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UNIDO AND FOOD SECURITY

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Global Context

Food systems face unprecedented threats due to multiple crises: the COVID-19 pandemic, violent conflicts, economic downturns (particularly domestic food price inflation), and extreme climate events. These crises prompted failures in global food systems and along the global food supply chains, fueling hunger and limiting livelihoods, resulting in the worst food crisis in modern history.

The progress achieved on the global food security front is being rapidly reversed. Two major shocks especially – the COVID-19 pandemic and the war in Ukraine – have erased 15 years of progress in hunger reduction worldwide. Violent conflicts have displaced 122.1 million¹ people, three-quarters of whom reside in climate-vulnerable areas². Over the past decade, climate extremes have affected 1.7 billion people³, while inflation has pushed billions beyond the reach of healthy diets. According to the joint UNIDO-FAO Study “Ending Hunger Is Possible: an income-generating approach through value addition”, 733 million people faced hunger in 2024 - that **is one in 11 people worldwide**. The lack of sufficient investment in the past four years has added an estimated USD 210 billion to the cost of ending hunger by 2030.

In 2024, more than 2.3 billion people were moderately

or severely food insecure, and more than 2.6 billion people could not afford a healthy diet. Current projections indicate that nearly 512 million people will still be facing hunger in 2030⁴. By 2050, global food production **will have to increase by 70%** to feed an estimated population of 9.1 billion⁵.

The global food security situation has exposed a significant gender gap. In 2024, 26.1% of women experienced moderate or severe food insecurity compared to 24.2% of men, with new estimates indicating that this gap continued to widen between 2023 and 2024⁶. **Women and girls now account for 60% of the world’s hungriest people⁷**. This disparity has deepened since 2020, and at the current pace, it would take four generations (around 134 years) to achieve gender parity in food security, even with sustained global efforts to address hunger and malnutrition⁸.

While the number of food-insecure people continues to rise, food waste is also increasing. Today, global food systems consume 72% of the world’s freshwater resources⁹, generate more than 30% of anthropogenic

¹ UNHCR. 2025. [Global Trends report 2024 | UNHCR](#)

² UNHCR. 2024. [No Escape – On the frontlines of climate change, conflict and forced displacement | UNHCR](#)

³ WFP. [Climate action | World Food Programme](#)

⁴ FAO. 2025. [The State of Food Security and Nutrition in the World](#)

⁵ FAO. How to Feed the World in 2050. [Microsoft Word - Synthesis_Report.doc](#)

⁶ FAO. 2025. [The State of Food Security and Nutrition in the World](#)

⁷ WFP. [Gender Inequality is Causing More Women to Suffer from Hunger](#)

⁸ WEF. 2024. [Global Gender Gap Report 2024 | World Economic Forum](#)

⁹ FAO. 2025. [Water is Life, Food is Water: Sustaining Water and Ensuring Food for the Future](#)



greenhouse gas emissions, and threaten over 86% of species at risk of extinction¹⁰. Yet, despite this immense environmental footprint, around 1 billion tonnes of food are wasted each year, which is equivalent to 19% of all food produced globally in 2024¹¹.

Post-harvest losses have further worsened food insecurity. More than 40% of global food loss occurs along commodity supply chains after harvest and before reaching consumers, a challenge that is especially severe in developing economies. In some countries, smallholder farmers lose up to 40% of their annual harvest, particularly grains, which account for 70% of the world's caloric intake. These losses create a double burden for people and the planet, undermining the important role of agriculture in socio-economic development. They also reveal the continued dominance of linear industrial production and economic models, and highlight the need for circular system transformation models.

Agriculture and food sectors are critical to glocal (global & local) socio-economic systems. In many regions **agriculture employs around two fifths of the total labour force**¹². The agriculture sector holds great potential to foster socio-economic growth, as sectorial growth is two to three times more effective in raising incomes in low-income economies compared to other sectors¹³.

Similarly, the history of development strategies has carved out a special place for the role of agriculture in industrialization and economic performance, particularly in promoting **inclusive and sustainable industrial development (ISID)**. Governments have recognized this as essential for transforming food systems through a strategic focus on agribusiness, food industries, and integration into global agro value chains.

Although developing countries and emerging markets rely heavily on agriculture for economic growth, private sector investment in the sector remains relatively low. This is often due to the absence of an **enabling environment**, including inadequate policy frameworks, limited implementation capacity, and weak infrastructure. At the same time, agro-food businesses frequently struggle to maintain efficient, transparent, and compliant practices along value chains due to technology and knowledge gaps, which often stem from insufficient local tertiary and support services.

The evolving policy and regulatory environment for food and agriculture — covering trade and



market policies, fiscal measures, producer and consumer support services, human rights, as well as environmental and safety regulations — presents significant challenges for the transformation of micro, small, and medium sized enterprises (MSMEs), food systems, and industry more broadly. These challenges intensify the already difficult conditions faced by smallholder farmers, food processors, and industrial actors along agro food value chains, including gaps in know-how, technology, energy, digital capacity, and information, as well as limited access to finance, infrastructure, and specialized industrial parks.

An effective transformation of food systems aimed at improving food security must address governance and policy gaps, economic and production bottlenecks, socio demographic challenges related to gender and inclusion, and climate and environmental threats.

¹⁰ UNEP. 2021. [Food system impacts on biodiversity loss | UNEP - UN Environment Programme](#)

¹¹ UNEP. 2024. [Food Waste Index Report 2024. Think Eat Save: Tracking Progress to Halve Global Food Waste](#)

¹² FAO. 2025. [Employment indicators 2000–2023 \(July 2025 update\)](#)

¹³ World Bank. 2025. [Agriculture Overview: Development news, research, data | World Bank](#)



Addressing the challenge

The prevailing approach to global food security is often fragmented, but it is evident that the road to lasting food security for all is a holistic multi-lane pathway, informed by system-wide and multidimensional perspectives. Taking into consideration the high levels of food and post-harvest losses, low production, productivity, value addition, and an escalating food crisis, UNIDO favors a **systematic approach to inclusive and sustainable food security** anchored in three key pillars:

1. **Strengthening the link between agriculture production, food processing, and value addition.**
2. **Reducing post-harvest losses and food waste.**
3. **Forging partnerships for immediate and direct support to the most vulnerable groups.**

This systematic three-pillar approach can play a key role in the transformation of agro-food systems, particularly in light of new challenges arising for global food security. Access to high-end markets in industrialized nations is becoming increasingly more complex and competitive. As mandatory due diligence requirements become a new regulatory trend, countries addressing human rights issues and transforming their environmental practices could face both significant trade advantages and challenges.

