



Business at OECD (BIAC) Peace for Food Campaign Synthesis report

*Contribution to the 2022 OECD Meeting of
Agriculture Ministers*

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Working together, the public and private sectors can build secure, sustainable, productive, and resilient global food systems

The theme of the 2022 OECD Meeting of Agriculture Ministers (Ministerial), *Building Sustainable Agriculture and Food systems in a Changing Environment: Shared Challenges, Transformative Solutions*, is well chosen. It has become urgent to move from discussion to action if global food systems are to feed the world, sustain the environment, address climate change, and enable livelihoods across the food supply chain. This Ministerial can articulate transformative solutions and the private sector (farmers and agribusinesses) can contribute both to identifying the most important priorities and to acting on them.

The *Business at OECD* (BIAC) Food & Agriculture Committee has launched its Peace for Food campaign and is working with farm groups and with agribusinesses that operate upstream and downstream in the food supply chain to identify actions that the private sector can take on its own, in partnership with governments and other stakeholders, and in response to specific policy changes. In addition to participation in numerous public discussions over the past year, two stakeholder dialogues have been organized in recent months.

The first dialogue took place on July 13 and addressed the immediate priority to bring stability to agriculture and food markets and to help support displaced, low income, and other vulnerable populations. There was a particular focus on food price inflation. The second dialogue took place on October 5 2022 and addressed medium-term priorities for enabling sustainable productivity growth and transforming global food systems. This solution-focused dialogue explored actions that could be taken by the private and public sectors.

This report synthesizes the key messages from the dialogue sessions for consideration by Agriculture Meetings for their meeting at the OECD on 3-4 November

Challenges confronting global food systems

Even prior to the two most recent global shocks – COVID-19 and Russia's invasion of Ukraine – international attention had been focusing on the challenges facing global food systems.

Research and analysis at the OECD and elsewhere described a triple challenge: ensuring food security and nutrition for a growing population, enabling livelihoods across the food chain, and sustaining the environment in a context of climate change. While food systems today provide more safe, nutritious, and affordable food per capita than ever before, there is still a great deal to do to meet the triple challenge. Over 800 million people are undernourished, and a higher number are overweight. Agriculture draws heavily on the world's natural resources while agriculture, forestry, and other land use change are major contributors to greenhouse gas (GHG) emissions, with most estimates ranging between one-quarter and one-third of global GHG emissions. Many small farmers face growing pressure on their already low household incomes, and in less developed economies the sector can account for as much as 50% of total employment.

In 2020 COVID-19 brought to light additional risks to global food systems, including vulnerabilities in domestic as well as international food supply chains, and necessitated rapid responses from governments as well as farm input suppliers, farmers, food processors, distributors, retailers, and food service operators. While the worst impacts of the pandemic were largely mitigated quite quickly, vulnerable populations and regions suffered disproportionately, and millions of additional people were pushed deeper into poverty and were not able to feed their families adequately.

This was the context in which various national, regional, and international meetings explored ways to improve the performance of global food systems, culminating in 2021 with the UN Food Systems Summit. Summit participants recognized that transformational changes were urgently needed to meet the triple challenge, and a diversity of follow-up actions that engage local, national, and global communities of practice and stakeholders were launched.

Russia's invasion of Ukraine earlier this year has created a global security and humanitarian crisis and introduced further risks to global food systems. Disruptions to food supplies from the Black Sea area hit vulnerable populations the hardest – displaced Ukrainian families, grain importers in the Middle East and North Africa reliant on Ukraine and Russian exports, and all low-income households unable to cope with increased food price inflation. Fertilizer and energy markets have also been significantly affected, with lower and more uncertain supplies and consequently higher prices. By mid-September almost 5 million refugees left Ukraine, primarily for neighboring countries in the EU. Increased migration can also be expected from other regions of the world experiencing an increase in food insecurity as families see no other alternative to escaping hunger.

Responding to immediate food needs while building a more secure, sustainable, productive, and resilient food future must be amongst the top priorities on the international political agenda.

Immediate international priorities

The immediate priority is to avoid any further increase in hunger and undernourishment and to provide humanitarian aid on the scale needed today.

