United Nations Development Programme



Supporting Food Systems Transformation Towards Sustainability and Resilience

UNDP White Paper

Photo: UNDP India

“Food shows us where real power lies; it can explain conflicts and wars; showcase human creativity and invention; account for the rise and fall of empires; and expose the causes and consequences of disasters. Food stories are perhaps the most essential stories of all.”

Dan Saladino
Eating to Extinction
(2021)

SUPPORTING FOOD SYSTEMS TRANSFORMATION TOWARDS SUSTAINABILITY AND RESILIENCE

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This White Paper was produced by a specially convened UNDP Task Team including participants from the Crisis Bureau, Climate Hub, Nature Hub, Nairobi Resilience Centre, Governance Hub and Sustainable Finance Hub. This breadth of expertise demonstrates the complexity of Food Systems and the need to approach transformation in a holistic manner.

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Citation: Supporting Food Systems Transformation Towards Sustainability and Resilience, United Nations Development Programme, 2024.

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Executive Summary

The time is now for food systems transformation. Humanity needs thriving food systems, but they are in crisis. Both by addressing immediate drivers of food insecurity and long-term systemic weaknesses that could trigger food insecurity, there has never been a more critical time to grasp the moment, break down the silos which obstruct progress, and build collaborative solutions for future food systems that are sustainable, inclusive and equitable, healthy, and resilient, serving both people and planet.

Food systems are in a state of disarray, with far-reaching consequences across environmental, health, and socioeconomic factors. This is even more pronounced in conflict and fragile contexts where conflict has a direct impact on food systems and resulting levels of food security. In 2023 alone, 281.6 million people faced high levels of acute food insecurity. This heightened food insecurity can fuel grievances, potentially escalating into instability and violence.

There is growing agreement that integrated development solutions, within and outside of crisis and fragile contexts, are key to addressing the underlying issues causing dysfunctional food systems and resulting food crises. Efforts are needed to speed up the transformation and bolster the resilience of both subnational and global food systems to ensure that no one is left behind. The objective is to enhance humanity's prospects of attaining food security through systems capable of supplying safe, affordable, balanced and healthy food to everyone.

Food systems are interconnected across various sectors and are linked to all the Sustainable Development Goals (SDGs). Consequently, they are crucial for achieving these goals, requiring multidimensional solutions to address them effectively.

This presents an unparalleled chance to tackle food crises in a comprehensive manner, moving beyond ineffective siloed methods and embracing systemic and multidimensional approaches. To do this we must address immediate consequences, long-term structural deficits and key vulnerabilities in food systems.

At the same time, this entails fostering collaboration among global actors, spanning the humanitarian development and peace spectrum, and leveraging their comparative advantage, while also empowering national and local stakeholders across various sectors to define locally driven solutions.

The objective of this White Paper is to identify pivotal themes and present transformative multidimensional solutions and areas of intervention for current and future UNDP engagement. It was produced by a cross disciplinary UNDP team and underwent consultation with internal and external stakeholders.

UNDP collaborates, partners and supports a range of stakeholders – including other agencies within the UN system, International Financial Institutions and other organizations – to collectively drive the strengthening of food systems towards enhanced resilience and sustainability. By actively participating in these collective endeavours, UNDP as SDG Integrator brings expertise, resources, and strategic innovation to strengthen food systems.

Four Dimensions of Change

The White Paper identifies four key dimensions for food systems transformation, each of which demands a number of areas of intervention.

Dimension One - Improving food systems governance, programmes and policies

The first Dimension provides the context in which the other three operate. Intervention areas here include supporting mechanisms, institutions and platforms that embrace complexity and address power imbalances, fostering multi-stakeholder dialogue through UNDP's Effective Collaborative Action approach, encouraging cooperation, extending systemic and system-wide perspectives (such as repurposing subsidies towards agroecology) at all levels of government. A whole-of-government approach is essential to move away from siloed approaches which address individual components but ignore the whole system and its linkages.

Dimension Two - Addressing structural drivers of unsustainable food systems

To strengthen food systems towards resilience and sustainability, we propose to address these six systemic drivers of unsustainable food systems. We draw on UNDP experience and expertise, and will work in collaboration with other stakeholders. Intervention areas are specific to each driver.

For the structural driver Poverty and Inequality the interventions are based on Inclusive Growth principles, including social protection institutions and prioritising those most vulnerable to food insecurity. Small-scale producers (often food insecure themselves) need access to land, water and credit. Systemic policies that link food assistance programmes to sustainable local production will improve access to health and diverse diets.

In Health, the key to unlock change is supporting governments to boost access to affordable, healthy and safe diets, whilst embracing sustainable production that significantly reduces harmful and dangerous chemical fertilizer, herbicide and pesticide inputs.

The Gender structural driver requires interventions that support governments to implement gender transformative policies in food systems, addressing power imbalances and ensuring the empowerment of women, including their rights and control over assets and food production resources, and equal pay.

The fourth driver, Environment, is positively underpinned by an accelerated transition to sustainable agricultural practices such as agroecology. Agroecological Food systems should be mainstreamed in National Biodiversity Strategies and Action Plans.

Climate change is both a major risk and opportunity for food systems: agriculture and land conversion are two of the biggest contributors of greenhouse gases, and small-scale producers are especially vulnerable to shifts in climate and extreme weather events such as flooding and droughts.

Interventions in agriculture and land use offer significant climate change mitigation and adaptation benefits which should be central to countries' National Climate Plans and Nationally Determined Contributions.

Energy is the final driver. Interventions that help food system players to reduce their dependence on fossil fuels will have both climate change and economic (cost of production) benefits.

Dimension Three - The food value chain

Interventions in this dimension focus on realigning power in the food value chain. Unsustainable food value chains see the most profit going to those with the most power: a fair, equitable and resilient food value chain would see the most benefit going to those (typically farmers) taking the most risk.

Governments will be supported to diversify domestic food production; promote sustainable agriculture, fisheries, and aquaculture; strengthen local food systems, shorten supply chains and encourage traditional and territorial markets; empower small-scale producers and small- and medium-sized enterprises along the food value chain; and build circular and resilient food value chains.

Dimension Four - Sustainable finance for food systems resilience and transformation

Finance –and equitable access to it– is the foundation of food systems transformation. Change will not happen if finance does not support it. The focus should be on how to reshape the global financial architecture to enhance food system resilience. This requires advocating for changes in policies, engaging in global policy-making, and influencing financial industry narratives. Subsidies and price support that lead to unsustainable outcomes must be retargeted towards sustainable agroecology. Efforts must redirect finance to local stakeholders, empowering communities to make decisions about their own food systems and promoting food sovereignty. This intervention also targets the private sector, encouraging sustainable and inclusive investment models that balance long-term sustainability with short-term profitability.

From the past to the future

It is 76 years since the Right to Food was included in Article 25 of the UN Universal Declaration of Human Rights. In that time food systems have evolved and transformed, and the debate now includes proposed solutions related to the Right to Food, social movements for food sovereignty, the evolution towards six pillars of food security, and the Food Systems Transformation Pathways. In addition, the need to address the systemic impacts of food systems in terms of the environment, health and nutrition, livelihoods and social inclusion, and economic growth is highlighted. Now is the time to take a long-term systemic view, ensuring improvements in the immediate term which do not conflict with positive outcomes in the future. By considering the Four Dimensions of this White Paper, we can plan for a future where food systems are sustainable, inclusive and equitable, healthy, and resilient.

Business as usual has failed us on multiple fronts. The task ahead is both unprecedented and timely: UNDP and its partners and collaborators must seize the moment to lead the change we need to see.



Photo: Unsplash

Introduction: the urgent need to transform food systems

“Global food systems are broken.”

At the UN Food Systems Summit +2 Stocktaking Moment in July 2023, UN Secretary General Antonio Guterres stressed that *“global food systems are broken – and billions of people are paying the price. However, broken food systems are not inevitable. They are the results of choices we have made,”* and *“transforming food systems requires all hands-on deck*[1]*.”*

The world currently finds itself in the throes of another global food crisis – the result of a confluence of crises: the war in Ukraine and the conflict’s impacts on two of the major food exporters; COVID-19's continued disruptions on global supply chains and the slow and uneven recovery from the pandemic-induced recession; climate shocks, including the floods in Pakistan and the droughts and heat waves that are hitting multiple regions of the world, from the Horn of Africa to China; as well as energy price shocks, which are adding fuel to the fire, with spiralling global inflation sparking spikes in food and fertilizer prices; and a debt crisis affecting vulnerable countries most, diminishing their resilience to these shocks. **Countries are experiencing an increase in food insecurity** due to this.

The challenges for this transformation are immense. Our food systems are in a state of disarray, with far-reaching consequences spanning environmental, health, and socioeconomic factors. According to the State of Food Security and Nutrition in the World Report 2023 (SOFI 2023) global hunger in 2022 affects 9.2 percent of the world population – between 691 and 783 million people – and a total of 2.4 billion people experience moderate or severe food insecurity. According to The Global Report on Food Crises (GRFC) 2023, over a quarter of a billion people were acutely food-insecure and required urgent food assistance in 58 food-crisis countries/territories in 2022. This is the highest number in the seven-year history of the GRFC.

Due to growing inequalities, **food systems are faced with difficulties in delivering nutritious, safe and affordable foods for all.** This means that while there are millions of people facing food insecurity and malnutrition, there is also an increase in the number of people suffering from being overweight and obese. The 2023 SOFI report reported that more than 3.1 billion people in the world, or 42 percent, were unable to afford a healthy diet in 2021.

Paradoxically, **those who play a crucial role in feeding the world often bear the brunt of food insecurity**, underscoring the deep-rooted poverty and inequality within the system. Food insecurity also disproportionately affects women. The 2023 SOFI Report states that the gender gap in food insecurity at the global level is 2.4 percent in 2022, (Women: 27.8 percent; Men 25.4 percent) suggesting that the global disproportionate impacts of the pandemic on women’s food insecurity have shown signs of easing. However, while the gender gap has recently reduced in Asia and in Latin America and the Caribbean, it has widened in Africa and in Northern America and Europe.

Food systems and climate change **are also one of the major contributors to environmental degradation**. Food systems alone are responsible for 31 percent of human generated GHG emissions globally.

[1] *Global food systems ‘broken’, says UN chief, urging transformation in how we produce, consume food.* (2023, July). United Nations. UN News. https://news.un.org/en/story/2023/07/1139037

The latest IPCC Report (AR6) highlights that **"Land, Water and Food"** adaptation and mitigation options offer the greatest potential in responding to the climate crisis. Implementing these options – including **reduced conversion of natural ecosystems and agricultural carbon sequestration** – will require a transformation in our food systems. In addition, food systems account for 80 percent of deforestation, 70 percent of biodiversity loss and 70 percent of all freshwater use (WWF[2]).

