applied in a way that they become non-tariff barriers (NTBs) to trade. To this end, regulations must be based on scientific evidence.



Some current and potential barriers to trade and agricultural protectionism represent a major limitation to global food security and to the transformation of production systems that the Food Systems Summit seeks to promote. It is therefore important not to add new NTBs to imports based on environmental standards that have no scientific basis and could lead to unnecessary restrictions on the future development of production systems.

There are numerous measures that in the short term can contribute to the food security goals in specific countries, such as subsidies, export restrictions and public procurement, among others. However, while such policies can help achieve short-term national objectives of increasing food availability and reducing food prices, the potential negative impacts of these policies in the medium and long term, both nationally and globally, can significantly undermine any short-term gains. Therefore, it is understood that the food system improvement proposed at the Summit should include impact analysis of policies related to the achievement of food security objectives with a short-chain approach without considering the benefits of global trade-offs. In identifying optimal policy interventions, the focus should be on long-term dynamics, which are those that enable sustainable development in most countries (FAO, 2016).

It should also be noted that trade will promote, as well, regional development and higher incomes for producers in developing countries, thus meeting the triple challenge set by the OECD: a) ensuring food security and nutrition; b) providing livelihoods for farmers and others in the food chain and promoting rural development; and c) ensuring environmental sustainability (OECD, 2021).

The success or failure in overcoming the challenges outlined above will depend, to a large extent, on the active participation of the main players in each of the agrifood chains. A systemic vision of the food system transformation processes such as the one proposed here implies maintaining a close public-private dialogue among all relevant stakeholders, from producers, raw material, commercial and logistics services suppliers, to consumers and regulators. It is they who will have to lead the transformations and are best suited to participate from the beginning in the entire Summit process, including defining its scope and priorities. This process cannot be led by just a few links in the chains, and even less by external agents not actively involved in food systems. The total absence of the mentioned stakeholders in the current institutional structure of the Summit, such as the Advisory Committee and the Action Tracks, does not seem logical.

The role of MERCOSUR and the Americas as net food exporters

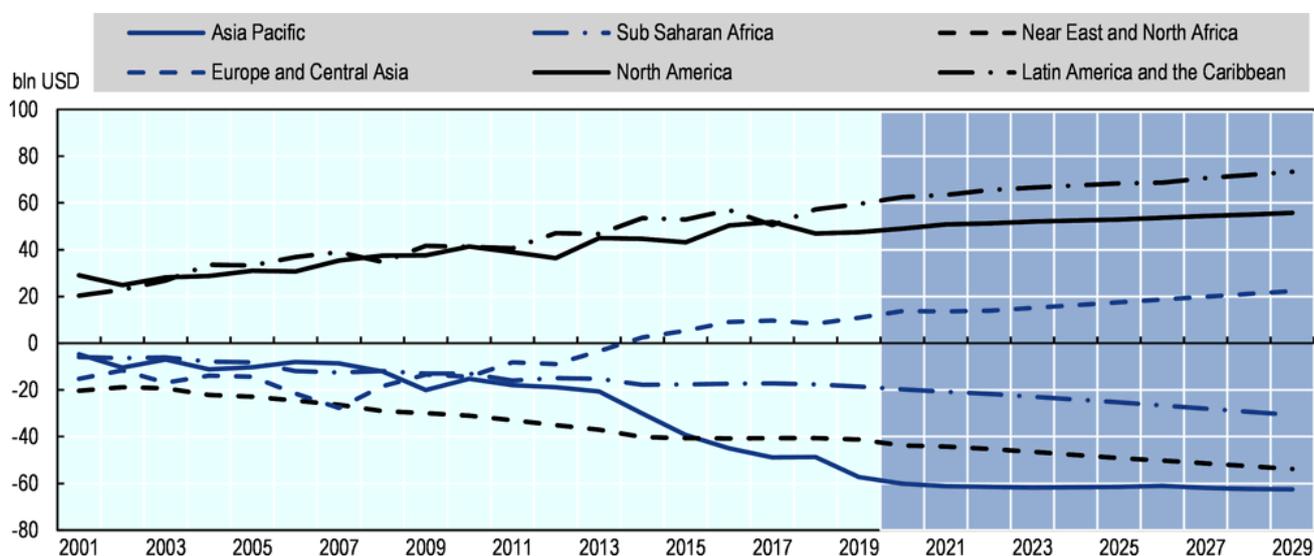
The American continent has developed an efficient, dynamic and environmentally friendly production system, which makes it the largest net exporter of food globally. In the case of Latin America and the Caribbean (LAC), exports of agrifood products account for 14% of the world total, so they currently



play a leading role in global food security and nutrition³. Over the last 20 years, agrifood trade surplus in the LAC region has grown significantly, from US\$35 billion in 2000 to almost US\$140 billion in 2019⁴. The region also includes some of the main net food exporting countries, namely Argentina, Brazil, Chile, Costa Rica, Ecuador, Paraguay and Uruguay, as per the index of per capita net food exports⁵.