Governments, multilateral institutions, and agribusinesses should actively support the UN World Food Programme and its hunger relief efforts. Multilateral institutions and donors should monitor the debt burden and financial liquidity constraints of food-importing and low-income countries and be prepared to act quickly, as necessary (see, for example, the new IMF Food Shock Window).

Governments and international organizations should work closely with the Agriculture Market Information System (AMIS) and its Rapid Response Forum, created by G20 governments for exactly such crisis situations. International dialogue on supply and demand developments and on possible crisis responses helps to ensure coherent policy decisions and to avoid making things worse. Agribusiness traders should be called upon, as needed, to share information on available stocks and supply chain performance to inform AMIS discussions.

It is particularly important that governments avoid unnecessarily restricting exports, hoarding stocks, and 'panic buying'. Available evidence suggests a significant increase in new restrictions on food and agriculture exports recently and these measures should be removed as quickly as possible. The short-term effect is to drive global food prices higher, and the longer-term effect is to reduce confidence in trade and international markets as a reliable source of food supply.

While food prices had already been trending upwards, Russia's invasion of Ukraine had an immediate additional impact, pushing commodity prices up even more and increasing future uncertainty for food trade. Farm production costs have also been pushed higher, with prices for fertilizers and energy increasing significantly.

Keeping agriculture trade corridors in the Black Sea area open so that food and essential inputs to food production can move freely should be prioritized. As of August, grain transported via the EU Solidarity Lanes totaled 2.6 million tons, while the resumption in July of shipments from Black Sea ports has allowed over 4 million tons of grain to be exported. These are very welcome developments, contributing in September to the sixth consecutive monthly decline in the FAO's Food Price Index; still, year-over-year food prices remain 7.2% higher.

Agribusinesses are contributing funding to the WFP, financial support to their Ukraine employees, and logistical support to humanitarian NGOs. Working alongside governments, the agribusiness community is ready to do more to complement public sector emergency responses.

At the same time, it is crucial not to lose sight of the longstanding challenges to better performing global food systems that pre-date Russia's invasion of Ukraine and the COVID-19 pandemic.

Medium-term international priorities

Feeding the world, sustaining the environment, addressing climate change, and enabling livelihoods require new, transformative solutions that balance the sector's global productivity potential and its environmental footprint across countries at different stages of development. Meeting the triple challenge requires *globally sustainable productivity growth*. It also requires new business strategies and modern agriculture policies that can *transform global food systems*.

There are important trade-offs in pursuing these multiple objectives and not all governments and societies have the same needs and preferences. Many advanced and emerging economies provide high levels of often production and trade distorting support to agriculture. OECD estimates that support to producers during 2019-2021 averaged USD 611 billion annually, while just USD 26 billion was allocated to funding agriculture innovation. In many less developed economies with limited fiscal capacity the sector suffers from a lack of public (and private) investment. According to WTO data, over 80% of domestic support to agriculture is provided by just 10 of its 164 members.

Policies matter, but so do business strategies. The private sector has an essential role to play in addressing the triple challenge, and both the public and private sectors can do much more, more effectively, by working better together. The following illustrates opportunities for public-private collaboration that are both feasible now and offer significant long-term potential benefit.

Enabling globally sustainable productivity growth

Increasing sustainable productivity growth globally is both more urgent and more difficult today due to the accumulated impacts of production and land use change on climate, land, water, and biodiversity, as well as the impacts of climate change on agriculture. Bringing new natural resources into production risks to compound the very problem that needs to be solved – sustaining the resource base while mitigating climate impacts. Producing less is clearly not an option, producing more with less is the only viable pathway forward. OECD-FAO analysis suggests that to feed the growing population it will be necessary to triple current agricultural productivity growth rates, while still addressing climate change. This is a herculean task that will require both using available science and technology more effectively and creating new knowledge.

The Syngenta Foundation for Sustainable Agriculture has been working with the Africa Rice Center and CGIAR, with assistance from Japan, to scale up an Android app, RiceAdvice, to support on-farm decision-making aimed at improving nutrition use, yields, and profits while coping with climate risks. On average, RiceAdvice users in Mali have increased yields by 0.9tons/ha and incomes by USD 320/ha, and the app has now been rolled out to 14 other countries in Africa.