Fragile and crisis contexts account for the top 10 countries with the highest number of people[3] facing acute food insecurity with 258 million people facing high level of food insecurity in 2022 alone[4]. Events in Ukraine and Gaza are further proof of how war, conflict, emergencies, and protracted crises feed hunger – forcing people out of their homes, wiping out their sources of income and production capacity and wrecking countries' economies. Addressing key risks and vulnerabilities in these contexts with integrated development solutions and systems approaches from national to local level, can contribute to prevention, reducing humanitarian needs and catalyse peace dividends allowing a return to development pathways.

A wider consensus is emerging on the **need to address the root causes of broken food systems and of these crises and accelerate the transformation of national and global food systems**. Food systems are cross-sectoral, interlinking with all the Sustainable Development Goals (SDGs) and therefore central to achieving them.

The current combination of events represents a **unique opportunity to adopt a systemic approach to addressing both the immediate issues resulting from the food crisis,** as well as the short- medium- and long-term challenges, structural flaws, and weaknesses in food systems by transcending the siloed and sectoral approaches that have not worked in the past. This involves forging cooperation between and drawing on the strengths of different global development actors, as well as strengthening and empowering national and local stakeholders from across different sectors.



Photo: Getty Images

[2] WWF. (2022). *Food Systems and Sustainable Land Use: A WWF food manifesto for COP15*. https://wwfint.awsassets.panda.org/downloads/wwf_food_manifesto_for_cop_15_7_may.pdf.
[3] OECD. (2022). *States of Fragility 2022*. OECD Publishing, Paris.
[4] Food Security Information Network & Global Network Against Food Crises. (2023). *Global Report on Food Crises 2023: Joint analysis for better decisions*. https://www.fsinplatform.org/sites/default/files/resources/files/GRFC2023-compressed.pdf

White Paper Objective

The objective of this White Paper is to identify pivotal themes and present transformative solutions and areas of intervention in which UNDP is actively engaged or has the potential to engage, collaborating, partnering, and supporting various stakeholders – including other agencies within the UN system, IFIs and other organizations – to collectively drive the strengthening of food systems towards enhanced resilience and sustainability.

For this document, we are adopting the definition from the High-Level Panel of Experts (HLPE) on food security and nutrition in 2014 that states that a food system **"gathers all the elements (environment, people, inputs, processes, infrastructures, institutions, etc.) and activities that relate to the production, processing, distribution, preparation and consumption of food, and the output of these activities, including socio-economic and environmental outcomes."**

Transforming Food Systems requires a wide range of expertise and experience. This White Paper is the product of a cross-disciplinary UNDP team including experts from the Crisis Bureau, Climate Hub, Nature Hub, Nairobi Resilience Centre, Governance Hub, and Sustainable Finance Hub. The breadth of participation is testament to the complexity of Food Systems and an indication of their power to drive systemic change. We believe that this is the first time that a team of this scope and seniority has been assembled within UNDP to address the challenge of Food Systems.

This paper aims to guide and inform the interventions that UNDP designs and implements at the global, regional, national, and local levels, as well as to contribute to the global conversation on the need for a significant transformation of global food systems to make them sustainable and resilient.



Photo: Getty Images

What's wrong? The external systemic drivers of unsustainable food systems

Food systems have become increasingly fragile due to the convergence of systemic drivers, many of them external, that create a context that renders food systems vulnerable to shocks and that produces negative outcomes, such as ecosystems loss and degradation; worsening inequality and poverty; high levels of food insecurity and malnutrition. These external drivers are linked to, among others, demographic changes (urbanization and population growth); extractive mindsets; power asymmetries; working in silos, among many others. To strengthen food systems towards resilience and sustainability, we propose to address these systemic drivers of unsustainable food systems:

1. Weak food systems governance

Weak governance and sectoral perspectives. Governments with limited capacities and narrow sectoral outlooks often overlook the necessity for a comprehensive systemic approach to strengthen food systems, that considers interconnected objectives of environmental sustainability, inclusive growth, and health.

Lack of efficient or deficient food systems governance platforms and mechanisms. National and subnational governments have not created adequate and strong platforms and mechanisms that facilitate the collaboration needed for the design and implementation of systemic solutions for food systems strengthening.

Public policies and programmes on food systems are not inclusive. The most vulnerable actors in food systems – including small-scale farmers, artisanal fishers and other small- and medium-sized enterprises across food supply chains, as well as women, youth, Indigenous Populations – are not well-represented and/or empowered to influence the formulation of policies related to food systems.

High concentration of power. Food supply chains are highly concentrated – both at the global and national levels – in stages such as land ownership, input and grain production, and retail, among others. This concentration – often not regulated by governments – contributes to the fragility of food systems and the emergence of power disparities, which disproportionately affect small-scale food producers and low-income consumers.

Lack of financing to strengthen food systems. There is a significant lack of financing to address the need to transform food systems, in issues such as access to credit and productive resources, support and training for a transition towards sustainable food production, investments in infrastructure in food supply chains, and social safety nets that improve food assistance, among many others.

2. Interconnected vulnerabilities of food systems to climate change, biodiversity loss and ecosystem degradation

Climate change. Altered weather patterns, intensified extreme weather events, and fluctuating temperatures significantly impact crop yields, water availability, ocean acidification and warming, and overall food production, posing a direct threat to food security. Additionally, food production and distribution stand as primary drivers of climate change.

Ecosystem degradation. Food production, especially within intensive models, stands as a primary contributor to, and is simultaneously impacted by, issues such as soil erosion, deforestation, water scarcity, loss of biodiversity,

and the unsustainable overexploitation of fisheries.

Concentration of food production in a few crops. The concentration of food production on a limited number of crops heightens the vulnerability of food systems, diminishing biodiversity which is a primary source of protection against shocks and disruptions.

3. Poverty and inequality driving exclusive and unjust food systems

Smallholder farmers and agricultural labourers grapple with a relentless cycle of poverty; restricted access to essential services; lack of access to transport infrastructure, productive logistics and resources, and adequate distribution; and heightened vulnerability due to lack of social safety nets. This situation presents major challenges for other marginalised populations, such as youth and Indigenous Peoples.

Healthy diets are unaffordable for 3 billion people. Nutritious diets remain financially out of reach for impoverished individuals and other marginalised and vulnerable groups, leaving them more susceptible and prone to malnutrition and diet-related diseases.

Unequal impacts of health and food safety issues. Disease outbreaks (such as the COVID-19 pandemic) which disrupt food supply chains, labour availability and market access, along with food safety concerns, disproportionately affect impoverished and more vulnerable populations.

4. Systemic gender inequalities and increased food insecurity and vulnerability

Women are more food insecure than men. They exhibit greater vulnerability across all six pillars of food security – availability, access, utilisation, stability, agency and sustainability –, and are more profoundly impacted during periods of crisis.

Systemic inequalities make women more vulnerable. They encounter reduced access to land and productive assets, contend with unpaid labour and diminished income relative to men, experience exclusion from household and community decision-making, and bear a disproportionate burden of climate change impacts.

5. Unsustainable energy use and dependency in food systems

Dependence on fossil fuels. Food systems are highly dependent on fossil fuels at various stages along the food value chain – including synthetic fertilizer use, long-distance transportation, processing, and more – which makes food systems more susceptible to energy price volatility.

Competition for productive land between biofuel and food crops. This competition directly contributes to fluctuations in food prices, heightens food insecurity, and exerts adverse effects on biodiversity and ecosystems.

6. Conflicts, fragility and crises generate increased vulnerability and impact the resilience of food systems

Natural disasters. Floods, droughts, hurricanes, earthquakes, and other natural disasters often triggered or exacerbated by climate change, can destroy crops, infrastructure, and food supply chains, causing food shortages and humanitarian crises.

Conflicts, displacements, and political instability. Armed conflicts, displacements and political instability can disrupt food production, distribution, and access, leading to food crises and humanitarian emergencies.

Economic shocks, global trade disruptions and volatile commodity prices. Economic recessions and volatile commodity prices affect food affordability, particularly for vulnerable populations with limited purchasing power, and negatively impact small-holder farmers. Disruptions in international trade – such as trade wars or export restrictions caused by conflicts or pandemics – impact food availability and prices, especially for countries heavily reliant on imports.

Why UNDP?
UNDP's contributions to the collective, collaborative effort to strengthen food systems

Given the magnitude of the challenges at hand – encompassing food security, environmental sustainability, health, and inclusive growth – **effective collaboration amongst United Nations agencies, International Financial Institutions, Member states, and other stakeholders**, is imperative to catalyse the strengthening of food systems towards resilience and sustainability. This collective work will enable the integration of the range of expertise and resources required to comprehensively address the multifaceted challenges, inherent vulnerabilities, and deficiencies within current food systems.

UNDP reinforces and complements the vital efforts undertaken by FAO, WFP, IFAD, as well as other UN agencies, International Financial Institutions, and other stakeholders, in enhancing the robustness of food systems. By actively participating in these collective endeavours, UNDP brings expertise, resources, and strategic innovation to strengthen food systems.

By **adopting a holistic and systemic perspective, these agencies can collectively identify, analyse, and rectify the core flaws** in these systems. Through collaboration, the agencies leverage their distinct capabilities at global, country, and local levels, synergising efforts to enact meaningful change that no single entity could achieve alone.

UNDP's contributions can be viewed through its **six corporate signature solutions**[5] focusing on poverty and inequality, governance, resilience, environment, energy, and gender equality play a pivotal role in strengthening food systems. Through collaborative and complementary efforts, UNDP can actively contribute to addressing the complex web of challenges that food systems encounter.

UNDP has distinctive strengths and experiences that provide a significant comparative advantage and essential role in advancing the resilience of food systems. These are instrumental in supporting and complementing the essential work and initiatives undertaken by other UN agencies and stakeholders for that purpose.

1. UNDP has a broad development mandate, working across the full range of issues that are directly related to structural problems and solutions in food systems; governance, catalysing and supporting cross-sectoral policy dialogues; and mainstreaming food systems into overall development processes.

2. UNDP has a clear role as Sustainable Development Goals integrator, which facilitates the strategic alignment of SDGs related to food security, sustainability, and development, fostering a holistic approach to ensuring policy coherence in food systems. UNDP also supports the implementation of other global commitments, such as the Multilateral Environment Agreements (MEAs) including The United Nations Framework Convention on Climate Change (UNFCCC); NDCs; New York Declaration on Forests (NYDF); The Convention on Biological Diversity (CBD) in its partner countries. UNDP also feeds into global processes and negotiations, like the UN Food System Summit and its Stocktaking moments and UN Climate Change Conference, contributing on-the-ground experiences from the countries it works in.

