

Ensuring a sustainable food value chain for a resilient future

When we discuss the impact of the sustainable food value chain, we often tend to focus solely on the environmental aspect, which is, without any doubt, crucial. However, there exists another dimension that demands our attention, one that revolves around social sustainability and how the sustainable food value chain can help overcome poverty, hunger, and malnutrition, particularly in vulnerable communities, while ensuring healthy food products for all. Therefore, this article aims to shed light on the social impact of the sustainable food value chain and its potential contribution towards ensuring social fairness and global food security.

Before delving into the topic, let's first explore the meaning of a sustainable food value chain.

The whole food production system, from raw agricultural materials to transformation into food products and selling to final consumers, followed by disposal after use, and all actors in the food system, from farmers to final consumers, passing by food processors, distributors, and retailers, play a key role in establishing a sustainable food value chain. A sustainable food value chain upholds economic sustainability by ensuring profitability at all its stages, while promoting social fairness and preserving the environment.

In this context, the European Union has recognized the importance of sustainable food and has taken concrete steps to promote its adoption. As part of its broader European Green Deal initiative, the EU's Farm to Fork Strategy for creating a sustainable food system has been developed and aims to make European food systems more sustainable, fair, healthier, and more resilient to future challenges.

Farm to Fork strategy goals for 2023:

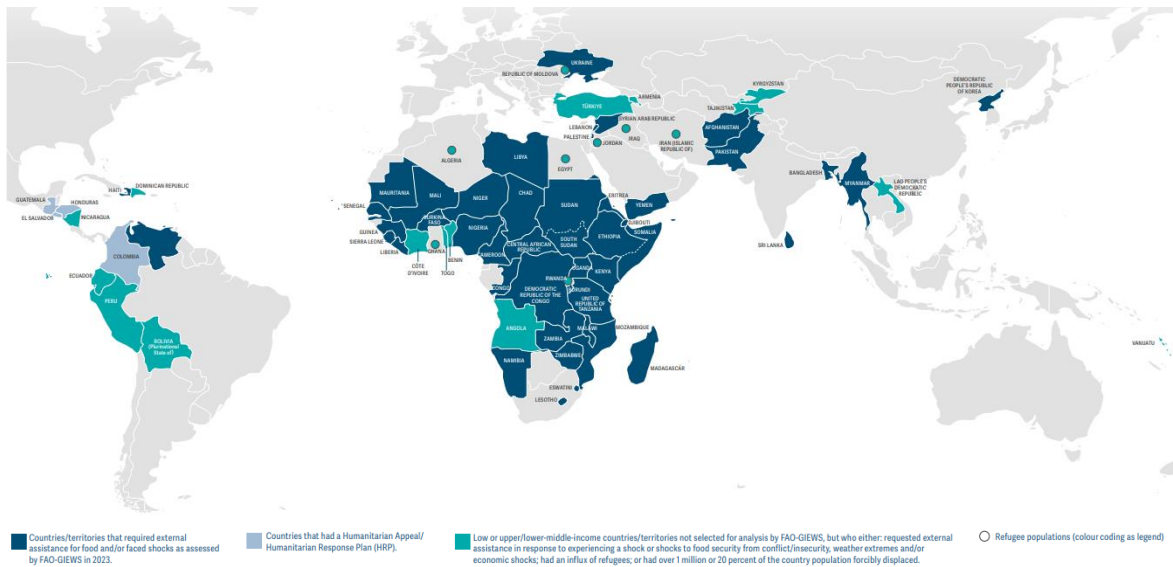
- 50%** * reduction in the use and risk of pesticides
 - 20%** * minimum reduction in the use of fertilisers
 - 50%** * reduction in sales of antimicrobials used for farmed animals and aquaculture
 - 25%** of agricultural land to be used for organic farming
- *from a 2020 baseline

In today's world, there is an increasing concern about the resilience of the food system as the current one already fails to fully meet the global food demand.

In April 2024, a report from the Food Security Information Network, supported by the European Union, the UN FAO, the WFP, and other organisations, revealed that approximately 300 million people faced severe food crises in 2023. The report identified the devastating combination of ongoing wars, climate change, and a rising cost of living as key factors.