Bayer is collaborating with the Institute of Tropical Agriculture and CGIAR to build an improved crop breeding system for six critical African crops: cassava, maize, cowpea, banana, yam, and soybean. The goal is to improve productivity on the 60 million hectares of these crops currently farmed by 100 million smallholders in sub-Saharan Africa.

BASF, in partnership with Bashaier, an agricultural NGO, has introduced a digital solution for smallholder tomato farmers in Egypt. Ardena is a free disease alert service that sends messages directly to farmers' mobile phones to support decision-making specific to their fields to achieve higher crop yield and quality. So far over 7,000 smallholders, almost a quarter of the smallholder tomato farmers in Egypt, and 1,800 retailers have benefited from this service.

FMC is partnering with India's premier agricultural university to train women in beekeeping as a source of sustainable family income. This three-year project, MadhuShakti, brings together honeybees, rural women, and sustainable agriculture to improve smallholder farmers' incomes and living conditions. In another project, FMC collaborated with South Asia Biotech Consortium (SABC) to build capacity on Indian farms against the invasive Fall Armyworm (FAW). This project built local knowledge based on global scientific data, established management protocols, cooperated with regulators for approval of biological and synthetic crop protection products, and worked with 14 agricultural universities to reach millions of farmers with FAW management techniques.

These are just a few examples to illustrate practical actions that can be taken by firms upstream in the food supply chain to improve productivity, sustainability, and farm incomes, simply by applying available technologies and know-how in less developed countries. Scaling-up such innovative solutions, including in collaboration with the public sector and relevant international organizations, would contribute a great deal to reducing the productivity gap between developing and developed country agriculture. The WBG, via IFC funding, is already increasing its activity in this area.

Enabling globally sustainable productivity growth also requires increased investment in agricultural research and development (R&D) to push out the technology frontier. While the up-front costs are high the long-term returns are enormous. There is a widely recognized role for governments in 'pure research' and for agribusiness in 'applied research', and an increasingly clear role for greater public-private collaboration, including across borders. The Global Research Alliance illustrates this approach well, but much more can and should be done to scale-up international research funding and public-private collaboration, including with the eventual users of research results, the farm community.

Improving climate outcomes is a clear priority for many consumers. Firms that operate downstream in the supply chain are directly facing consumers demanding goods and services that are climate friendly and produced sustainably. For these companies much of their environmental footprint is upstream in their agriculture suppliers. Two examples illustrate what can be done – and what needs to be scaled-up.

Nestle is working with its network of 150 000 suppliers to support regenerative (climate smart) agriculture by providing technical assistance for farmers to adopt state of the art science; co-investing with farmers and funding pilot projects; and paying premiums for raw materials produced using regenerative (climate smart) practices.

Danone, in collaboration with the IADB, is working with farmers in Mexico to support sustainable milk production, while in Thailand the Danone Ecosystem Fund has teamed up with Harmless Harvest, with support from Germany, to introduce regenerative (climate smart) agriculture practices for coconut farming.

More generally, ramping up investment on cost-effective Soil Organic Carbon Measurement, Reporting, and Verification (MRV) could help to unlock and accelerate the generation of carbon assets and the implementation of best agronomic practices for regenerative (climate smart) agriculture at scale, including in developing countries.

Digital applications in agriculture offer enormous potential and agribusinesses are increasingly investing in tools to pursue a range of aims: to improve productivity, including by reducing food loss at the farm level and throughout the supply chain; to support sustainable outcomes on farms, including by reducing pesticide, fertilizer, and water use; to improve profitability on small and remote farms through advice on best agronomic practices and access to current market information; and so on. Successful applications will need to be scaled-up.

But there are hard and soft infrastructure constraints to digitalization in agriculture within and across many countries and these need to be overcome. In many cases, this requires additional public investment to improve broadband access in rural areas, and to improve the technical skills of farmers and their ability to use the digital tools that become available. Public-private collaboration can accelerate the needed shift from being perhaps the least digitalized sector in the world to being on the leading edge of digital innovation.

Transforming global food systems

The above illustrates what more can be done by the public and private sectors and by working together. But is it enough...are these actions sufficient for the enormity of the triple challenge?