[5] *UNDP. Strategic Plan 2022–2025.* (n.d.). UNDP. https://strategicplan.undp.org/

UNDP also contributes to global policy processes, such as the G20, where UNDP serves as the Secretariat for the Sustainable Finance Working Group.

3. UNDP takes integrated and multi-sectoral systemic approaches to complex development challenges, including food systems transformation. UNDP addresses interconnected issues within food systems, promoting and supporting coordinated efforts to enhance their resilience as well as the communities these affect. The focus is on the risks and vulnerabilities to these food systems to ensure they can absorb potential shocks. This includes UNDP's experience and expertise in governance (national and subnational), inclusive growth, gender, environment, climate change, energy, health, and in crisis contexts.

4. UNDP has a unique convening power and acts as a valued neutral broker across stakeholders. UNDP brings diverse stakeholders together for collaborative dialogue and collaboration, key for the strengthening of food systems. UNDP has years of experience promoting effective collaborative action for food systems transformation.

5. UNDP assists governments to convene across ministries, development partners, and civil society with a focus on those most marginalised and vulnerable, to promote people centred "whole-of-government" and "whole-of-society" responses. This approach supports incorporating multi-sectoral perspectives, promoting effective collaborative actions, policy coherence, and including marginalised voices into food system strengthening initiatives, ensuring inclusivity and equity.

6. UNDP has experience working with the private sector to enhance sustainable development outcomes related to food systems transformation. Through engagement with the private sector, UNDP drives innovative partnerships that promote sustainable practices, technological advancements, and investments in food systems.

7. UNDP has a wide country presence, with strong technical teams working at different levels of government, from national to subnational levels. This extensive presence facilitates the implementation of context-specific strategies, policies, and interventions that reinforce food systems at various administrative levels.

8. For decades, UNDP has been contributing to inclusive and sustainable food and agricultural commodity systems. UNDP's experience provides insights and expertise to promote fair and sustainable food systems with an integral approach to development challenges.

9. UNDP has the largest climate portfolio in the UN system. UNDP integrates climate mitigation and adaptation strategies into food systems, to address the negative impacts of climate change on food security and food production.

Across interventions recommended in this document, UNDP will also take a conflict-sensitive approach in fragile and conflict settings, working with humanitarian counterparts to address humanitarian needs.


Photo: istock

10. Effective Collaborative Action. In achieving food systems transformation, UNDP's Effective Collaborative Action (ECA) is a key methodology to not only systematise multi-stakeholder collaboration but also embed essential capabilities and actions on the ground, across the world, to catalyse transformation.

Launched in 2021, **UNDP's methodology** **Guide to Effective Collaborative Action** was born out of the learnings of more than 15 years of experience from the UNDP Food and Agricultural Commodity Systems team in multi-stakeholder collaboration and systems change globally. **Evolving from the previous National Commodity Platforms Methodology, ECA brings about a holistic, systemic approach to designing and executing multi-stakeholder collaborative processes.** Given the growing complexity of food systems, it offers a wider range of options to work through the multiplicity of entry points for food systems transformation: from single to multiple commodities, working at national, subnational and landscape levels, across a wide range of diverse actors.

UNDP's further comparative advantage and experience will be described in more detail in the UNDP's Capabilities and Experience section as well as more details regarding experience in this area outlined in Annex 3. More information about UNDP's key global initiatives, partnerships, experience, and capabilities can be found in Annex 1, 2 and 3.



Photo: Getty Images

UNDP's vision: an integrated approach to strengthening food systems towards sustainability and resilience



Photo: Getty Images

UNDP's vision is to strengthen food systems, so they are sustainable, inclusive and equitable, healthy, and resilient. Considering the complex interplay of challenges that must be tackled to strengthen food systems – including environmental and climate change issues, poverty and inequality, systemic gender disparities, unsustainable energy usage and reliance, conflicts, fragility, and crises, as well as weak and inadequate sectoral governance – UNDP employs a comprehensive strategy. Leveraging its six signature solutions, alongside its distinct strengths and comparative advantage, UNDP adopts an integrated approach to bolstering food systems, fostering sustainability and resilience, developing and implementing systemic solutions.

How can food systems transform?

Four Dimensions of change: an overview. Expected outcomes and key intervention areas

Considering the structural drivers of unsustainable food systems, the need for collaborative actions, and UNDP's distinctive strengths and experiences, the cross-disciplinary team has identified four dimensions that require attention to fortify and revamp food systems, especially considering the numerous crises the world is currently facing.

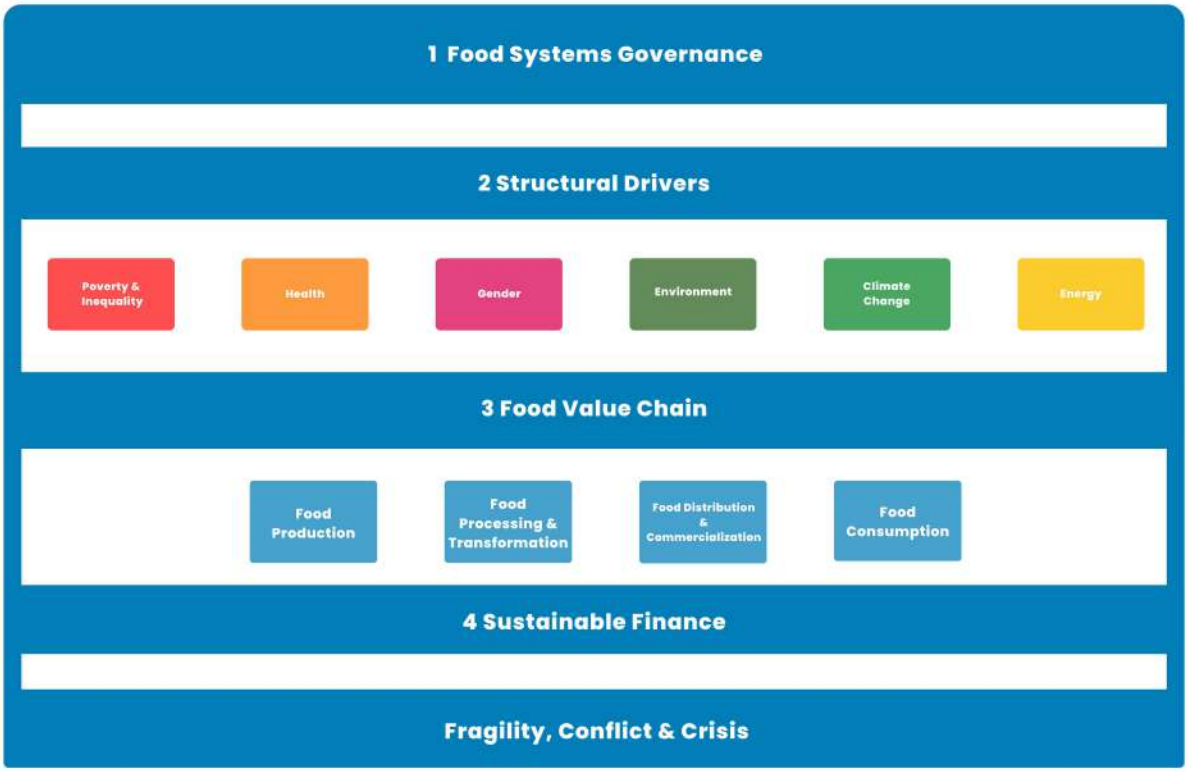
The first dimension centres on systemic governance, programmes, and policies, necessitating the development of mechanisms that foster multi-stakeholder dialogues, effective collaborative action, and cooperation, transcending sectoral approaches at all levels.

The second dimension provides solutions for structural development challenges significantly affecting food production and consumption, encompassing poverty, gender inequality, health, environment, climate change, and energy.

The third dimension focuses on solutions addressing challenges spanning the entire food value chain, including production, storage, distribution, processing, commercialisation, cooking, consumption, and waste management.

The fourth dimension focuses on sustainable finance for food systems resilience and transformation. Additionally, crisis and conflict, along with financing food systems transformation, have been identified as two cross-cutting challenges.

Taken together, these four dimensions make the foundation for developing a Theory of Change in the future. The diagram below illustrates the interrelation of these **four** dimensions. The White Paper then continues with a description of outcomes and intervention areas within each dimension.



Dimension 1: Improving food systems governance, programmes and policies

Outcome: Improved food systems governance that delivers food systems with positive economic, social, health, climate, and environmental outcomes that are compatible with the health of humanity and the planet.

Intervention area: Supporting mechanisms, institutions and platforms that embrace complexity, foster multi-stakeholder dialogue, drive effective collaborative action, and encourage cooperation, extending systemic and system-wide perspectives beyond sectoral approaches at all levels of government.

For the **work in this dimension, UNDP builds on its signature solution and experience in governance**, its role as SDG integrator, its whole-of-government and whole-of-society approaches, and its convening power. It makes use of its experience and expertise on Effective Collaborative Action, governance mechanisms and platforms, policy coherence, and supporting the strengthening of institutional capacities of national and local governments and public servants to implement complex solutions.

This approach **involves the participation of different sectors** – ministries and public agencies in charge of food production, the environment, public health, social inclusion and the economy, among others; stakeholders from civil society and academia; the private sector – emphasising the need to include and empower smallholder farmers, artisanal fishers and other workers and small and medium-enterprises in the food supply chain – and also different levels of government, considering national and subnational actors. UNDP assists stakeholders, processes, mechanisms, and institutions in achieving greater systemic effectiveness and coherence.

Dimension 2: Addressing six structural drivers of unsustainable food systems:

UNDP offers signature solutions and a comprehensive approach that tackles the interconnected structural drivers, challenges and vulnerabilities within food systems, that are impacted by or have a major impact on how food is produced and consumed. These encompass a wide range of critical areas, including poverty and inequality, gender equity, environment and climate change and energy. Furthermore, UNDP supports collective endeavours to address a key area for strengthening food systems, which is to combat health-related challenges within food systems, aimed at improving access to healthy and nourishing diets, while strengthening the resilience of food systems to ensure food safety and their ability to withstand and recover from pandemics. UNDP's capacity to collaborate across various sectors and ministries is vital in addressing these six interlinked structural challenges and vulnerabilities.

Dimension 2: Structural driver: Poverty and inequality

Outcome: Food systems that contribute to poverty reduction and reduce the inequalities and vulnerabilities that leave people behind and undermine the human development potential of individuals and of societies.