The global food crisis was further exacerbated by the residual economic effects of the Ukraine war, the enduring impacts of the COVID-19 pandemic, the El Niño event (climate shock), the intense war on Gaza Strip and the conflict in Sudan, which significantly strained national and regional stability. Inadequate actions have compounded these issues, highlighting the urgent need for more effective solutions.

Food-crisis countries/territories included in the GRFC 2024



Source: GRFC Food Security TWG, 2024

In 2023, over 281.6 million people across 59 countries and territories faced high levels of acute food insecurity. Conflicts, wars, and insecurity were the primary causes in 20 of these countries/territories, affecting 135 million people. We could indeed witness a 12 percent increase in global conflict events in 2023 compared to 2022, and a 40 percent increase compared to 2020.

Furthermore, economic shocks were the main driver in 21 countries, impacting 75 million people. Global economic growth slowed to 3.1 percent in 2023 from 3.5 percent in 2022 due to higher central bank rates aimed at curbing inflation, which in turn slowed economic activities. However, despite tighter monetary policies and lower commodity prices, inflation remained above pre-pandemic levels.

Finally, weather extremes were the primary driver in 18 countries, affecting 72 million people. The world experienced its hottest year on record in 2023, nearing the critical 1.5 degrees Celsius above pre-industrial levels set by the Paris Agreement. This rise in temperatures resulted in extreme heat, drought, wildfires, intense rainfall, and flooding. Climate-related shocks were the main drivers in 18 countries, with almost 72 million people facing high levels of food insecurity, up from 56.8 million people in 12 countries in 2022 who required urgent humanitarian assistance.

This dire situation may deteriorate further with escalating malnutrition and hunger in vulnerable communities compounded by a growing global population projected to reach 9.7 billion by 2050. Therefore, finding solutions to meet the increasing food demand is imperative, and the sustainable food value chain offers a promising approach as it aims to secure long-term food availability by minimizing waste in food production and consumption while also conserving the planet's precious resources.

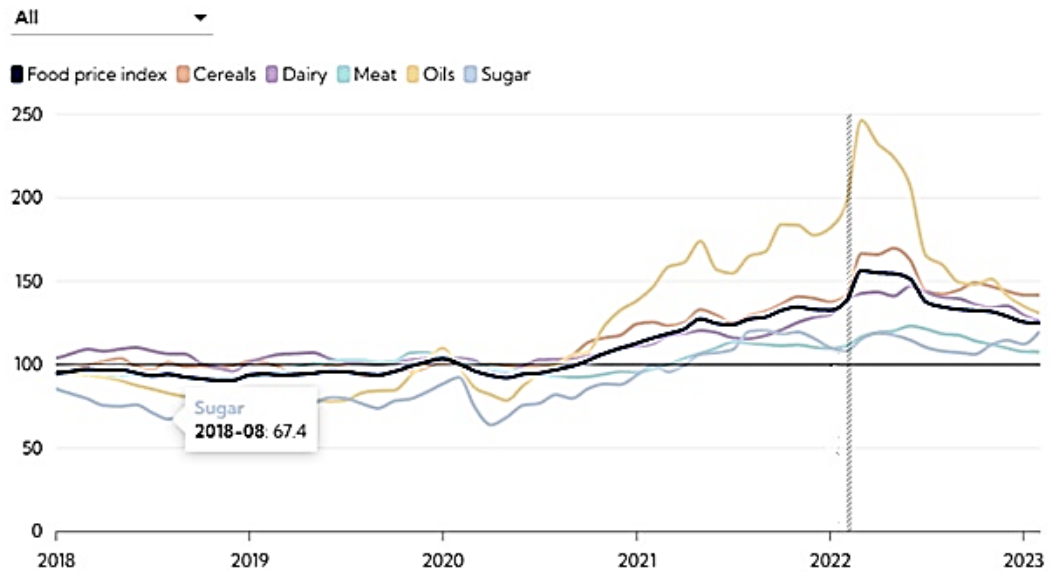
The conflict between Ukraine and Russia has further disrupted food value chains in the region

And this has led to potential risks for the stability of the global food supply chain and food security. It has further emphasised the need to strengthen the adoption of local sustainable food value chains.