Building production, processing, and value addition bridges

This pillar addresses the constraints limiting **food availability and accessibility** (economic, social, and physical access). UNIDO supports actors across food supply chains through capacity building, technology transfer, infrastructure and common user facilities, agro-food transformation hubs/centers of excellence (CoEs), rural transformation centers (RTCs) and industrial parks, financing and market access, food safety and quality standards, supply chain management, research and innovation, climate-smart practices, and policy support.

Many agribusinesses will therefore be enabled to develop innovations, adopt smart practices to better adapt to the impact of climate change, and decarbonize their existing practices through efficiencies in the production processes. Improved practices should be coupled with robust educational and vocational programmes, to serve enterprises with skilled and well-educated labour in primary production, manufacturing, and tertiary services. This would require several governmental measures





and tools enabled through industrial policies, private sector financing, and localization of the tertiary sector. Building bridges between productions, processing, and value addition is key to reduce food loss and waste throughout post-harvest processes.

Reducing post-harvest loss

The conventional approach to food security has centered primarily on increasing the sheer quantity of food available. However, evidence shows that a lot of the food produced is lost or wasted. Decreasing the post-harvest food losses is critical for **sustainable food security and food systems**. Infrastructure, particularly strategically relevant ones like storage capacities at ports and airports, are necessary to ensure the competitiveness and affordability of food commodities. Above all, storage facilities, technology, and capacity building of smallholder farmers and MSMEs - who are the front liners - are essential in reducing food losses and waste.

Food supply chains, food retail, and wholesale, also require innovative technology and policy tools that tighten the link between food processing and food consumption. To this end, **Integrated Agro-Food Parks (IAFPs)** are critical for food security and rural development. Established at the intersection of rural and urban environments, the IAFPs approach benefits processing firms in that it relieves firms from the burden of the initial capital investment by providing the necessary infrastructure and services for agro-processing in the IAFP, as well as regular supply of raw materials at a predetermined quality and quantity. This allows them to optimize utilization of their processing capacity. For smallholder

farmers and rural communities, it allows for better integration into value chains by supplying agricultural raw materials to agro-industries on a demand-led contract basis, and also provides off-farm employment opportunities in the IAFPs and allied industries.

Partnership for immediate and direct support to the most vulnerable populations

UNIDO recognizes the multidimensional nature of food security and reaffirms every human's right to safe and healthy food, upholding the principle of **leaving no one behind**. UNIDO therefore prioritizes - as part of its holistic approach to food security - strategic partnerships that enable direct access to food for affected populations.

By leveraging the diverse and complementary mandates of the UN-system organizations and other development partners, UNIDO seeks to harness the combined power of local and regional food industries' processing potential and global humanitarian food purchasing power. This synergy aims to ensure sustainable production, sourcing, and supply of safe and nutritious food for vulnerable populations across the world. As a result, not only are local MSMEs and food industries transformed, but a formidable link between humanitarian and nutrition programming and local economic and industrial transformation is constructed - capitalizing on these for better food security outcomes.





UNIDO's role



Achieving food security requires simultaneously addressing the complexity of poverty reduction and the transformation of food systems. Considering current global trends and the needs of its Member States, UNIDO contributes to improving food security through the following areas of support:

- » **Sustainable food systems for reduced post-harvest losses**
- » **Improved skills and capacities for better jobs in industrializing countries**
- » **Addressing investment gaps in agribusiness and agriculture**
- » **Promoting agro-innovation and new technologies**
- » **Strategic infrastructure for resilience in industrializing countries**
- » **Improved nutrition and food safety**

Accordingly, the following strategic areas have been identified to contribute to the main priorities of Member States in driving economic transformation:



Strategic area 1

Sustainable food systems for reduced Post-Harvest losses

UNIDO supports its Member States through its long experience in **food value chain development** and by

connecting them to regional and continental supply chains. Scaling up investments in infrastructure is essential to tackle food loss and waste, with UNIDO playing a key role through integrated initiatives.

This includes reducing post-harvest losses via **Agri-Business Transformation Hubs (ATHs)**, expanding activities in **food safety**, and strengthening programmes on **sustainable food packaging**. UNIDO also reinforces its **normative role** while deepening cooperation with research and technology institutions, other UN organizations, the private sector, and private foundations. To maximize impact, UNIDO is expanding partnerships with International Financial Institutions (IFIs) and national development banks to channel greater investments into food loss and waste reduction. In addition, it leverages international climate funds to design innovative programmes that prevent food losses across the value chain.

Reduction of food losses. Up to 40% of food produced does not reach the end consumer, a problem driven in part by the lack of necessary investments in the post-harvest sector. Using UNIDO's expertise in this area, new initiatives have been developed to optimize investments in harvest and post-harvest technology, dry and cold storage, processing, packaging, marketing along the value chain, as well as to provide training to stakeholders. UNIDO is doing this together with the United Nations' Food and Agriculture Organization of (FAO), the World Food Programme (WFP), and the International Fund for Agricultural Development (IFAD) to optimize said investments.

ASTA is a global systems-based programme led by UNIDO and FAO to assist countries in transforming their agro-food systems. It fosters innovative partnerships and promotes SDG-compliant investments in selected value chains. ASTA designs and implements catalytic systems-based projects that create new opportunities and partnerships at the interface between the public, private and civil society sectors. Its approach is human-centered and stakeholder-driven from the outset, emphasizing continuous learning and adaptation by both project and stake-holders to achieve sustainable socio-economic, environmental and resilience impacts at scale. ASTA uses its own sophisticated and fully field-tested methodology to create solutions within the food system that are self-sustaining, adaptive and resilient.