Intervention area: Supporting governments to strengthen social protection institutions and mechanisms and implement inclusive growth programs that prioritise the most vulnerable to food insecurity. Additionally, supporting small-scale food producers with systemic policies that link food assistance programmes to sustainable local food production, improving access to healthy and diverse diets.

Dimension 2: Structural driver: Health

Outcome: Healthy and safe diets are accessible and affordable to the most vulnerable, and food production methods are safe for workers and the environment.

Intervention area: Supporting governments to enhance access to affordable, healthy and safe diets while promoting sustainable food production that significantly reduces the use of chemical fertilizers, herbicides, pesticides and other harmful and dangerous inputs.

Dimension 2: Structural driver: Gender

Outcome: Food security levels are gender equal, with women having equal access to food production resources and being empowered to make informed decisions and play a stronger role in food systems.

Intervention area: Supporting governments in implementing gender transformative policies in food systems, addressing power imbalances and ensuring the empowerment of women. This involves securing women's rights and control over resources across the food supply chain, prioritising their access to social safety nets, enabling and empowering their participation in food systems governance platforms, and securing equal pay.

Dimension 2: Structural driver: Environment

Outcome: Rich and diverse ecosystems – that protect biodiversity, with high-quality soils, adequate water supply and sustainable oceans – ensuring greater resilience, environmental sustainability and healthy food production.

Intervention area: Supporting governments in mainstreaming food systems in National Biodiversity Strategies and Action Plans to accelerate the transition towards sustainable agricultural practices; sustainable management of oceans, and land-based and marine aquaculture; sustainable land and water management; as well as the protection of ecosystems and biodiversity for sustainable food production.

Dimension 2: Structural driver: Climate change

Outcome: Food systems reduce their impact on climate change and enhance their resilience in the face of climate variations.

Intervention area: Supporting governments in addressing the risks of climate change across food value chains, increasing ambitions in National Climate Plans and Nationally Determined Contributions related to food systems, and implementing climate change mitigation and adaption policies, programmes and investments, prioritising support for the most affected and vulnerable.

Dimension 2: Structural driver: Energy

Outcome: Food systems are less dependent on fossil fuels, increase their use of renewable energies and agricultural and food waste as energy, and reduce trade-offs in land use between food and energy production.

Intervention area: Supporting governments in reducing trade-offs and promoting less energy intensive agricultural practices, focusing instead on renewable solutions for strengthening domestic food production, improving diversification and sustainability, as well as strengthening shorter supply chains, and empowering the participation of small-scale food producers and small- and medium-sized enterprises along food supply chains.

Dimension 3: Food value chain

Outcome: Socially, economically just and resilient food supply chains, to help outmanoeuvre uncertainty, ensure the diversification of food production as well as geographic concentration, and encourage lasting transformation towards improved inclusion, nutrition, and sustainability.

Intervention area: Supporting governments to diversify domestic food production; promoting sustainable agriculture, fisheries, and aquaculture; strengthening local food systems, shorter supply chains and territorial markets; empowering small-scale producers and small- and medium-sized enterprises along the food value chain; building circular and resilient food value chains.

UNDP complements and reinforces the collective efforts of other UN agencies and stakeholders dedicated to strengthening food supply chains for positive outcomes in sustainability and the environment; health and nutrition; social inclusion; and economic growth. This systemic approach guides the areas of intervention, enabling the creation of comprehensive solutions that not only address

immediate challenges but also contribute to the long-term resilience and prosperity of communities. These also address the challenges of sustainability, nutrition and inclusive growth in the different stages of production, storage and distribution, processing, commercialising, cooking and consumption, and waste management.

Dimension 4: Sustainable finance for food systems resilience and transformation

Outcome: Reshape the global financial architecture to promote sustainable, resilient, and inclusive food systems. This involves addressing the hidden social, economic, and environmental costs amounting to $12 trillion, advocating for policy changes, redirecting finance to priority areas, and promoting sustainable business models.

Intervention area: Focusing on reshaping the global financial architecture to enhance food system resilience. This involves advocating for changes in policies, engaging in global policy-making, and influencing financial industry narratives. Additionally, the aim is to redirect finance to local stakeholders, empowering communities to make decisions about their own food systems and promoting food sovereignty. The intervention also targets the private sector, encouraging sustainable and inclusive investment models that balance long-term sustainability with short-term profitability.

Across the four dimensions, UNDP's approach in fragile, conflict, and crisis contexts is of **vital importance in its contribution to the strengthening of food systems.** In these contexts, UNDP plays a pivotal role in **breaking the cycle of fragility in protracted and fragile contexts, preventing and anticipating risks, and sustaining development pathways in times of crisis.** Addressing the root causes of food crises is then a priority through integrated development solutions that address the resilience of institutions and communities. In these engagements, UNDP works across the humanitarian development peace spectrum to address the unique complexities and vulnerabilities that often exacerbate both food insecurity and instability.

Strengthening food systems requires a substantial increase in sustainable financing and a restructuring of the economic governance framework, which can efficiently prioritise investments and allocate resources. UNDP stands in a distinctive position to bolster the resilience and sustainability of food systems through its capacity to mobilise financial expertise, its wealth of sustainable development knowledge, and its ability to craft mechanisms for channelling vertical funds and innovative instruments.

The successful implementation of these systemic solutions within the designated areas of intervention will **depend on the unique context, specific needs, and challenges prevalent in each country, region, and community.** These contexts are shaped by a complex interplay of factors, encompassing income levels, institutional quality, the prominence of food systems on the agenda, food security requirements, susceptibility to fragility, conflict, and exposure to economic and climate-related shocks, among other considerations.


Photo: UNDP

How this White Paper will guide UNDP's work

This document has been developed to inform UNDP's support for food systems transformation towards resilience and sustainability. This document **is based on recommendations from different organizations and stakeholders**[6]; current approaches in crisis and fragile settings, and transformation; and UNDP's Strategic Plan, UNDP's Crisis Offer, UNDP's Beyond Recovery: Towards 2023 Strategy, and the Food and Agricultural Commodity Systems (FACS) Strategy. This document is also guided by UNDP HIV and Health Strategy 2022-2025 Connecting the Dots: Towards a More Equitable, Healthier and Sustainable Future, UNDP's Climate Promise, UNDP's Gender Equality Strategy 2022-2025, UNDP Nature Pledge, UNDP Sustainable Energy Hub and UNDP Sustainable Finance Hub offers.

Under its mandate, UNDP focuses on the four dimensions highlighted in this paper, through the Six Signature Solutions of its 2022-2025 Strategy. As described above, UNDP has a strong **comparative advantage** including work around strengthening sustainable food value chains. Addressing these dimensions will also assist in supporting the progress towards the moonshot goals UNDP with its partners aims to reach by 2025; 100 million people to escape multidimensional poverty, access to clean energy for 500 million people, 800 million people to participate in elections and $1 trillion of public expenditure and private capital invested in the SDGs.

As the world experiences rising violent conflict, the impacts of the climate crisis, food crisis, deepening mistrust in institutions, and the sharpest drop in human development in decades, UNDP's Crisis Offer presents solutions for breaking the cycle of fragility and for getting ahead of the curve. UNDP helps countries anticipate, prevent, respond to and recover from crisis, every day, and in every development context.

UNDP's work on food and agricultural commodity systems (FACS) is guided by its **FACS Strategy**. UNDP's vision for FACS is, through multi-stakeholder collaboration, to transform food and commodity systems into resilient; equitable; inclusive; environmentally, socially, and economically sustainable systems.

This document draws inspiration from the UNDP FACS Strategy, but its scope extends beyond the strategy's boundaries, encompassing a comprehensive array of dimensions and structural factors crucial for enhancing the resilience of food systems.

This document delves deeper into the extensive role and expertise of UNDP across various aspects that food systems share. It also focuses on how UNDP addresses issues related to fragility, conflict and crisis, to better understand and address challenges in unstable and crisis-ridden situations. This document seeks to provide a more comprehensive understanding of the challenges faced by food systems worldwide, offering a nuanced perspective that encompasses not only the immediate issues but also the underlying structural drivers that necessitate attention for sustainable and resilient food systems.

UNDP recognises the centrality of human rights to sustainable development, poverty alleviation, sustaining peace and ensuring fair distribution of development opportunities and benefits and is committed to supporting universal respect for,

[6] In addition to consultation with various technical teams within UNDP, including representatives from the African Regional Bureau, Crisis Bureau, Climate Risk Insurance, Finance, Climate Promise, Digital, Energy, Social Protection and Health, we also consulted with representatives from the Committee on World Food Security (CFS), the Food and Agriculture Organization (FAO), the World Food Program (WFP), the World Bank, and IPES-Food, among others. The Strategy has also considered briefs, reports and papers from different organizations that promote resilience and transformation in food systems.

and observance of, human rights and fundamental freedoms for all. Hence, UNDP seeks to support governments to adhere to their human rights obligations and empower individuals and groups, particularly the most marginalised, to realise their rights and to ensure that they fully participate.

This work includes UNDP's support to transforming food systems. In particular, the right to food was recognised in the 1948 Universal Declaration of Human rights as part of the right to an adequate standard of living.

It is an inclusive right, which means the right to all nutritional elements that a person needs to live a healthy and active life and to the means to access them. A rights-based approach, focused on the right to food and the right to a healthy environment, is an essential catalyst for accelerating the transformation from today's unsustainable food systems to a future where everyone enjoys healthy and sustainable food, workers are treated fairly, and degraded ecosystems are restored.



Photo: UNDP

The Four Dimensions in detail

The cross-disciplinary team's four dimensions for food systems transformation are set out here in detail. For each dimension, the background, context, and key organizational actors are examined, before a series of areas of intervention are defined.

Dimension 1: Systemic governance, collaboration and solutions

To **transform food systems, we need systems-thinking approaches, as well as effective, inclusive, and accountable governance mechanisms**[7][8], which can embrace complexity and facilitate more effective collaborative action to deliver food systems with economic, social, health, climate, environmental and ecosystems outcomes that are compatible with the health of the humanity and the planet. Food systems extend beyond food production and supply chains, are socio-ecological, complex, and adaptive, and encompass interactions by multiple actors and institutions. This systemic perspective considers collaboration across multiple sectors and policy coherence. Therefore, understanding and managing the interdependencies globally, regionally, nationally, and locally in this sector requires more collaborative mindsets, collective efforts, knowledge sharing, and joint decision-making that takes foresight[9] to develop risk-informed food systems development.

Additionally, there is a need to leverage the power of consciousness and strengthen inner capacities.

These inner capacities are our individual and collective mindsets, values, and skills that will assist in transforming food systems towards sustainability and resilience. Combining inner capacity building using consciousness approaches with ongoing investments in technical solutions can unlock widespread transformation towards more sustainable and resilient food systems.