The displacement of farmers and the damages caused to farmlands and food production infrastructures have had repercussions extending beyond Ukraine, as the country plays a major role in global food markets and used to be a significant global grain and cereal exporter, alongside Russia. Prior to the conflict, Ukraine and Russia accounted for 29% of global wheat and 62% of sunflower oil. Therefore, disruptions in Ukraine's agricultural production have contributed to a decrease in global grain, cereal, and vegetable oil supplies, leading to an exacerbation of food prices worldwide and impacting the most vulnerable populations who are already suffering from food insecurity.

Real food price indices

(2014–2016 = 100)



Source: United Nations Food and Agriculture Organization (FAO). - Note: The period 2014–16 was chosen as the base as it was considered the most representative period for most markets in the past ten years. A three-year period is chosen to minimize the impact of variation in both internationally traded prices and quantities.

Source: United Nations Food and Agriculture Organization (FAO), 2024

The UN FAO graph illustrates that the Food Price Index remained stable until 2020. However, in mid-2020, the index began to rise steadily, peaking in 2022, coinciding with the Ukraine-Russia conflict. Following this peak, global food prices began to decline, driven by strong agricultural production and decreases in the costs of energy, fertilisers, and shipping. However, despite these declines, prices remained historically high, with significant variations across different commodity groups, especially rice and sugar. Furthermore, the reduction in global prices did not translate equally to domestic markets, particularly in low-income countries. As a result, domestic food prices measured in national currencies continued to increase, intensifying the cost-of-living crisis for many low-income households.

Food prices throughout 2024

Global suppliers will need to compensate for shortfalls in Ukrainian production and exports, maintaining tight markets and increasing vulnerability to significant production deficits elsewhere. Furthermore, production losses due to El Niño conditions are likely, leading to lower global food availability and, consequently, higher prices. Typically, during an El Niño event, there are global declines in the production of major staple crops like wheat, rice, and maize, accompanied by increases in their prices.

Investing for equity and empowering people throughout the value chain

Beyond the growing concern of hunger and undernourishment, food security faces multifaceted challenges that extend into various social dimensions. While addressing hunger remains crucial, it is equally important to focus on ensuring equity throughout the entire food value chain. This encompasses a range of actions, from providing substantial support to small-scale farmers and guaranteeing them fair compensation for their produce, to extending the concept of fairness to encompass living wages for both employees and suppliers involved in the production process. Additionally, mitigating food waste becomes a significant strategy in achieving food security by optimising resource utilisation. At the consumer end, facilitating access to nutritious and healthy food options emerges as an indispensable factor for safeguarding public health and well-being. In essence, a comprehensive approach to food security integrates principles of fairness, sustainable practices, waste reduction, and health promotion across the entire spectrum of the food system.

DPAM B Equities Sustainable Food trends - the importance of finding solutions

DPAM actively contributes to addressing the numerous global food security challenges the world is facing, through its **DPAM B Equities Sustainable Food Trends**, whose investment strategy centres around the sustainable food value chain.

Through this fund, DPAM is committed to promoting social characteristics and to ensuring that the companies it invests in uphold several of the United Nations' Sustainable Development Goals. Accordingly, the companies within the fund collectively contribute to achieving the following SDGs:









SDG 1 No Poverty - The fund supports initiatives that aim to alleviate poverty and improve access to food resources, particularly in vulnerable communities.

SDG 2 Zero Hunger - By investing in companies focused on sustainable food production, the fund contributes to the goal of eradicating hunger and ensuring food security for all.

SDG 8 Decent Work and Economic Growth - The fund supports companies that create decent, sustained, and inclusive job opportunities in the food systems.

SDG 10 Reduced Inequalities - By investing in companies that prioritize social equity and inclusiveness, the fund works towards reducing inequalities.