Rudi Moeridjan/Intersnap Visual Arts

- » **Food Packaging Programme.** Launch and expansion of the Sustainable Food Packaging Programme under the Food Loss and Waste Action Plan.
 - » **Global Coalition on the Hidden Middle.** Launched in partnership with the International Union of Food Science and Technology (IUFoST) and the private sector to promote the role of food processing in ending hunger.
 - » **Innovative partnerships.** In collaboration with FAO, the Agrifood System Transformation Accelerator (ASTA) programme provides unique opportunities to accelerate investments in agro-food value chains and provide end-to-end solutions. Building on this collaboration, the joint UNIDO-FAO programme can be scaled up to more countries and regions through joint UN funds.
 - » **African coffee sector transformation.** Scale-up of the Advancing Climate-resilience and Transformation in African Coffee (ACT) programme within and beyond Africa as an innovative model for food system transformation of key food commodities.
- improved competitiveness is crucial for structural transformation. Specifically, better skills play a crucial role in boosting their productivity and efficiency, enabling them to diversify their product portfolio and increase value addition. UNIDO strengthens technical skills downstream of the farm gate to create decent jobs - particularly among youth and women - and improve productivity and value addition through technology transfer, extension services, and digital solutions:
- » **Centers of Excellence.** Capacitated institutions serve as a vector to deliver supporting services on compliance and productive capacities to the private sector. The service portfolio of these centers is being developed based on the local demand and needs to provide added value to existing food and agricultural products.
 - » **Improved agricultural inputs and extension services.** The delivery of improved extension services by public and private institutions with a focus on agricultural inputs, food safety, and precision agriculture enables farmers to have access to the latest technologies and scientific knowledge.
 - » **Diversification of economic income for youth and women.** The facilitation of new opportunities for youth and women in agriculture/non-food sectors and allied industries, such as the valorization of biomass.
 - » **SME development tools.** Development and promotion of SMEs performance management solutions lead to improved productivity, efficiency, and sustainability of current practices.



Strategic area 2

Improved skills and capacities for better jobs in industrializing countries

MSMEs are often the backbone of rural economies. Therefore, building their resilience through



Strategic area 3

Addressing investment gaps in agribusiness

Bridging the global investment gap will only be possible by developing new types of innovative financing solutions based on partnerships. UNIDO facilitates domestic investments and foreign direct investments (FDIs) in rural and peri-urban areas of developing economies by assisting in infrastructure planning and de-risking investments. Many investment gaps could be tackled by bringing together relevant stakeholders to address the financing needs of MSMEs in developing countries.

- » **Access to finance.** UNIDO collaborates with local banks and IFIs for the development and promotion of innovative financial solutions in agriculture and agribusiness to enable an upgrade in their business practices.
- » **Collaboration with IFIs.** UNIDO partners with IFIs and the private sector to facilitate larger investments required for infrastructure development.
- » **Organization of investment forums for agribusinesses.** UNIDO fosters engagement among a broad group of stakeholders to identify possible solutions and create new business partnerships with the involvement of the public and private sector.
- » **Private sector involvement.** UNIDO galvanizes action from the private sector to support agro-industrialization and food systems transformation, and endorses action-oriented initiatives aimed at providing innovative solutions, such as UNIDO's "A World without hunger is possible!" initiative.



Strategic area 4

Promoting agro-innovation & technologies

Tackling global challenges - such as climate change, pollution, water shortage, and loss of biodiversity - in food and non-food MSMEs (e.g. textile, leather, and non-timber forest products), requires rapid and scalable solutions based on innovative technologies and techniques. Circular and smart practices, renewable energy, and improved water management are just a couple of examples where technology can contribute to solution-oriented practices of MSMEs. Innovation entails the ability of businesses to transform their practices by using data and applying regenerative and cleaner processing technologies. However, without local access to them, MSMEs cannot effectively compete in global markets. Therefore, innovation hubs and centers can serve as platforms to develop or promote existing agricultural technologies and services for MSMEs.

- » **Innovation hub for agricultural technologies (IHAT).** Farmers and agribusinesses require support services to ensure their competitiveness as well as their ability to implement their practices for product portfolio diversification and risk mitigation. IHAT is a new approach to develop innovation support services for companies in devising new solutions, addressing the challenges of agribusinesses, and mainstreaming local innovations.
- » **Development of circular and smart practices.** For stakeholders involved in textile, leather and non-timber forest products, UNIDO aims to scale up its portfolio on the Sustainable Leather Programme with increased mobilization of international climate financing.
- » **Promotion of bio-based solutions (bioeconomy) and regenerative practices.** UNIDO has experience in supporting MSMEs in climate adaptation and mitigation measures through best available techniques (BATs), which are an essential contribution to improve stability by reducing vulnerabilities, as well as building resilience to future shocks.
- » **Promotion of innovative smart digital solutions.** These include the UNIDO-Smart Performance Analytics for Real Time Kaizen (U-SPARK) for food processing industries in Africa.



Strategic area 5

Strategic Infrastructure for resilience in industrializing countries

Avoiding disruptions in the food supply chain entails the urgent need to upgrade strategic infrastructures. Facilities for primary processing of agricultural produce and by-products, along with aggregation centers and storage capacities, are essential elements for national food security. To strengthen this foundation, UNIDO supports the development and implementation of large-scale agribusiness infrastructure projects. This includes IAFPs, RTCs, agro-processing hubs (APHs), leather parks, and effluent treatment plants (ETPs).

- » **Resilience diagnostic for food security based on industrial infrastructure.** Recent years have highlighted the inability of many countries to withstand shocks affecting food supply chains, leading to food crises. Assessing national capacities in industrial infrastructures that are necessary for both food and non-food supply chains contributes to relevant sections of countries' industrial policies.
- » **Development of integrated agro-food parks.** UNIDO has supported several countries in

conceptualizing and establishing IAFPs. This includes preparing feasibility studies and operational plans for IAFPs and related storage facilities. A number of African countries have also requested similar assistance and support.