A food systems approach requires the engagement of **national and subnational actors led by strong public institutions** and public officials that have adequate expertise, resources, and tools to design and implement complex solutions that achieve multiple food systems objectives.

This systemic approach should consider **three main elements:** dialogue, coordination, and effective collaboration; governance mechanisms and platforms; and planning, policy design, implementation, and monitoring.

A systemic approach to food requires **dialogue, coordination, and collaboration** between stakeholders from government, the private sector, civil society (including the most vulnerable and marginalised) and academia. These stakeholders should represent the different sectors involved in food, such as agriculture and fishing, health and nutrition, environment, economy and social development, domestic and international trade, among others.

The second key element for a systemic perspective is the need for **food governance mechanisms and platforms** to promote effectiveness, accountability and transparency, and inclusiveness and equitable collaboration to

[7] *Committee of Experts on Public Administration (CEPA*). (n.d.). United Nations. Department of Economic and Social Affairs. https://publicadministration.desa.un.org/intergovernmental-support/cepa

[8] That are aligned with the ECOSOC 11 principles of effective governances: *Committee of Experts on Public Administration (CEPA). (n.d.).* United Nations. Department of Economic and Social Affairs. https://publicadministration.desa.un.org/intergovernmental-support/cepa

[9] Conrad, P., Sarva, S., & Smith, R. (2023). *Development Future Series: Choosing your tomorrows: using foresight and anticipatory governance to explore multiple futures in support of Risk-Informed development*. UNDP. https://www.undp.org/sites/g/files/zskgke326/files/2023-02/UNDP-DFS-Choosing-Your-Tomorrows-Using-Foresight-and-Anticipatory-Governance-Risk-Informed-Development.pdf

design, approve, implement, align, and enforce policies, legislation, regulatory frameworks, planning, programmes and budgets, as well as to leverage and align public and private investments to transform food systems. Food governance mechanisms and platforms require putting in place innovative governance arrangements, to allow for approaches to address the interrelated issues within the food system and beyond and bring together the different stakeholders to develop systemic solutions. They need to be designed and implemented at the different levels – national and local – with a strong political economy analysis, supporting policy coherence and relevant policies that promote real improvements. These mechanisms and platforms should be particularly inclusive of civil society and should consider the need to empower and strengthen their participation.

To translate the interactions between these different actors into complex solutions that address food systems' structural problems, we need to consider the third key element, **systemic planning, policy design, inclusive implementation and diligent monitoring** that includes multidimensional objectives and indicators that would need to be addressed simultaneously for comprehensive and sustainable change. This will acknowledge that food policies, programmes, investments, and business models have a range of impacts (positive and negative, direct and indirect, intentional and unintentional) on economic, social, health and environmental variables, which need to be managed holistically.

Multidimensional objectives and indicators can play a pivotal role in guiding this approach, enabling stakeholders to create solutions that not only addresses immediate challenges but also foster long-term sustainability, resilience, and equity within complex web of food systems. This considers strengthening operational capacities of national and local governments and public servants to implement complex solutions. The planning and policy design also needs developing data, knowledge, risk-informed analysis and foresight on food systems trajectories that will inform policy planning and design, and regulations.

Finally, to ensure that food systems are resilient and inclusive, **we need to address key issues that have systemic** and structural economic, social, health and environmental negative outcomes at the global, regional and national levels, and that have an impact in the six pillars of food security – availability, access, utilisation, stability, sustainability and agency.

These issues include but are not limited to: agricultural subsidies in developed countries; high concentration and market power in global food value chains; agricultural commodity speculation; the links between unsustainable food systems and debt crises; high dependence on food imports and less reliance on diverse local products; increases in non-food land use; increasing and high reliance on synthetic fertilizers and slow transition towards sustainable agricultural practices such as agroecology; among others.

This document considers promoting **food sovereignty from a systemic perspective** in public policies and programmes, emphasising the need to improve the livelihoods of those who cultivate, produce, process, trade and consume our food.

UNDP works in collaboration with, supports and complements the work of key UN organizations such as UN Food and Agricultural Organization (FAO), UN Environment Programme (UNEP) and International Fund for Agricultural Development (IFAD). UNDP works alongside these organizations to enhance systemic governance, promote sustainable agricultural practices, and improve access to nutritious and safe food. Moreover, civil society engagement and private sector collaboration are vital components in ensuring inclusive and equitable food system governance. By fostering these partnerships and adopting a holistic approach, UNDP contributes to the development of comprehensive solutions that address the interconnected issues surrounding food systems at both the national and global levels. More information about UNDP's key partnerships can be found in Annex 2.

To complement the work of others, UNDP promotes and implements a **systemic perspective on food challenges and food system transformation.** In doing so, it draws on its comparative strength in accelerating structural transformations, systems thinking and approach, analysing and addressing all the elements of systems, bringing together government sectors, promoting multi-stakeholder dialogues and mechanisms, and on its capacity and experience in supporting governments with their national development strategies and the implementation of the SDGs.

Addressing complex systemic challenges requires the active participation and engagement of different ministries, public agencies, and private and civil society stakeholders, particularly those involved in food production – agriculture, livestock, fisheries and aquaculture (blue food) – and food processing and commercialisation, nutrition and public health, environment, energy, water and sanitation, gender equality, social protection, trade, employment, and finance. Through decades of experience, UNDP has developed a deep understanding of how achieving system-level change requires diverse stakeholders to align, collaborate, co-create and collectively learn, innovate, and act in a changing environment. UNDP acts as solution facilitator, creating spaces for important discussions to take place. We take a whole-of-government, whole-of-society and cross sectoral approach, working from policy to field level. With greater alignment, the impact of practitioner efforts at all levels of the food system can be amplified and scaled. More details about UNDP's experience and capabilities in this area can be found in Annex 3.

Dimension 1: Areas of intervention

1. **Facilitating more effective collaborative action to deliver more resilient food systems.** Achieving system-level change requires diverse stakeholders to align, collaborate, co-create and collectively learn, innovate, and act in a changing environment, with an emphasis on the participation of vulnerable and marginalised groups, such as women, young people, small-scale food producers, Indigenous People, among others. This also involves promoting the inclusion of consciousness and inner development in dialogues and collaborative programmes, through capacity building, reflective spaces and conscious work practices; as well as addressing power asymmetries and imbalances that prevent collaboration.

2. Promoting bottom-up **systems-thinking approaches, policies, programs, and investments** that embrace complexity and systemic challenges, and that promote policy coherence and policies that drive real change. To strengthen food systems, we need to acknowledge the various implications on social outcomes, nutrition and public health, environment and inclusive prosperity. The purpose, implementation and monitoring of these complex solutions involves strengthening the capacities of national and local governments and public servants to design systemic food policies and programs.

3. Strengthening **inclusive food system governance,** recognising inter-system linkages and promoting multi-sectoral and multi-stakeholder dialogue, coordination and action, and including increased political empowerment of a wider range of food systems actors. This considers food sovereignty as a key component by prioritising inclusive planning and, where possible, decision making by small-scale food producers, small- and medium-sized companies, processors, traders and consumers, emphasising the inclusion of women, young people, Indigenous People, local communities, and other marginalised groups. This involves strengthening the capacities and representation of these groups and prioritising their role in food governance platforms and mechanisms.

4. **Linking short-term responses to long-term structural transformation** at the national and subnational levels by coordinating cooperation between various agencies and financial institutions, civil society organizations, government ministries, and private sector. This entails strategically designing short-term actions that not only address immediate crisis but also contribute to the gradual reshaping of fundamental aspects of the food system.

5. Ensuring the **interconnection and integration between individual countries and broader regions on issues related to the food crises and structural vulnerabilities** by exploring and determining areas in which **regional and multi-country responses** could better address problems and identifying coordinated solutions. This includes issues such as the need for integrated food storage and regional grain reserves, regional trade to shift food surplus to food deficient areas, regional food security strategies, seed-saving and sharing, coordinated climate related responses, natural resources and land management, coordinated transhumance actions, disaster risk management, among others.

6. Encouraging governments to **repurpose agriculture subsidies and other incentives towards agroecology and other types of sustainable, equitable, and efficient agriculture support** that can help cut carbon emissions, protect and restore ecosystems, reduce/eliminate the use of agrochemicals, improve livelihoods, and increase the access and affordability of nutritious and diverse food.

7. **Supporting capacity building for governments to anticipate, mitigate and adequately prevent future food crises,** through systematic data collection on the state of food systems and monitoring of national and regional policies and activities. This includes strengthening early warning systems and capacities, developing risk informed analyses and foresight on food systems trajectories and topics that affect them such as political economic and conflict analyses. With a more comprehensive understanding of the state of the food system and the drivers that affect them, governments and concerned food systems stakeholders across the humanitarian, development and peace spectrum, can prepare for or prevent potential food crises.

8. **Producing analysis, policy recommendations and foresight on systemic issues** that affect food systems transformation at the global, regional, national and subnational levels. This includes continuing the collaborative work that UNDP and other agencies have done on repurposing food systems subsidies analysis, as well as covering other key challenges for food systems. Those challenges include a small number of powerful companies controlling the global and national food supply chains; heavy reliance on imported and volatile inputs for food production in many crisis-prone countries; high dependence on food imports and less reliance on diverse local products; increases in non-food land use; increasing and high reliance on synthetic fertilizers and slow transition towards sustainable agricultural practices such as agroecology; excessive commodity speculation and lack of market transparency; the strong and reinforcing links between unsustainable food systems and debt crises; among other issues.



Photo: Unsplashed

Dimension 2: Structural drivers in food systems

As a result of its broad development mandate and specific expertise and experience in dealing with development challenges, UNDP's **work on addressing structural factors in food systems is strong and overarching, particularly in poverty and inequality, health, gender, climate change, environment, and energy.** This presents an ideal opportunity to link short-term food crisis responses with long-term food systems resilience and transformation – including promoting sustainable food production; ecosystem conservation; climate change mitigation and adaptation; sustainable and renewable energy; stronger social protection mechanisms and institutions and inclusive growth to end poverty and reduce inequality; job creation in food supply chains; and gender-transformative policies.

Poverty and inequality: promoting inclusive growth and social protection in food systems

Strong food systems can contribute to poverty reduction and reducing the inequalities and vulnerabilities that leave people behind and undermine the potential of individuals and of humanity. Agricultural development is a powerful tool to end poverty and boost shared prosperity and it is two to four times more effective in raising incomes among the poorest compared to other interventions[10]. Food value chains account for 40 percent of the global workforce in the primary industries (agriculture, forestry and fishing[11]). Agriculture accounts for 4 percent of the global gross domestic product (GDP) and in some least developing countries it can account for more than 25 percent of GDP.