Food production in Latin America can grow significantly in the coming decades, on the basis of environmentally friendly systems with very efficient carbon balances (in terms of emissions and carbon sequestration). For more than three decades, agriculture and livestock farming in the region have been moving towards more productive and sustainable forms of production, with crop management systems that have reduced the use of fossil fuels; and in livestock farming capturing emissions through extensive grazing systems, as well as programs for reforestation of native forests and establishment of forests for timber and cellulose production, among others. The application of modern technology allows not only using resources that remained unused so far (such as biomass, residues and other organic waste), but also reduces the negative impacts of climate change on the environment, by the introduction of minimum tillage practices, efficient use of water, seeds resistant to pests and diseases, integrated pest management and, more recently, precision agriculture.

Figure 4. Agricultural trade balances by region, in constant value.



Note: Net trade (exports minus imports) of commodities covered in the *OECD-FAO Agricultural Outlook*, measured at constant 2004-06 USD.

³ IICA (2021). International trade in agricultural products from Latin America and the Caribbean and the transformation of food systems. IICA's contribution to the CSAA 2021.

⁴ As reported by FAO (2020), agrifood exports increased from US\$ 45 billion to USD 193 billion in that period, while imports grew from US\$ 20 billion to USD 55 billion.

⁵ Arias, J. Chavarría, H and Salazar, E, 2020.



Source: OECD/FAO (2020), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), <http://dx.doi.org/10.1787/agr-outl-data-en>.

Taking into account the current and future crucial importance of MERCOSUR and the Western Hemisphere in global food security in net exports of food, with food systems that three decades ago started transformation processes towards conservation practices with high productivity but low environmental impact ("sustainable intensification"), it is understood that its members should have an active participation in the Summit process and the subsequent follow-up. This also applies globally to the private sector as a whole, as has been suggested in the above section.

Some proposals for action on trade issues to be integrated into the UNFSS process

The effectiveness of trade and related policies to support the transformation of food systems in the long term depends not only on the type of policies used, but also on their design, enforcement and implementation. Here follows a set of trade-related preliminary topics and action proposals that can be integrated into the UNFSS process.

- **WTO regulations.** The regulations or proposals adopted at the UNFSS must comply with the relevant WTO provisions.
- **Non-Tariff Barriers (NTBs).** NTBs should not be applied in a way that impede normal trade flows. The rise in the number of this kind of measures, which can often become unjustified barriers to trade, affects global food security and sustainability of production systems. After the COVID19 pandemic, consumers are expected to be more concerned about SPS issues, in addition to the growing interest in sustainability and climate change. The commitment of each country to ensure that such measures are based on scientific evidence must be reinforced.
- **Transparency.** Measures that affect the food system must be notified to the relevant WTO bodies to give greater predictability to trade. Stability, transparency and consistent policy interventions (rather than ad-hoc changes driven by short-term considerations) must be ensured, in order to manage expectations and build trust with all players in the system.
- **Certification.** In order to provide adequate information to consumers about the way in which sustainable production is carried out, the implementation of certification adapted to the needs of each specific region should be promoted. In view of the proliferation of schemes and the growing importance of the private sector as developer of this type of standards,



public-private partnership is essential to allow greater coordination, even at the international level.

- **Trade Facilitation.** Adopting trade facilitation measures, including ratification of the relevant WTO Agreement, and promoting the reduction of unnecessary bureaucracies that hinder trade flows. Initiatives such as the Single Window for Foreign Trade, Digital Certification of Origin or electronic phytosanitary certification (e-Phyto) have served to streamline procedures and reduce the time and costs associated with foreign trade.
- **Subsidies.** Agricultural policies around the world tend to use very distorting measures, creating incentives for overproduction and excessive use of inputs in some countries. These policies are ineffective ways of improving global food security, and often have negative effects on the environment. Production support measures that generate distorting effects on trade should be avoided. As provided for by WTO regulations, emergency measures should not be used as a disguised form of illegal aid.
- **Tariff measures.** Promote the reduction and progressive elimination of restrictive measures on import and export of food products, to facilitate the “matching” of supply and demand with low levels of uncertainty. Trade not only allows food to flow from regions of surplus to regions of deficit, but will contribute to a more efficient and sustainable use of the world's natural resources. However, import and export duties on agricultural products create distortions that limit this role of international agricultural trade.



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