- » **Development of common services for a resilient infrastructure.** UNIDO has assisted in the development of common services for various agricultural value chains, such as affluent water treatment for tanneries. Addressing pollution from industrial activities is crucial to mitigate public health risks, including antimicrobial resistance, foodborne illnesses, and land degradation.

INTEGRATED AGRO-FOOD PARKS (IAFPS)

An IAFP consists of an agro processing hub (APH) linked to a network of rural transformation centers (RTCs). The APH is a centrally managed cluster of agro industrial and related firms designed to achieve economies of scale and generate positive externalities. This is made possible by sharing utilities, common and specialized infrastructure, and accessing opportunities for bulk purchasing and selling, as well as a range of business services.

Each RTC serves as a vital link between local producers and the agro-industries within the APH. These complexes are where agricultural products sourced from farming communities or collection centers are aggregated, sorted, stored, and may undergo primary processing (as needed per product). From there, goods are either transported to the APH or in the case of fresh produce (such as fruits and vegetables) sold directly to consumers.

To date, UNIDO has supported Ethiopia in the establishment and operation of IAPs; three APHs are under development in Senegal, and others in the designing and planning stages in Kenya, Tanzania, and Zambia, among others.

- » **Food safety regulatory programmes.** UNIDO has a long history of delivering food safety interventions focused on competitiveness, market access, and conformity assessment services. Building on this, UNIDO continues to support food businesses in selected value chains by improving their compliance capacities and creating a supportive environment through local public and private services.
- » **Capacity building.** UNIDO continues to enhance the institutional capacities of food safety authorities in areas such as testing, inspection, and digital performance monitoring. Simultaneously, special programmes are being developed to build competent authorities in supporting local food businesses to achieve market access and regulatory compliance.
- » **Food fortification.** In collaboration with the WFP, UNIDO supports the development of local and regional production and supply capacities for nutritious food products. This supports MSMEs to access new markets, including WFP humanitarian programmes.

VIENNA FOOD SAFETY FORUM (VFSF)

First launched in 2022, UNIDO brings together the global food safety community to promote lessons learned and share experiences through an annual food safety forum.

The forum serves as a dynamic platform for the private sector, regulators and academia, allowing them to forge the future of food safety together. Furthermore, it significantly contributes to the work of the Codex Alimentarius in emerging topics.

At the VFSF 2025, UNIDO launched the Food Safety Approach 2.0. This update to its 2016 framework incorporates recent developments and best practices aimed at strengthening food safety systems in low- and middle-income countries.

Strategic area 6

Improved nutrition and safety of food

Food security encompasses the essential need for food that is safe, nutritious, and accessible for all consumers. Food safety is a shared responsibility that should be guaranteed from farm to fork. Supporting the food sector in complying with food regulatory and market requirements - including nutrient content - enhances both operation resilience and public health outcomes. UNIDO collaborates with a wide range of stakeholders in nutrition and food safety, including UN agencies (FAO, IAEA, WHO, WFP), business associations and cooperatives, and academia.





Partnerships



International organizations

UNIDO is recognized as a key partner in improving the food security situation in Member States by focusing on economic transformation through inclusive and sustainable industrialization. Given the complexity of food security within broader development challenges, close collaboration among development agencies is more crucial than ever before.

The FAO and UNIDO signed a Memorandum of Understanding in October 2022, focusing on

normative work and cooperation in food security, zero hunger, and food safety. The two organizations have launched ASTA, which is designed to achieve socio-economic and environmental impact by transforming practices in selected value chains. Separately, the **International Atomic Energy Agency (IAEA)** provides nuclear technologies and the know-how to Member States on food irradiation, food testing, authenticity, and climate-smart agriculture solutions.

IFIs, like the **World Bank Group (WBG)**, the **African Development Bank (AfDB)**, and the **Islamic Development Bank (IsDB)**, can act as lenders or donors of larger initiatives, which might also include the purchase of equipment or the development of strategic infrastructure for food security.

UNIDO also offers a unique partnership with the WFP, strengthening the capacities of local agribusinesses that supply nutrient dense foods for WFP's humanitarian assistance programmes. Additionally, UNIDO works closely with the IFAD on climate-related interventions that help build the resilience of micro, small, and medium-sized enterprises.





INNOVATIVE MULTI-STAKEHOLDER PARTNERSHIP ON COTTON VALUE CHAIN



Partenariat pour le Coton



The '*Partenariat pour le coton*' (Partnership for Cotton) was launched in February 2024, stemming from an innovative collaboration between the WTO and FIFA. This extensive partnership also includes stakeholders such as UNIDO, ITC, Afreximbank, ILO, IAEA, the International Cotton Advisory Committee, the Better Cotton Initiative, and the Cotton Made in Africa standard. The initiative's primary goal is to support African cotton-producing countries to integrate into regional and global markets, increase local processing for value addition, and thereby create more decent jobs to benefit local communities.

PARTNERSHIP WITH WFP ON FOOD SECURITY AND FOOD SYSTEM TRANSFORMATION

In collaboration with the WFP, the global programme *Framework for Local Sourcing of Specialised Nutritious Food* leverages the two institutions' complementary mandates to address the dual challenge of hunger and poverty through increased local production. This is achieved through processing and procurement

of food for humanitarian assistance. Key interventions include strengthening smallholder farmers' resilience, reduction of post-harvest losses through provision of innovative post-harvest management, first mile storage, value addition infrastructure, energy, and financial and technological solutions.



Global partnerships

Exploring and joining existing global initiatives offers new avenues for delivering UNIDO's services and providing coordination mechanisms at the global level. The international community has already decided to advance the food security agenda through special initiatives, such as the WBG's Global Alliance for Food Security or the Global Agriculture and Food Security Program (GAFSP). UNIDO organizes international conferences to bring together development partners, Member States, and the private sector for the identification of new solutions and local partnerships addressing food security challenges from an economic access and stability perspective.