Food value chains support 800 million livelihoods, mostly in small-scale fisheries and aquaculture[12]. **Food crises drive more people into extreme poverty, amplifying malnutrition, food insecurity and hunger.** Around 3.4 billion people, 45 percent of the global population, live in rural areas of developing countries, and most depend on smallholder farms for their livelihoods and sustenance[13]. Rural women are particularly vulnerable as they form the majority of those unpaid contributing family workers in family farms and are less likely to have access to land and productive resources.

We cannot achieve SDG1 (No Poverty) and the universal value of the 2030 Agenda of leaving no one behind without **improving the lives and livelihoods of poor rural producers** especially when the reinforcing cycles of economic instability, climate change and conflict are disrupting food availability, increasing food prices, reducing access to food, and affecting food quality and nutrition.

Improving food systems to benefit the millions of small-scale food producers producing the bulk of the world's food is a fast track to keeping people out of poverty, reducing inequalities, making them more resilient to shocks and crises and promoting food sovereignty. Poverty and inequality reduction strategies such as land rights and access to services, resources and markets can contribute to improved rural producer livelihoods and food security. Since poverty and malnutrition are structurally linked, a **shift towards diversified food systems and increasing access and affordability to healthy and local diets** for poor and vulnerable groups can significantly improve their wellbeing and provide food and nutrition security. To make smallholder farmers more resilient to weather shocks and adapt to climate change, we need to **promote an accelerated transition to agroecology** and other sustainable agricultural practices.

[10] *Agriculture and food*. (n.d.). World Bank. https://www.worldbank.org/en/topic/agriculture/overview
[11] *Value chains for resilient food systems*. (n.d.). United Nations. Food Systems Coordination Hub. https://www.unfoodsystemshub.org/fs-stocktaking-moment/programme/value-chain-for-resilient-food-systems/en
[12] Blue Food Assessment. (2021). *The Vital Roles of Blue Foods in the Global Food System*. https://sc-fss2021.org/wp-content/uploads/2021/04/FSS_Brief_Blue_Economy_MT.pdf
[13] *Why rural people*. (n.d.). IFAD. https://www.ifad.org/en/investing-in-rural-people

Agroecological approaches are not only ecologically sustainable, but they are also socially just, create an important basis for more jobs and decent working conditions, and increase quality of life in rural areas, particularly for women and young people[14]. Agroecology emphasises participation and fairness while promoting flourishing locally embedded markets, which ultimately contributes to the promotion of sustainable rural areas and counteracts the rural exodus.

UNDP works in collaboration with and supports and complements the work of UN organizations such as the World Food Programme (WFP), the International Labour Organization (ILO), UN Children's Fund (UNICEF) and UN Entity for Gender Equality and the Empowerment of Women (UN Women), as well as other organizations, international financial institutions, civil society, the private sector and other relevant stakeholders. By working together, each can leverage their respective strengths to develop and implement comprehensive solutions that address both immediate food needs and long-term development goals to promote inclusive growth and social protection in food systems. More information about UNDP's key partnerships can be found in Annex 2.



Photo: Unsplash

[14] Baum, D., & Mechsner, S. (2023). *Jobs Perspectives in Agroecology. More employment, Better income.* Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. https://www.snrd-africa.net/wp-content/uploads/2023/07/Factsheet_Agroecology_Employment_Promotion_EN.pdf

UNDP offers a whole-of-government approach and expertise in inclusive growth programs aimed at addressing poverty and inequality, ensuring **that social protection programs and institutions** expand their outreach and their focus on the most vulnerable – particularly during food crises. The agency's profile also allows it to address multidimensional challenges, such as bringing together nutritional needs and local production from smallholder farmers; using and protecting biodiversity; promoting a living wage; and improving livelihoods and employment-creation in food supply chains. Beyond the siloed approaches that have not worked in the past to address structural challenges, UNDP brings together ministries from various economic, social and environmental sectors to provide systemic solutions to multidimensional problems related to poverty and inequality in food systems. This work also contributes to the organization's core mission of reducing poverty and inequalities, building resilience and helping to ensure that no one is left behind. More details about UNDP's experience and capabilities in this area can be found in Annex 3.

Dimension 2: Poverty and Inequality: Areas of intervention

1. **Promoting social safety nets** that can expand rapidly in response to needs, particularly to support those most affected by lack of access to food and food insecurity and those most vulnerable to crises, such as women and young children.

2. Promoting the implementation of **social programs that link food assistance programs to sustainable local food production** (through agroecology and sustainable fishing and aquaculture) and support smallholder farmers, fishers and fish farmers through government food procurement.

3. Developing better **social protection institutions with a systemic approach** to food-related issues (for example, school meals programs), which addresses different objectives

such as: (i) providing access to healthy, nutritious and culturally-appropriate food – not just sufficient calories – particularly for the most vulnerable, including poor, Indigenous People, women, adolescent girls and young children; (ii) promoting an acceleration in the transition towards agroecology and traditional diets with local food procurement that creates a market and prioritises sustainable, nutritious, and diverse products; (iii) creating mechanisms to protect small-scale food producers from risks; and (iv) ensuring a safety net provision of income to ensure access to food for small-scale food producers in times of crisis. This considers preventing commercial interference in food basket/social assistance design and incentives, ensuring local producer and item inclusion, eligibility and preference in food basket listing.

4. Supporting **the creation of green and inclusive employment across food supply chains** that address the need to: improve livelihoods and employment-creation; promote gender-transformative programs; reduce informality; secure opportunities for future generations and making agriculture and food production attractive to the farmers of tomorrow; and improve the capacities of small- and medium-sized enterprises across supply chains, while protecting and regenerating nature, and promoting climate change mitigation and adaptation.

5. Promoting **small-scale food producers' access and rights over productive resources**, such as land and water, ensuring a more inclusive and sustainable use of ecosystems that can improve income, protect and restore natural resources, and promote food sovereignty.

Health: promote sustainable, safe and nutritious diets and safe environments

Food systems have a major impact on health outcomes through multiple pathways including unhealthy diets, food insecurity, and unsafe foods. Our current food systems drive climate change, pollution and ecosystem degradation, which each cause additional health impacts. (WHO 2021). Furthermore, increasing food prices driven by conflict, natural disasters and economic downturns impact people's ability to access nutritious foods, resulting in shifts to cheaper and less healthy diets – with an increase in the consumption of more processed and shelf stable foods, and a decline in the consumption of fruits and vegetables, particularly in countries and communities where households spend a higher proportion of their income on food. According to the 2023 SOFI report more than 3.1 billion people, 42 percent of the global population, were unable to afford a healthy diet[15]. On top of that, there is an unprecedented over reliance in our diets on a limited number of plant and animal species. All these changes in consumption patterns are related to all forms of malnutrition, including undernutrition, overweight and obesity and micronutrient deficiency.

Current agricultural, livestock and aquaculture practices can also have a significant local impact on the health of farmers and other food producers and population living near food production sites. For instance, fertilizers, herbicides and pesticides used to increase crop yields cause chemical and nitrogen runoffs that contaminate fresh water sources and can lead to toxic algal blooms. Furthermore, the ways in which farmed, ranched and wild caught animals are handled and treated, as well as the inappropriate and overuse of antibiotics in livestock and aquaculture, can result in exposure to zoonotic pathogens (such as COVID-19 and Ebola) and antimicrobial resistance in humans. The way food is often packaged exposes people to microplastics with still largely unknown health impacts, with some evidence of hormonal and immunity disturbances. To build resilience in food systems, crises responses should also address the negative health effects that food production has on food chain workers and consumers, firmly protecting and improving health and environmental regulations in the face of pressure to relax standards to increase production.

[15] FAO, IFAD, UNICEF, WFP, & WHO. (2023). *The State of Food Security and Nutrition in the World: Urbanization, agrifood systems transformation and healthy diets across the rural–urban continuum*. FAO.

https://docs.wfp.org/api/documents/WFP-0000151116/download/?_ga=2.21527992.2092415403.1694173817-269706540.1691476909

Food systems health-related challenges cannot be addressed without tackling commercial factors including the influence of health-harming industries in public policy development. Evidence-based policies, international guidelines, resolutions and treaties are frequently opposed by such industries particularly when they are given equal voice in inclusive consultative processes.

UNDP works closely with UN organizations like World Health Organization (WHO), FAO, UNEP, WFP and UNICEF, as well as other organizations, international financial institutions, civil society, the private sector and other relevant stakeholders to address health challenges within the food system comprehensively. This includes working to prevent and address the *syndemic* – the aggregation of concurrent or sequential epidemics or diseases, along with social and environmental factors – of obesity, undernutrition and climate change, as well as the *syndemic* of COVID-19 and non-communicable diseases. This multi-stakeholder approach ensures a holistic and coordinated effort to improve the health and well-being of populations by fostering sustainable and nutritious food systems. More information about UNDP's key partnerships can be found in Annex 2. UNDP works with its partners to deliver health results for the most marginalised and vulnerable while driving equity, resilience and sustainability. UNDP continues to work with governments to help focus on geographic areas where needs are elevated and assist in directing more investments in health and community systems to ensure that those most in need receive the assistance integral to their survival and well-being. More details about UNDP's experience and capabilities in this area can be found in Annex 3.

Dimension 2: Health: Areas of intervention

1. **Improving economic and physical access to healthy diets– particularly during crises** and for the most vulnerable and food insecure groups – by encouraging the production, commercialisation and consumption of local, diverse and traditional diets, and reducing food import dependency.

2. Promoting **sustainable and nutrition-sensitive local food value chains.** This includes incentives to increase the local production of affordable, diverse, sustainable and healthy food in agriculture, fishing and aquaculture; implementing social programs, from school meals to food vouchers, that encourage the access to local, affordable, sustainable and healthy diets; supporting traditional and informal markets in retailing affordable, sustainable and healthy food products; marketing traditional, culturally-appropriate, sustainable and healthy products, particularly in schools, that include blue and aquatic food and forgotten and underutilised products; among others.

3. **Support multisectoral interventions, governance mechanisms and efforts** – global and national – to reduce the pervasive influence of health-harming industries in public policies. This includes improving the governance, legal and regulatory frameworks of noncommunicable diseases related to food.

4. Eliminating or encouraging **significant reductions in the use of chemical fertilizers, herbicides and pesticides, and other inputs** that are harmful and dangerous to people and the environment. This involves a reduction of those production inputs in the short and medium term, as well as an accelerated transition towards sustainable food production practices, such as agroecology. Significant decreases in the levels of air, soil and water pollution and contamination coming from agricultural, livestock and aquaculture production, are needed to protect the health of food workers and consumers, and the environment.