Risks of DPAM B Equities Sustainable Food Trends

 Concentration risk <i>Moderate</i>	 Capital risk <i>High</i>	<p>DPAM B Equities Sustainable Food Trends is a sub-fund of DPAM B, SICAV under Belgian law</p> <p>Summary risk indicator (SRI)</p> <p>Lower risk ← → Higher risk</p> <p>1 2 3 4 5 6 7</p> <p>SRI calculated according to PRIIPs (EU) N° 1286/2014 regulation</p> <p>We refer to the prospectus and KID PRIIPs for more explanation and a complete overview of the risks.</p> 
 Liquidity risk <i>Low</i>	 Exchange risk <i>High</i>	
 Derivative risk <i>Low</i>	 Market risk <i>High</i>	
 Sustainability risk <i>Low</i>		

Source: DPAM, 2024

As of 30 June 2024, the fund was invested in 41 companies, actively supporting various social causes linked to the sustainable food value chain. These include empowering smallholder farmers to promote fairness in agricultural practices, fostering socio-economic development in developing regions, ensuring traceability, improved quality, and enhanced food safety measures, and promoting equal access to food.

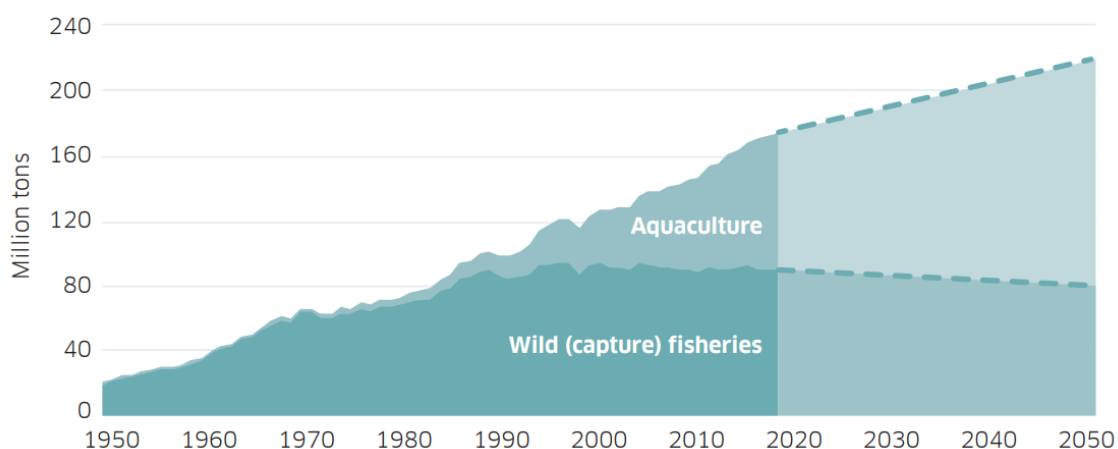
Promote sustainable agriculture: high-quality seed for the future

KWS SAAT, a specialised company in breeding, producing, and distributing high-quality agricultural seeds, recognises the global challenges of food supply and price fluctuations due to climate change, the ongoing COVID-19 pandemic, and the conflict in Ukraine. The company is dedicated to offering sustainable solutions centred around seed and manages every aspect of the modern seed production value chain, including developing new varieties, multiplication, processing, seed marketing, and farmer consultation. The company invests in innovative bio- and agricultural technologies for seed multiplication and advancing process engineering for processing and pelleting. The sustainability focus of their seeds encompasses drought resistance, pest and disease resilience, aiming to mitigate crop losses, reduce pesticide usage, and conserve water resources. By doing so, the company contributes to ensuring consistent food production amidst changing conditions and aligns with the goals of the European Green Deal and Farm to Fork Strategy for sustainable agriculture.

Salmon, a sustainable source of protein to feed the growing population

The rapid growth of the global population is coupled with a rising need for protein. Hence, it becomes important to address this challenge responsibly and offer a sustainable source of protein to feed the growing population. Meeting the demand for protein and valuable fish oils in an efficient and sustainable way is a challenge that the aquaculture industry is taking on. Therefore, as the biggest salmon producer in the Faroe Islands and the third-largest fish farming company in the world, Bakkafrost is working towards meeting the demand for protein while also considering the long-term impacts on economic, social, and environmental factors. Social factors encompass more than just fulfilling the increasing protein demand; they also involve providing a nutritious protein solution to address that demand. It's worth emphasising that farmed salmon ranks among the healthiest protein sources, attributed to its abundant levels of omega-3 fatty acids, vitamin D, B vitamins, and selenium.