UNIDO collaborates with a wide array of private sector companies, including multinational corporations, MSMEs, foundations, and industry associations across various sectors and value chains. UNIDO acts as an implementation agency for its partners through its **Public-Private Development Partnerships (PPDPs)**. The PPDP framework is one of UNIDO's flagship approaches for the delivery and funding of public services with wider development impact. Under this model, investments, risks, responsibilities, and rewards are jointly shared between the public and private sector, as well as the development partner. Some of these PPDPs include collaborations with private sector companies such as Alfred Ritter GmbH & Co. KG, Illicafè S.p.A., Luigi Lavazza S.p.A., Office Chérifien des Phosphates (OCP) Group, Deloitte, DHL Group, Google LLC, Anuga, as well as Fairtrade International, to support agricultural services, skills development, and smallholder farmers.



Business partnerships

UNIDO collaborates with the private sector to align its initiatives with the needs of sustainable agro-industries, effectively combining resources and expertise to promote shared prosperity, economic growth, and environmental sustainability. These partnerships deliver innovative solutions to industrial challenges in producer countries, providing concrete opportunities for action that achieve long-term sustainability goals. Ultimately, they promote sustainable agri-business development and inclusive economic transformation in line with the SDGs.





Development finance partnerships

UNIDO's engagement with IFIs and other public and private financial actors is essential to provide its Member States with the financial skills, expertise and resources - particularly through blended finance - needed to transform their food systems. By leveraging UNIDO's expertise and experience, rooted in decades of successful technical assistance implementation, Member States can realize their potential to address inequality, alleviate environmental and climate change impacts, and strengthen resistance to and recovery from shocks.

A notable example of these successful partnerships is the newly established **Alliance for Special Agro-Processing Zones (A-SAPZ)**. UNIDO is a founding member, together with the AfDB, the African Export-Import Bank (Afreximbank), ARISE IIP, and the IsDB. The Alliance works towards bridging the critical financing gap in agri-business development, agro-processing, and the establishment of IAFPs.

Furthermore, UNIDO is developing the Transformation Pathways Initiative (TPI), jointly with Finance in Motion, a global impact fund manager. The TPI will be comprised of an investment fund and a related technical assistance facility. This is an example of how public and private funding can be effectively blended to address critical issues related to Member States' sustainable economic and industrial development.



Academia and research

UNIDO collaborates on technology and knowledge transfer with a wide range of partners, including universities and key institutions, such as members of the Consultative Group on International Agricultural Research (CGIAR) and IuFOST. In the scope of its interventions, UNIDO engages academia to improve their practices and support demand-driven research. Partnerships with academia and research institutions are particularly relevant for the development and successful operation of Innovation Hubs for Agricultural Transformation.





Technical Cooperation Portfolio

UNIDO's Technical Cooperation Portfolio translates its mandate into action, supporting Member States with tailored projects that strengthen food systems, create jobs, and build resilience. These initiatives operate across multiple value chains, specifically addressing gaps in post-harvest management, skills and capacity development, investment mobilization, innovation, infrastructure, and food safety. By combining technical expertise, strategic partnerships, and innovative financing mechanisms, UNIDO delivers its practical solutions that not only improve food security but also drive inclusive and sustainable industrial transformation. The examples below highlight best practices and key achievements from UNIDO's global portfolio.



Strategic area 1

Sustainable food systems for reduced Post-Harvest losses

- » In Suriname, ASTA established the Horticulture Innovation Hub to promote advanced technologies, sustainable practices and entrepreneurship, and improve access to finance for farmers and cooperatives in the horticulture sector. Furthermore, an ASTA project was launched in Jordan under the UN Joint SDG Fund to transform the country's agrifood system towards greater sustainability and resilience.
- » In West Africa, UNIDO has been implementing an EU-funded competitiveness programme, thereby supporting seven countries - namely Cabo Verde, Gambia, Ghana, Guinea, Guinea-Bissau, Senegal, and Sierra Leone - to boost local production and export capacity for key agriculture commodities.
- » In Kenya, through the SDG Multi-Partner Trust Fund, UNIDO is supporting the Government in strengthening the capacities of MSMEs in the banana and meat value chains. The initiative aims to enhance circular practices and business models relevant to county aggregation and industrial parks in Laikipia and Nyamira, respectively. To date, this project has delivered significant results:





43 MSMEs in the banana and beef value chains have received tailored technical assistance to improve their circular agro-processing capacities, while 17 policymakers and value chain actors have participated in study visits to South Africa and the Philippines, gaining exposure to international best practices in circular production.

- » In South Sudan, 80 women from displaced and host communities received training in entrepreneurship and post-harvest processing of groundnut and sesame, supporting microenterprise growth, food security and social stabilization.
- » In Somalia, through an EU-funded project, UNIDO is helping the government strengthen the private sector. Over 450 businesses have benefited from the initiative, leading to the creation of 1,500 jobs and stimulating SME activity valued at approximately USD13 million.



Strategic area 2

Improved skills and capacities for better jobs in industrializing countries

- » In Ethiopia, in collaboration with the AfDB, the EU, and the Government of Ethiopia, UNIDO has supported over 500,000 smallholder farmers and MSMEs to enhance the quality of their produce and improve market access. This was achieved through targeted support in financing, business upgrading, and linkages with firms operating in IAIPs.
- » In Sudan, with funding from the Government of Canada, UNIDO has supported over 1,750 women smallholder farmers across 133 producer associations in Gedaref and the Red Sea State with agricultural inputs and financial literacy, thereby enhancing their resilience and economic empowerment.
- » In the Democratic Republic of Congo, 300 women, including survivors of gender-based violence, were trained in bioethanol production, with nearly half gaining employment subsequently.



Strategic area 3

Addressing investment gaps in agribusiness

- » The ASTA Suriname horticulture Centre, legally registered as a not-for-profit foundation (Stichting), also hosts the Collateral Facility - a loan guarantee mechanism designed to tackle constraints in accessing finance, and stimulate investments by de-risking bank-issued loans to farmers and cooperatives that would otherwise be excluded from financing.
- » In Cambodia, the EU-funded CAPFish-Capture Project used blended finance mechanisms to support twenty enterprises with over USD 440,000 for processing equipment and USD 550,000 in guaranteed, collateral-free loans, leveraging over USD 500,000 in their own contribution.