5. Support other global and national stakeholders to prioritise resources and **ensure policy coherence to increase resilience by preventing zoonotic diseases, rise in infections and increases in antibiotic resistance.** This includes research, regulations and policies focused on reducing the use of antibiotics and other toxins such as food colourings in food production, particularly livestock and aquaculture, to prevent the increase in anti-microbial resistance.

Gender transformative solutions in food systems

Women play essential roles in food systems that are usually invisible, undervalued and unpaid. Women make up 43 percent[16] of the global agricultural labour force and across our food systems, women are key actors in production, processing and transformation; in trading and retailing; and as wageworkers and consumers. Yet, systemic inequalities related to lack of access to land and productive resources; unpaid labour and care work; and exclusion from decision-making limit their ability to sustain and improve their livelihoods, and those of their families, and be more resilient to climate and economic shocks. Closing the gender gap in both farming productivity and wage in food systems would increase global GDP by 1 percent or nearly 1 trillion USD, which would reduce global food insecurity by 2 percent, reducing the number of food insecure people by 45 million[17].



Photo: UNDP

Women play a central role in achieving and maintaining household food security, yet are more food insecure than men, across all regions; they suffer different macro- and micronutrient deficiencies; and are vulnerable to the six pillars of food security – availability, access, utilisation, stability, sustainability and agency, particularly during crisis situations. Women and adolescent girls face bigger challenges to afford a nutritious and healthy diet, since they earn lower income than men, and have less control over the households' finances. In times of crisis women and girls tend to pay the highest price, cutting down on their own intake to save food for other members of the household, a practice often dictated by local norms. Gender inequalities are both a cause and consequence of malnutrition.

Systemic inequalities make women more vulnerable to different types of crises. The burden of climate change disproportionately impacts women, they face structural gender inequalities in economic and social access to resources, information and technologies that make them more vulnerable to climate change. These inequalities are reinforced with climate and economic shocks, political conflict, food and water crises and forced displacement. According to UN Women, the Ukraine crisis has caused shortages and price increases that are leaving women behind – both in Ukraine and globally – and are putting them in increasing danger of food insecurity, malnutrition, anaemia, and heightened domestic workloads[18]. Despite advances in addressing gender inequalities over the years, women in food value chains, particularly in rural settings, are still among the most marginalised groups in society and are particularly vulnerable to climate change and food insecurity. Given these close relationships, **efforts to make food systems more resilient need to consider gender dynamics, including gender-transformative approaches** – which address root causes of inequalities, power imbalances and discriminatory gender norms.

[16] *Reduce rural poverty. Women in agriculture.* (n.d.). Food and Agriculture Organization of the United Nations. https://www.fao.org/reduce-rural-poverty/our-work/women-in-agriculture/en/

[17] *The status of women in agrifood systems.* (n.d.). In Food and Agriculture Organization of the United Nations. https://doi.org/10.4060/cc5060en

[18] *Ukraine and the food and fuel crisis: 4 things to know.* (2022, September 22). UN Women. https://www.unwomen.org/en/news-stories/feature-story/2022/09/ukraine-and-the-food-and-fuel-crisis-4-things-to-know

UNDP works closely with UN organizations like UN Women, FAO, WFP, IFAD and UN Population Fund (UNFPA), as well as other organizations, international financial institutions, civil society, the private sector and other relevant stakeholders, to advance gender-transformative solutions within the food system. More information about UNDP's key partnerships can be found in Annex 2. UNDP's multi-stakeholder approach recognises that addressing gender inequalities is not only a matter of social justice but also essential for achieving sustainable and resilient food systems that benefit everyone. **UNDP works to promote gender transformative approaches in food systems**, empowering women in food value chains, working with government agencies in charge of gender equality in addressing the root causes of gender inequality, and supporting them amidst both the current and future food crises. More details about UNDP's experience and capabilities in this area can be found in Annex 3.

Dimension 2: Gender: Areas of intervention

1. Address and reduce gender inequalities in food value chains by **strengthening women's rights and control over assets and food production resources**, and women's access to equal capacity building, technology, finance, entrepreneurship and employment opportunities along the food chain.

2. **Empowering women's collective action, through associations and cooperatives in food value chains,** to enhance their role in all stages, from production to market access, including processing, distribution, and trade. This includes making them key stakeholders to accelerate the transition towards agroecology, reducing food import dependencies and promoting traditional and diverse diets based on local food.



Photo: Unsplash

3. Prioritising **women's and adolescent girls' food access related to their nutritional status**, with social programs that focus their food support on their specific nutritional needs.

4. **Strengthening safety nets and social protection institutions to support women and adolescent girls cope with the current and future food crises**, both in the short term – by facilitating immediate access to cash-transfers and food packages – and in the long term, by ensuring that public funds and programs reach women and girls who need them the most and by reducing women's work burden.

5. Enabling **women to have a stronger participation** in the formulation of policies, in governance platforms, and in decision-making processes related to food systems, at community, local and national levels.

Environment, biodiversity and sustainable food production

To ensure greater resilience, environmental sustainability and healthy food production, we need rich and diverse ecosystems that protect biodiversity, with high-quality soils, adequate water supply and sustainable oceans. Food systems are the primary driver of biodiversity loss, with agriculture alone identified as a threat to 24 000 of 28 000 (86 percent) species at risk of extinction[19]. There is an urgent need to change the way we produce food to limit the treat to biodiversity and ecosystems. By promoting greater biodiversity and genetic diversity in ecosystems, food systems will be more sustainable, resilient and able to withstand climate change and shocks, pests and diseases and other disruptive events.

Healthy and high-quality soils promote resilience against climate change and increase food security by driving more robust and stable crop yields, increasing the quality, diversity and nutritious value of crops, storing larger amounts of water and carbon, and reducing losses produced by warmer climates.

Improving water management and reducing the stress on freshwater resources will make agriculture more resilient to future water-related shocks and prevent water shortages. Significantly reducing the negative impacts that aquaculture has on marine life, water systems and land ecosystems, as well as decreasing its unsustainable reliance on wild fish and agricultural crops, will both protect the environment and continue providing valuable resources to increase food security. Sustainable ocean management will protect the ocean's biodiversity and ensure the provision of nutritious food and protect the livelihoods of millions of people that depend on seafood value chains. To make food systems more resilient and less vulnerable to crises, we **need to accelerate a transition towards sustainable food production practices** – such as agroecology and sustainable fishing and aquaculture – that significantly reduces our negative impact on ecosystems and helps conserve and restore natural resources.

UNDP works in collaboration with, and supports and compliments the work of UNEP, FAO, as well as other organizations, international financial institutions, civil society, the private sector and other relevant stakeholders to promote environmentally responsible and sustainable practices in the context of food systems. UNDP also partners with and supports the UN Convention on Biological Diversity (CBD) and the UN Framework Convention on Climate Change (UNFCCC). UNDP's collaborative efforts with UNEP, FAO, CBD, UNFCCC, and other stakeholders are aimed at mainstreaming environmental sustainability and biodiversity conservation within food systems. This approach recognises that achieving sustainable food production is inseparable from protecting the environment and conserving biodiversity, which are essential for the long-term well-being of both people and the planet. More information about UNDP's key partnerships can be found in Annex 2.

[19] Benton, T., Bieg, C., Harwatt, H., Pudasaini, R., & Wellesley, L. (2021). *Food System Impacts on Biodiversity Loss: Three levers for food system transformation in support of nature*. Chatham House. https://www.chathamhouse.org/sites/default/files/2021-02/2021-02-03-food-system-biodiversity-loss-benton-et-al_0.pdf

UNDP promotes best practices in conservation and sustainable development, which include promoting a transition towards sustainable food production and scaling-up agroecology; safeguarding biodiversity in the face of the increasing pressure exerted by food systems; and addressing land degradation. **UNDP does not address the protection of the environment, climate change or food security as stand-alone issues.** Its systemic approach involves the protection and better use of ecosystems, natural resources and biodiversity, with sustainable food production to provide better livelihoods and improved access to healthy foods. For more details about UNDP's experience, see Annex 3.

Dimension 2: Environment: Areas of intervention

1. **Promoting the protection of ecosystems and the sustainable use of natural resources to maintain and restore soil quality and water management, preserving biodiversity and restoring oceans** by providing policymakers with analysis and solutions on how to safeguard natural resources from unsustainable use and overexploitation, particularly amid increasing food demand and production. This includes recommendations to eliminate and/or reform any current incentives and subsidies that result in land degradation; unsustainable water use; biodiversity loss; destruction of ecosystems to protect biodiversity, e.g., forests and wetlands; overexploitation and unsustainable management of fisheries. It prioritises that Indigenous Peoples and local communities have fair access and are engaged in the preservation and restoration of biodiversity using their valuable knowledge from thousands of years living in harmony with nature.

2. Providing coordinated action in policy, programs and governance to **accelerate the transition to sustainable agricultural practices,** to protect and regenerate nature, while fostering inclusive growth and access to nutritious food. This includes supporting agroecology as an effective way to unlock the potential of biodiversity to feed people with traditional, affordable, healthy and sustainable diets that are beneficial for local ecosystems and natural resources.

3. Supporting **sustainable water access, use and management,** by providing policy proposals and capacity-building to address water availability, fair and affordable access, and pollution; as well as improving agricultural water management, reducing water losses in food value chains; and including water challenges in health and nutrition programs – and recommended diets; among others.

4. Ensuring the **sustainable management of oceans, and land-based and marine aquaculture**, including the blue food sector's ecosystem challenges as key elements for more resilient food systems. This should consider recommendations to solve key problems, such as overfishing, illegal fishing and the negative impacts that fishing technologies have on ecosystems, biodiversity and climate change; the harmful impacts that aquaculture can have on ecosystems, water and land quality, and its unsustainable reliance on wild fish and agricultural crops for feed; and the inequities present in blue food value chains, that have negative impacts on the environment, livelihoods and nutrition.

5. Providing individual, institutional, and systemic **capacity-building and policy solutions to land degradation challenges** and supporting countries in unlocking finance and designing practical interventions in degraded landscapes to pilot and upscale technologies and approaches designed to prevent, reduce, and reverse land degradation.

Climate change resilience and adaptation in food systems

Significant changes in temperatures, increased rainfall variability and more frequent and severe droughts and floods pose huge challenges for farmers and threaten global food security. Tropical regions will face decreases in agricultural yields and diminishing ocean captures.

More than one-third of all global GHG emissions caused by humans can be attributed to the way food is produced, processed and packaged[20].