Aquaculture production must continue to grow to meet world fish demand.



Source: Bakkafrost. Historical data, 1950-2016: FAO (2017b) and FAO (2018). Projections to 2050: Calculated at WRI; assumes 10 percent reduction in wild fish catch from 2010 levels by 2050, linear growth of aquaculture production of 2 Mt per year between 2010 and 2050. (Creating a Sustainable Food Future, World Resource Institutes)

Bakkafrost is also contributing to the Global Salmon Initiative, an international leadership initiative established to significantly improve the sustainability and transparency of salmon farming. The GSI organisation is established by global salmon producers to promote sustainable salmon farming practices worldwide and to tackle the key sustainability challenges in the salmon industry, with a focus area that includes providing a healthy and sustainable source of protein to help feed the growing population, improving their social and economic contribution while reducing the environmental footprint.

Supporting smallholder farmers for more fairness

Small-scale farmers play a key role in ensuring food security, reducing poverty, and promoting sustainable development in the global agricultural sector, through diverse food production practices such as biodiversity conservation, crop rotation, and organic farming. However, these players often face various obstacles, from limited access to resources like land, water, finance, and technology to market barriers, lack of infrastructure support, and inadequate social protection measures.

To support small farmers, it is crucial for sustainable food actors to invest in rural infrastructure and enable irrigation facilities, transportation systems, and improved market access. These actors can also contribute to strengthening farmer organisations by empowering their collective bargaining ability, improving their access to inputs and to the market, and providing tailored financial services, such as microcredit and insurance, to help them manage risks and invest in their farms.

Promoting knowledge and technology transfer is also vital. To build resilience among small farmers, sustainable food actors can facilitate the exchange of information and promote sustainable farming practices.

Colruyt, a Belgian company that is part of DPAM B Equities Sustainable Food Trends, exemplifies such support. Colruyt aims to empower small agricultural producers in developing regions and improve their living conditions. Through international chain projects, Colruyt collaborates with farmers and supply chain stakeholders to establish efficient and sustainable production systems. The company ensures a market for farmers' products by buying a fixed and substantial volume from the farmers' organisations at a good price on top of the market price and offering it for sale in Belgian shops, which then helps farmers get higher incomes and invest more in food production. Colruyt also provides knowledge transfer, technical assistance, and financial resources to enhance the quality and sustainability of the farmers' production.

Through this project, Colruyt has had a positive impact on the lives of more than 2,000 farmers and indirectly about 40,000 farmers. For instance, in Peru, Colruyt bought 100 tonnes of quinoa in 2020; 300 farmers were co-beneficiaries, and 30 were directly involved in this chain project. Farmers received a collective premium to invest. In Burundi, Colruyt bought 172 tonnes of green coffee beans in 2019 at a price higher than the world market price. This cooperative had more than 27,000 people, and some 700 were directly involved.

Ensuring living wage for employees and supply chain actors

Income and wages are fundamental human rights, and ensuring them is key to honouring commitments to the United Nations Guiding Principles and OECD Guidelines for Multinational Enterprises. Employees and workers throughout the supply chains who earn a living wage are able to meet their own basic needs and those of their families, and can also save money for future use, thus having more chances to find their way out of poverty.

Firmenich Group, the world's largest privately-owned fragrance and taste company, is acting for a fairer and more equitable society.

As part of their pathways to social sustainability, the company achieved its objective of ensuring that 100% of their employees earn at least a living wage. Hence, in 2022, **Firmenich** was one of only two companies in the world and the first in the industry to be globally Living Wage Certified by the Fair Wage Network. The Fair Wage Network is an initiative "*aimed at making wage practices progress along global supply chains, by ensuring the coherence needed in the wage area and helping to liaise the proposed fair wage approach in relation to all wage initiatives at international and national level.*"

Ensuring that people can afford a decent standard of living is a critical step towards strengthening the company's equitable culture. Therefore, **Firmenich** will continue working on living wage at source in specific supply chains and in collaboration with its customers, by scaling up supplier engagement on living wage.