Strategic area 4

Promoting agro-innovation & technologies

- » In Sudan, under the RESEAT project, 441 new agri-startups were launched — 73% of which are women-led risk-sharing finance mechanisms and the establishment of cold storage and processing facilities.
- » In Ghana, UNIDO piloted a Kaizen-based digital solution to optimize agrifood manufacturing and supply chain management. Three women-led parboiled rice cooperatives consisting of over 360 members were provided with machine learning-based artificial intelligence tools for assessing rice quality.
- » In Pakistan, UNIDO supported the establishment of the Leather Finishing Centre in the Kasur tannery cluster by providing equipment, training, and technical guidance, while local authorities and tanners handled construction and utilities. The Centre introduced modern finishing techniques and equipment operation, enabling local factories to upgrade their processes. Thirty years later, the Centre remains fully operational and self-sustaining, continuing to support smaller units and reinvesting its income in new machinery and improvements.



Strategic area 5

Strategic Infrastructure for resilience in industrializing countries

- » In Ethiopia, three IAIPs are operational, with 112 investors committed, 2,297 jobs created, and over 100,000 smallholder farmers linked to processing.
- » In India, the Ranipet Common Effluent Treatment Plant (RANITEC) received support from UNIDO in the design phase and the provision of selected equipment, including a mechanical screen, decanter centrifuge, floating aerators for degasifiers, along with continued technical assistance from national and international experts. The RANITEC in V.C. Mottur is one of such successful facilities catering to the needs of 82 tanneries.
- » In Pakistan, the Karachi Environmental Treatment Project (ETP), implemented by the Pakistan Tanners Association (PTA) with support from UNIDO and funding from the Global Environment Facility (GEF), represents a key initiative to improve strengthen solid waste management in the Korangi Leather Zone. Since its launch in 2019, the project has established a fully operational Solid Waste Facilitation Centre and upgraded the Combined Effluent Treatment Plant (CETP) through the integration of solar energy and advanced testing facilities. These efforts are helping Pakistan's leather industry comply with international environmental standards, advance sustainability practices, and enhance its export competitiveness.



Strategic area 6

Improved nutrition and safety of food

- » In Cambodia, UNIDO has supported institutional reforms in food safety governance and strengthened value chains in the fisheries sector. This was done by supporting the implementation of food safety standards, upgrading production facilities, certification and traceability processes, and the establishment of market linkages. Through value chain investment support of approximately EUR 1.5 million, forty enterprises received processing equipment and coaching in business management and food safety.
- » In Pakistan, UNIDO supported the meat and apple value chains in the Khyber Pakhtunkhwa and Balochistan provinces, facilitating the provision of safer food to more than 100,000 people, creating and retaining over 2,500 jobs, and improving livelihoods for nearly 32,000 beneficiaries.
- » In China, UNIDO, in collaboration with the Ministry of Commerce, supported small and medium enterprises in Quannan County by promoting sustainable packaging solutions that improve food safety, reduce waste, and strengthen the local agricultural identity. UNIDO also shared best practices on remote auditing and inspection, as well as on the paperless exchange of electronic certificates, and supported the development of regional guidelines for remote audits and inspections based on Codex Alimentarius principles.





Key Achievements

The World Without Hunger (WWH) Conference, held in Addis Ababa, Ethiopia, from 5 to 7 November 2024, co-organized by UNIDO together with the Government of Ethiopia, the African Union Commission, and FAO, marked a major milestone in global efforts to end hunger. The Conference concluded with the Addis Ababa Call to Action, a roadmap mobilizing international partners and both public and private sectors to scale up investments toward eradicating hunger. A key outcome of the Conference was the launch of the joint UNIDO–FAO study “Ending Hunger is Possible”, which underscores an income-generating approach focused on enhancing productivity and value addition across agrifood systems as the most resilient and sustainable pathway to achieving food security. Building on the study’s findings, UNIDO conducted a comprehensive portfolio analysis to align its programmes with the study’s recommendations, ensuring greater impact and coherence. Furthermore, at the UN Food Systems Summit Stocktaking Moment (UNFSS+4) in July 2025, UNIDO launched its Food Loss

and Waste (FLW) Action Plan, which advances system-wide solutions for reducing losses and enhancing economic inclusion - UNIDO’s leadership in food systems transformation through technical guidance, financing, and partnerships.

UNIDO has advanced food security worldwide through flagship programmes that cut post-harvest losses, boost MSME competitiveness, unlock investment, drive agro-innovation, build resilient infrastructure, and strengthen food safety and nutrition. Initiatives such as ASTA, IAIPs, Food Safety 2.0, ACT, U-SPARK, and Regenerative Bioeconomy are delivering real impact on the ground. In parallel, UNIDO has convened major global platforms—including the Vienna Food Safety Forum, the Sustainable Food Packaging Confex, the World Without Hunger Conference, and World Cotton Day—bringing together partners and decision-makers to shape the future of sustainable, resilient food systems.





FOOD LOSS AND WASTE (FLW) ACTION PLAN

Building on the Addis Ababa Call to Action and the outcomes of the *World Without Hunger Conference*, UNIDO launched the FLW Action Plan as a concrete framework to transform post-harvest systems and accelerate progress towards ending hunger. The Action Plan outlines ten Priority Actions that integrate infrastructure investment, innovation, and inclusive partnerships to reduce post-harvest losses across value chains — particularly in regions most affected by food insecurity. It aligns UNIDO's technical cooperation and policy work through flagship programmes such as IAFPs, CoEs, and the Food Safety Approach 2.0, emphasizing collaboration with governments, IFIs, and private partners. By reducing the USD 2.6 trillion annual cost of food loss and waste, the FLW Action Plan aims to unlock climate, social, and economic benefits while fostering sustainable and resilient food systems.



Strategic area 1

Sustainable food systems for reduced Post-Harvest losses

UNIDO has launched several flagship initiatives that directly address food loss and waste while strengthening food value chains. UNIDO's systemic interventions focused on storage, processing, packaging, and food safety have shown strong results in reducing food loss and waste, contributing to SDG2 (Zero Hunger) and sustainable development.