To transform global food systems, business strategies across the food supply chain will have to create incentives for adopting sustainability practices, including on-farm. Much of the value-added in food supply chains occurs upstream and downstream of farm operations, at input supply, processing, and retail & food service levels. Expecting farmers to change practices, adopt new tools, incur additional costs, and take on more risks on their own is not realistic. But offering farmers new income and profit opportunities is likely to work.

In much the same way that the evolution of digital tools and data analytics has enabled the "servicification" of manufacturing – whereby firms add customer value by supplying services together with physical goods – digital applications across the food supply chain have the potential to truly transform global food systems.

Digital transformation and sustainability outcomes

In November 2021 Bayer, a German-based life science multinational with over 100,000 employees, and Microsoft, a US-based technology multinational with over 220,000 employees, announced a new strategic partnership. Why?

Both companies saw an opportunity to develop innovative, outcomes-based, and digitally enabled solutions to the challenges confronting global food systems, by bringing Bayer's agronomic expertise and digital farming platform together with Microsoft's digital analytics expertise and cloud computing platform. This B2B digital platform will deliver a connected, accessible and interoperable space for the entire value chain to drive productivity and sustainability outcomes.

Meanwhile, Bayer's flagship digital farming software platform, focuses on the upstream portion of the food and ag value chain and is available in more than 20 countries to inform on-farm production and marketing decisions. Data analytics can enable measurement of impacts and outcomes on-farm, including soil carbon content and emissions intensity, carbon sequestration, as well as sustainable sourcing, supply chain improvement, and ESG monitoring.

Sustainability is increasingly a new source of competitiveness across food supply chains; farmers and agribusinesses can benefit from aligning their operations to sustainability outcomes. For input suppliers, offering advisory and technical services that contribute to higher productivity and help ensure sustainable climate neutral outcomes on-farm can add value to their product offering, differentiate their business, improve their competitiveness, and increase profitability. For consumer-facing processing, retail, and food service firms, the opportunity to access sustainable climate neutral sources of supply can also provide greater customer value, differentiate their business, improve their competitiveness, and increase profitability. For farmers, the opportunity to access world class expertise from its suppliers and the subsequent ability to provide a sustainable climate neutral source of supply to its customers can lower their costs, raise their returns, and increase profitability.

Boortmalt, the world's leading barley malt provider, is working with over 800 growers in Ireland to introduce BASF's easy-to-use digital tool AgBalance. The integration of the Sustainable Agriculture Initiative Platform's Farm Sustainability Assessment module into AgBalance allows Irish barley growers to verify the sustainability contributions of their farm operations quickly and easily. This partnership helps to measure and to drive sustainability in barley production and supports Boortmalt in its goal to source 100% sustainable barley in Europe by 2030.

The needed transformation is not costless, and it will take time, but digitalization can bring to small and remote farms the same information and expertise that is available to large farms. Digital tools and data analytics enable more to be done to ensure that farms, everywhere, can achieve their full productivity potential, use land, water, and biodiversity resources sustainably, and both emit less and store more carbon. Unnecessary food loss across the supply chain can be identified, and avoided; sustainable sourcing can be assured, and verified from the farm gate to the dinner plate; and environmental, social, and governance practices can be monitored.

To transform global food systems, governments will also have to do more to align agricultural and trade policies with the triple challenge. Farmers and agribusinesses need to be able to operate in an environment that is predictable over time and coherent across countries. The huge investments, private as well as public, that are needed to transform global food systems depend in large part on private sector confidence in the stability of the markets in which they operate.

Much of the domestic support provided to agriculture today contributes to sustain current production structures with relatively little support directly addressing the triple challenge. There have been encouraging initial steps recently, such as the USDA Climate Change Strategy, the Sustainable Productivity Growth Coalition, the EU Carbon + Farming Coalition, and Japan's Private-Public Roundtable Initiative, amongst others. But overall, what was recognized by Ministers meeting at the OECD in 2016 remains true in 2022 "...international and domestic policy settings are not sufficiently aligned with emerging needs."

Global food systems would benefit from shifting government support towards investments in innovation (R&D, technology adoption, and extension services), including in digitalization (physical infrastructure to ensure access, as well as training & advisory services to support adoption and use). Such investments have high social rates of return, yet current public spending in these areas is low and declining. There are immediate opportunities to leverage national government spending through collaboration with both the private sector at home and the international research community abroad.