Promoting healthy food access

According to the United Nations Food and Agriculture Organization, more than three billion people could not afford a healthy diet in 2020. Therefore, DPAM B Equities Sustainable Food Trends has invested in **Tate & Lyle**, a world leader in ingredient solutions for healthier food and beverages. Over the last two years, the company has removed 4 million tonnes of sugar from people's diets and is continuously working towards improving the nutrition profiles of the products customers use by adding fibre and protein.

Selective exposure to Palm oil

Investing in palm oil has become a significant choice for many investors, driven by its extensive use in a wide range of food and beauty products, particularly in emerging markets like Asia and Africa. Palm oil accounts for approximately one-third of the global vegetable oil market. However, this investment option comes with a complex set of considerations, ranging from health concerns to environmental and ethical issues.

One of the key concerns surrounding palm oil is its saturated fat content, which has raised questions about its impact on health. However, this is a subject of ongoing debate in the scientific community. Some argue that not all saturated fats are equal, and palm oil contains types that are considered essential for the human body. Additionally, palm oil has practical uses in making confectionery, where alternatives like butter or hydrogenated soybean oil come with their own set of health risks.

Another concern lies in the fact that in addition to its adverse environmental consequences, palm oil production has significant detrimental effects on society due to the criminal activities carried out by certain palm oil production companies. These activities can range from intimidation and acts of violence to the outright theft of lands from farmers. Recognising these grave social concerns, DPAM B Equities Sustainable Food Trends has taken a proactive approach by restricting its investments to a select few companies engaged in palm oil production. These companies have demonstrated a commitment to upholding the principles set forth by the Roundtable on Sustainable Palm Oil (RSPO).

The companies selected by DPAM B Equities Sustainable Food Trends for investment are **Sipef, MP Evans, and United Plantations**. These companies have not only embraced RSPO principles, a certification that strives to revolutionise the palm oil industry by establishing global standards for sustainable production and sourcing but have also shown a steadfast dedication to sustainable and responsible practices in the palm oil industry.

United Plantations, for instance, actively promotes sustainable agricultural practices, including integrated pest management, and the use of organic fertilisers. The company has made unwavering commitments to combat deforestation, refraining from clearing any primary forests since 1990 and implementing a strict zero-burn policy since 1989. The company is also dedicated to treating people and local communities with fairness, ensuring equal treatment, opportunities, and rights for all.

By adhering to the rigorous RSPO Principles and Criteria, **United Plantations** achieved the notable milestone of becoming the world's first certified sustainable palm oil producer in 2008.

Investing in food waste reduction

Food waste reduction can not only secure environmental sustainability but can also ensure greater food security and social fairness. Therefore, another invested company is Darling Ingredients, which serves the agri-food industry and reduces food waste by collecting and repurposing animal-based co-products and other natural materials. This includes collecting bakery waste, which is then converted into animal feed. Used cooking oil is processed to produce renewable diesel. Meat by-products undergo a transformation process to create various end products. Additionally, animal residuals are utilised to generate renewable diesel.

Food production will continue to occupy a special position at the core of society, the environment, and the global economy. In recent decades, this sector has faced a significant challenge: how to feed a growing global population while minimising its ecological impact and safeguarding natural resources for future generations. Tackling this challenge involves adopting sustainable practices throughout the food value chain. These practices are poised to technologically evolve and become increasingly important in the future. They are expected to undergo significant changes driven by emerging technologies such as precision agriculture, which utilises data analytics, sensors, satellite imagery to optimise resource management including water, fertilisers, and pesticides, reduction of food waste, transparency in supply chains, and so on.

DPAM has found a way to support this evolution through its DPAM B Equities Sustainable Food Trends investment strategy, which invests in companies that contribute to reducing the negative impact of the food value chain on the environment and society. Furthermore, the growing demand for sustainably produced food offers a favourable market opportunity, while regulatory support ensures a conducive business environment.

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