- » In Ethiopia, IAIPs have **reduced post-harvest grain losses by up to 25%**.
- » In Vietnam, COEs have **cut mango and vegetable losses by up to 50%**.
- » With a diverse portfolio of projects spanning Africa, the Near East, Central and Eastern Europe, West Asia, and Latin America and the Caribbean, **ASTA** is delivering standardized processes and tools, such as the UNIDO–FAO methodology brief on developing sustainable food value chains.
- » UNIDO's **Sustainable Food Packaging Programme** has successfully established three Centers of Excellence on Packaging (CEPs) in Member States, which are now operating sustainably. Additionally, the Vienna Sustainable Food Packaging ConFex, co-organized by UNIDO, engaged over 150 stakeholders from 53 Member States.

Together, these initiatives strengthen infrastructure, innovation, and partnerships to reduce post-harvest losses and improve market access.



Strategic area 2

Improved skills and capacities for better jobs in industrializing countries

UNIDO is equipping agribusinesses and MSMEs with the skills, services, and tools needed to compete globally.

- » Through **CoEs**, local enterprises gain access to cutting-edge practices, compliance services, and knowledge platforms specifically tailored to their needs.
- » In collaboration with the WFP, the **Local Sourcing for Food Aid Programme** supports MSMEs in meeting humanitarian procurement standards, thereby unlocking new market opportunities while improving the quality and safety of locally produced food. These efforts enhance productivity, create new opportunities for youth and women, and strengthen resilience across rural economies.
- » Since 2019, **Creative Tunisia** has implemented over 500 training and capacity-building sessions, financed and structured more than 250 enterprises, and developed over 800 new products. **Creative Tunisia 2.0**, launched in 2024, has upgraded 10 leading craft enterprises, trained more than 300 youth and women, and supported over 80 project holders in incubating their businesses.

UNIDO has significantly advanced skills development and job creation in industrializing countries, as detailed in the TC portfolio.



Strategic area 3

Addressing investment gaps in agribusiness

To close persistent financing gaps in the agro-food sector, UNIDO mobilizes innovative partnerships and investment facilitation platforms. Initiatives such as **A World Without Hunger is Possible!** galvanize private sector action and leverage IFIs to channel resources into agribusinesses, particularly in developing economies. By convening investment forums and building bridges between local MSMEs and global financiers, UNIDO enables enterprises to modernize practices, expand infrastructure, and increase value addition, especially in underserved rural and peri-urban areas.

Through the **Agro-Food Parks initiative** in Ethiopia, a USD 5 million technical assistance programme has successfully leveraged USD 1.52 billion from public and private sources to support the expansion of three additional parks, with an estimated investment of USD 900 million. In Senegal, UNIDO's technical assistance enabled feasibility studies and business plans for agropoles in the north and south, leveraging USD 516 million in investment.



Strategic area 4

Promoting agro-innovation & technologies

UNIDO is driving innovation to build climate-resilient and competitive agribusinesses.

- » The **U-SPARK** tool helps MSMEs optimize their operations through digital monitoring and analytics. Successful pilots in Ghana have demonstrated strong results. Beneficiary enterprises reported significant improvements in performance management, especially in productivity and resource efficiency, data collection, access and analysis over time, real time problem detection and resolution on the production floor, communication between management and shop floor staff, and overall employee mindset.
- » The **Regenerative Bioeconomy Programme** has been actively involved in global platforms on bioeconomy, including the UN Expert Group Meeting (EGM), the G20 Bioeconomy Initiative, and the FAO Multistakeholder Partnership on Bioeconomy for Sustainable Food and Agriculture.
- » The **Ethical Leather Programme** has provided direct assistance to SMEs in over 80 countries, upgraded more than 50 institutions, and developed over



Strategic area 5

Strategic Infrastructure for resilience in industrializing countries

200 guidelines and standards, supported by training, normative guidance, and digital learning platforms. Furthermore, the online Leather Panel (www.leatherpanel.org) offers technical manuals on best practices and access to globally used online courses, attracting 50,000 users annually from 200 countries.

These initiatives collectively ensure that agribusinesses adopt cutting-edge, sustainable practices that enhance competitiveness and environmental stewardship.

UNIDO is pioneering infrastructure models that anchor agro-industrial transformation.

The **IAFPs** link smallholder farmers to markets through shared infrastructure, services, and investment facilitation, catalyzing inclusive rural development in multiple African countries. In Ethiopia, four pilot parks have already been established, three of which are operational, supported by 19 RTCs. By mid-2025, the parks mobilized over USD 1.1 billion in investments, achieved an average occupancy above 50%, generated more than USD 60 million in combined export and domestic sales, and created over 100,000 jobs across value chains, while integrating more than 280,000 smallholder farmers. At the continental level, UNIDO is contributing to the implementation of the **Common African Agro-Parks Programme** (CAAPs), notably in relation to the cacao value chain between Côte d'Ivoire and Ghana.

In parallel, UNIDO has supported the upgrading or establishment of 75 **Effluent Treatment Plants (ETPs)** within **Leather Industrial Parks**, combining efficient industrial layouts with centralized treatment systems to enhance productivity and ensure environmental compliance across the leather sector.

By promoting scalable, resilient infrastructure models, UNIDO is supporting Member States in building the backbone of sustainable and shock-resistant food systems.

Food safety and nutrition remain central to UNIDO's mandate.

- » Through the **Food Safety 2.0** approach, UNIDO helps Member States modernize regulatory systems, strengthen competent authorities, and build institutional capacities to ensure compliance with international standards.
- » The **Vienna Food Safety Forum**, launched in 2022, provides a global platform for regulators, the private sector, and academia to exchange

knowledge and shape future priorities in food safety.