Global food systems would also benefit from regulatory reforms both at and behind national borders. Import tariffs for agriculture products are two times higher than for industrials and vary considerably across commodities and countries, while export restrictions on agriculture and food remain widespread and unpredictable. Both import and export restrictions should be progressively phased out. In addition, low-cost and proven-successful trade facilitation measures to streamline customs and border procedures are available - and should be widely adopted - to reduce trade costs and enable trade to flow predictably.

Domestic regulations can protect both consumers and producers, but excessive and poorly designed measures impose unnecessary costs on farmers and agribusinesses. Differences in regulations across markets, unless they are science-based, constrain the freedom of farmers and agribusinesses to innovate in response to consumer preferences and to share those innovations globally.

Addressing the triple challenge simply cannot happen without international trade, that is, without enabling farmers and agribusinesses to produce where it is most economically, environmentally, and socially sensible to do so, and to ship food to where it is needed. Globally, 20% of calories consumed are traded and in some regions the share is 50%. With climate change, the reliance on trade to feed the world will only increase. International markets also increase supply chain resilience by buffering supply and price volatility, as domestic shocks are more frequent and severe.

Farmers and agribusinesses can offer granular insights on the impacts of alternative policy measures on current operations and on investment intentions. In the absence of well-functioning domestic and international markets for agricultural inputs and outputs, food prices will be higher and private investments lower than otherwise. Reduced confidence in trade and international markets as a reliable source of food supply will further constrain our collective ability to feed the world, sustain the environment, address climate change, and enable livelihoods.

Conclusion: delivering transformational solutions

Working together, the public and private sectors can build secure, sustainable, productive, and resilient global food systems. The immediate priority is to avoid any further increase in hunger and undernourishment and to provide humanitarian aid on the scale needed today.

The medium-term priorities are long standing and increasingly urgent: enabling globally sustainable productivity growth and transforming global food systems. This means:

- Reducing the productivity gap between developing and developed country agriculture, and doing so sustainably, through widespread application of available technologies and know-how in less developed countries and regions
- Extending the technology frontier, through increased investment in agricultural R&D, increased international cooperation on science and technology, and greater public-private collaboration, including with the farm community
- Bringing to small farms the same information and expertise that is available to large farms to improve productivity, sustainability, and profitability, through new digital applications
- Aligning farm and agribusiness strategies with sustainability outcomes, through development and application of digital tools and data analytics across the food supply chain
- Aligning domestic agricultural policies to the triple challenge, through replacing support that distorts production and trade with new measures that enable globally sustainable productivity growth
- Aligning agricultural trade policies to the triple challenge, through introduction of trade facilitation measures and removal of trade restrictions and unnecessary regulatory differences across countries

This agenda is urgent, but it will not be delivered overnight, and it will not be achieved without public-private collaboration, international cooperation, and an improved domestic and trade policy environment to incentivize the needed private investment. The *Business at OECD* Food and Agriculture Committee will continue to work with farm groups and agribusinesses operating across the food supply chain to ensure that global food systems are fit for the future. The immediate next step is just weeks away and we look forward to contributing to Ministerial discussions at the OECD on 3-4 November 2022.

In the meantime, we hope that this short note provides useful perspectives for consideration by Ministers, in advance, during, and even after the Ministerial.

The outcomes of the Ministerial will be a major milestone on the path to transforming global food systems and will serve as the core input to a stakeholder dialogue that will be organized by Business at OECD's Food and Agriculture Committee early next year. This event will take stock of progress made and explore practical next steps, including possible creation of a multistakeholder coalition as a forum for on-going and regular dialogue. Such a coalition could be modeled after AMIS, the highly successful forum for international collaboration on agriculture markets - a kind of "AMIS" for farm and agribusiness strategy, international policy dialogue, and public-private collaboration to enable globally sustainable productivity growth and to transform global food systems.

Our fundamental aim is to sustain momentum in implementing transformative solutions: actions that the private sector can take on its own, in partnership with governments and other stakeholders, and in response to specific policy changes.



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