- » Within a close **UNIDO-WFP partnership**, UNIDO supports food fortification and the development of nutritious and safe food products for humanitarian and local markets. These initiatives not only safeguard consumer health but also open new economic opportunities for MSMEs.
- » Through **strategic partnerships** and **high-level convenings**, UNIDO has also played a key role in advancing global dialogue and action on food security.
- » UNIDO has piloted digital tools such as remote audits and electronic certification and developed tailored voluntary Third-Party Assurance (vTPA) programmes that expand market access for MSMEs.
- » UNIDO has actively supported its Member States in strengthening laboratories, accreditation systems, and regulatory frameworks, while advancing regional harmonization on SPS measures in Africa and ASEAN.
- » UNIDO has launched various national and regional food safety capacity building initiatives, including in Somalia, Liberia the ASEAN region, and four regional economic communities in Africa (COMESA, ECCAS, ECOWAS, and SADC).
- » UNIDO also contributes to flagship global initiatives, from the **UN Food Systems Summit**, mobilizing leaders to transform food systems for the SDGs.
- » Further achievements include supporting the World Packaging Organization's **WorldStar Awards**, which highlight excellence in packaging innovation, advancing Africa's food agenda through **AGRA's Future Food Summit**, and strengthening industry collaboration through the global **ProPak series** with Informa Markets, connecting innovators across six countries.

UNIDO is actively strengthening agricultural commodity supply chains to promote fair, climate resilient, and value adding participation of developing countries in global trade. This approach responds to the urgent need for productive, resilient, and sustainable supply chains that create decent jobs, empower smallholders, and align with international sustainability standards. It also addresses systemic inequalities and environmental challenges across key sectors such as coffee, cotton, and cocoa.

The **ACT Coffee Programme**, spearheaded by UNIDO with support from the Italian Government, is redefining how Africa's coffee sector can achieve climate resilience and inclusive industrial transformation. Through a holistic PPDP model and a



one-stop-shop technical assistance approach, UNIDO has successfully mobilized strategic coordination among EU Member States, global coffee companies, and African institutions. Recognized as a flagship under the EU Global Gateway, the programme has launched Delivery Labs for policy orientation, initiated Coffee Training Centers, and facilitated access to climate finance. By aligning national and international efforts, engaging major roasters like Lavazza, Illy, Nestlé and JDE Peets, and promoting gender and youth inclusion, UNIDO is driving systemic change and positioning ACT Coffee as a model for sustainable value chain development across the continent.

At the WTO's 9th Global Review of **Aid for Trade**, UNIDO and its partners marked a significant milestone in the Cotton Initiative by signing a Joint Declaration to galvanize investment financing for a sustainable cotton industry in West Africa. The initiative aims to mobilize USD 12 billion for the Cotton Four countries (Benin, Burkina Faso, Chad, and Mali) and Côte d'Ivoire (C4+), with the vision of transforming the region into a hub for sustainable textiles and clothing. A baseline study confirmed a "once-in-a-lifetime development opportunity" to effectively add value, develop skills, and create decent jobs. National consultations and roadmaps have since been developed under a five-pillar strategy, with strong interest from financial institutions including AfDB, Afreximbank, ITFC, IFC, and AFC. UNIDO, now jointly serving as the secretariat of the Partenariat pour le Coton alongside the WTO, coordinates efforts to unlock investment and promote inclusive, climate-resilient industrial development in the cotton-textile-garment sector.



Further Reading

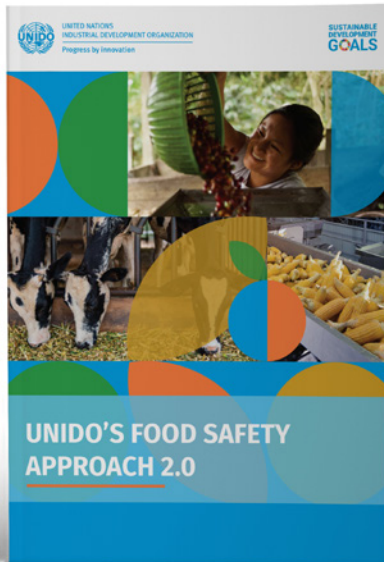


UNIDO-FAO STUDY: ENDING HUNGER IS POSSIBLE:
AN INCOME-GENERATING APPROACH THROUGH
VALUE ADDITION

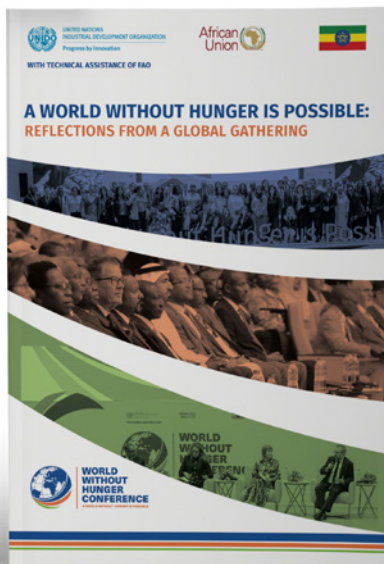


A WORLD WITHOUT HUNGER IS POSSIBLE: UNIDO'S
APPROACH AND CONTRIBUTION

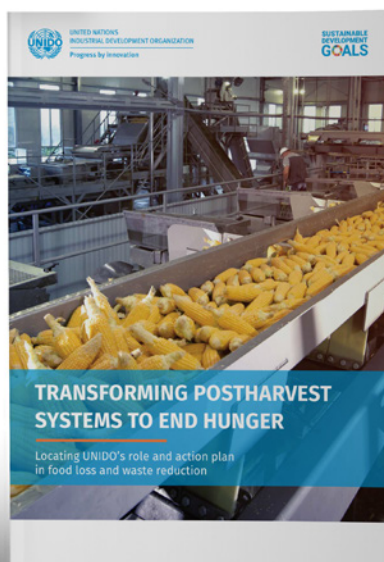




UNIDO'S FOOD SAFETY APPROACH 2.0



A WORLD WITHOUT HUNGER IS POSSIBLE: REFLECTIONS FROM A GLOBAL GATHERING



TRANSFORMING POSTHARVEST SYSTEMS TO END HUNGER: LOCATING UNIDO'S ROLE AND ACTION PLAN IN FOOD LOSS AND WASTE REDUCTION





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