Our current food systems are both contributing to climate change and are largely impacted by the effects of climate change.
Climate change will likely impact food quality and safety, diminishing proteins and nutrients, and increasing infections and micro toxins. It **will affect the six pillars of food security – availability, access, utilisation, stability, sustainability and agency[21]**. It will have the most severe impact on food producers and consumers with lower income, since they are mostly concentrated in the areas with the most severe impacts, they have a limited capacity to respond and adapt to climate impacts, including through capacity-building, technologies and infrastructure, and they are more vulnerable to food price fluctuations. Around 80 percent of the global population most at risk to have their livelihoods affected and suffer from hunger due to climate change, are in Sub-Saharan Africa, South Asia and Southeast Asia, where smallholder farmers are disproportionally poor and vulnerable[22].

Therefore, **addressing the risks of climate change across the food value chain yields significant mitigation and adaptation benefits, particularly** to vulnerable small-scale food producers, rural communities at large, and low-income consumers. Nationally Determined Contributions (NDCs), National Adaptation Plans (NAPs) and development plans must therefore include an acceleration in the transition towards sustainable food production practices such as agroecology, and other mitigation and adaptation measures for all dimensions of food security, or they will fall short of assisting countries to achieve climate, economic, social and shock resilience. These strategies will accelerate the ambition of the NDCs under the Paris Agreement; build more sustainable, inclusive and just farming practices that are robust and climate resilient, reduce GHG emissions; and support global efforts to end hunger and poverty.

UNDP recognises the urgent need to address climate change resilience and adaptation within food systems to ensure global food security and environmental sustainability. UNDP actively collaborates with various UN organizations, including UNEP, FAO, UNFCCC, WFP and IFAD, as well as international financial institutions, and other stakeholders to promote climate-resilient and adaptive practices in the context of food systems. More information about UNDP's key partnerships can be found in Annex 2.

UNDP's comparative advantage in climate change resilience and adaptation in food systems lies in its multisectoral approach, global presence, capacity-building efforts, policy support, inclusive approaches, resource mobilisation, technical expertise, technology transfer, monitoring and evaluation systems, and advocacy efforts. These strengths enable UNDP to support countries and communities in building resilient and sustainable food systems in the face of climate change. More details about UNDP's experience and capabilities in this area can be found in Annex 3.

Dimension 2: Climate change: Areas of intervention

1. Supporting governments' ambitions in National Climate Plans and **NDCs related to food systems**, particularly in the agricultural sector, by turning ambitions and targets into concrete actions. This includes addressing in National Climate Plans, NDCs and NAPs the main sources of GHG emissions in food systems, such as livestock, manure management and disposal, production and use of chemical fertilizers, rice cultivation, refrigeration in cold chains, and storage, packing and transportation, food loss and waste, among others.

[20] *Food systems account for over one-third of global greenhouse gas emissions.* (2021, March). United Nations. UN News. https://news.un.org/en/story/2021/03/1086822
[21] HLPE. (2020). *Food Security and Nutrition: Building a global narrative towards 2030*. https://www.fao.org/3/ca9731en/ca9731en.pdf

[22] *What you need to know about food security and climate change.* (2022, October). World Bank. https://www.worldbank.org/en/news/feature/2022/10/17/what-you-need-to-know-about-food-security-and-climate-change

2. Assisting governments in implementing **climate change mitigation and adaptation policies and investments** in agriculture and food systems. This should prioritise strategies such as accelerating the transition towards agroecology and other nature positive and sustainable agricultural practices; and supporting research and capacity building to produce underutilised diverse crops and varieties that are climate resistant.

3. **Supporting governments to prioritise climate change adaptation programmes**, such as developing capacities for modelling and scenario-based decisions on trade-offs and synergies; promoting the implementation of early warning systems and climate information services, and translating into actionable adaptation advisories, especially for smallholder farmers and small-scale value chain actors; utilisation of digital means and developing digitalisation strategies for easier access to market and price information, climate risk information and related adaptation advisories, climate and weather index insurance, particularly for small-scale food producers; improving the understanding of climate risks in the long term; among others.

4. Ensuring that **countries have inclusive governance, financing and transparency mechanisms** in place to enable them to achieve and track food-related measures and targets in their NDCs and NAPs, while at the same time empowering food supply chain actors to drive climate action.

5. Prioritising **support on climate change mitigation and adaptation for the most affected and vulnerable – low-income and small-scale food producers, processors and traders-** to promote sustainability, resilience and food sovereignty. This priority should be reflected in NDCs, National Climate Plans, NAPs policies, investments across the value chain, public budgets and finance for climate change. This support includes financial and technical assistance for the transition towards agroecology and similar sustainable agriculture practices, as well as facilitating access to key productive inputs such as credit, water, and land.

6. Supporting **multi-stakeholder engagement, south-south exchange and capacity building** to promote and support the transition to sustainable agricultural practices such as agroecology to foster food sovereignty.

Sustainable energy in food supply chains

Food and energy crises are interlinked. Modern food systems are highly dependent on fossil fuels, in different processes along the food value chain, e.g., fertilizer extraction and manufacture, tractors, water pumping for irrigation, processing and packaging, long-distance transport (especially for fresh fruits and vegetables transported by plane), refrigeration and cold chains – including those at restaurants and homes – etc. Farmers all over the world have become more dependent on synthetic fertilizers that come from highly concentrated supply chains. Food systems use about 30 percent of globally available energy, and this energy accounts for about 30 percent of agri-food systems' GHG emissions, mostly related to fossil fuels[23]. Additionally, an estimated 1/3 of food produced that is destined for human consumption is lost or wasted and accounts for approximately 38 percent of energy consumed in food systems.

This high dependence on fossil fuels makes food value chains more vulnerable to frequent energy price changes, which impact food prices, increasing food insecurity. As the prices for energy, fertilizers and food commodities increase, people across the planet are unable to absorb these costs. As a result, we see an unprecedented contribution of rising energy prices to food insecurity and humanitarian needs. Moreover, the Russian invasion of Ukraine has resulted in problems accessing food, fossil fuel-based fertilizers and oil needed in food value chains, exacerbating the impacts of these food and energy crises. **Energy diversification is vital for building resilience in the agricultural sector and improving food security** and reliable energy

[23] *Energy*. (n.d.). Food and Agriculture Organization of the United Nations. https://www.fao.org/energy/home/en

is key for productive farm households. **It is crucial to find green and resilient solutions that can support sustainable food system transformation.** Focusing on renewable energy solutions can alleviate drudgery, increase productivity, expand incomes and enable rural producers to avoid food loss.

Developing the renewable energy infrastructure in an inclusive and just manner and supporting the development of a sustainable and diversified energy sector will improve access to clean, renewable and affordable energy for producers, making them more resilient against frequent fossil fuel price fluctuations. Access to energy is essential at every stage of the food supply-chain for production, processing and preservation – opening new economic opportunities in rural and urban areas that build resilience and strengthen livelihoods, particularly for the most vulnerable.

Globally, 733 million people live without access to electricity, and 2.4 billion people use fuels when cooking that are detrimental to their health and the environment[24]. Rural producers are one of the most significant targets for closing the energy gap, as they account for 80 percent of the world's population without access to electricity. Women still unevenly bear the burden of household chores, subsistence agriculture and manual labour, and they are often prevented from taking part in meaningful societal dynamics and decision-making processes by lack of time. Machines that wash, cool, mill, grind, press, sew, and cook have efficiently improved the lives of many women during the last century. People in rural communities rely heavily on biomass for their fuel – 2.4 billion people have **no access to clean cooking solutions** and cook with charcoal, straw or wood[25]. The lack of access to clean cooking is a huge, often-forgotten crisis that disproportionately impacts women and children, who bear the brunt of domestic tasks, in the world's poorest communities. It comes with great health, social and environmental costs. Indoor pollution generated by open fires or stoves used for cooking or heating leads to the premature death of 3.2 million people every year – nearly half of all air pollution related deaths[26].

In addition, food and energy systems are not aligned, resulting in competition between the use of productive land for biofuels or food crops with impacts on food security. The percentage of crops grown for biofuels is increasing, and this proportion is expected to grow significantly to meet increasing demand, a situation that makes food systems more vulnerable by driving food price increases, like in the 2008 global food crisis. Solving competing interests for food versus biofuel is critically important to stem biodiversity loss around the world and to ensure that supply chains produce food that addresses local and regional demands.

UNDP recognises the critical role of sustainable energy in improving efficiency and mainstream sustainable energy practices within food supply chains. UNDP actively collaborates with various UN organizations including UN Energy, FAO, UNEP and UN Industrial Development Organization (UNIDO), as well as international financial institutions, and other stakeholders to promote sustainable energy solutions in the context of food systems. For more information about UNDP's key partnerships see Annex 2.

UNDP works with governments and partners to transform energy systems and support the integrated policy, technology and financial shifts that shape a country's sustainable economic development. UNDP's comparative advantage in the energy sector is characterised by its holistic and integrated approach, leveraging local engagement, inclusive strategies, knowledge sharing, partnerships, technical expertise, and policy support to drive sustainable energy access, reduce carbon emissions, and contribute to broader development and climate goals. More details about UNDP's experience and capabilities in this area can be found in Annex 3.

[24] Report: COVID-19 slows progress toward universal energy access. (2022, June). *World Bank.* https://www.worldbank.org/en/news/press-release/2022/06/01/report-covid-19-slows-progress-towards-universal-energy-access

[25] *Household air pollution.* (2023, December). World Health Organization. https://www.who.int/news-room/fact-sheets/detail/household-air-pollution-and-health

[26] *Household air pollution.* (2023, December). World Health Organization. https://www.who.int/news-room/fact-sheets/detail/household-air-pollution-and-health

Dimension 2: Energy: Areas of intervention

1. **Reducing dependence on fossil fuels** by promoting less-energy-intensive forms of food production, processing and distribution – particularly promoting an accelerated transition towards agroecology and other sustainable agricultural practices – thus making food prices less vulnerable to energy price fluctuations and reducing dependency on fuel imports.

2. **Evaluating the use of crops and farmland for non-food products,** including analysis and recommendations aimed at reducing land conversion and managing the trade-offs between direct food production and other crop and land uses, and the trade-offs between using crops for food or for energy.

3. Facilitating a **transition towards affordable, renewable, sustainable, and resilient energy sources across the food supply chain** by fostering investments and funds for small infrastructure projects. These could be mini grids and solar panels – for food production and processing, particularly in rural areas; supporting small- and medium-sized enterprises' energy efficiency in transport, storage, retail and wholesale; and promoting clean cooking energy solutions, especially in rural households. This includes supporting governments in translating global energy commitments into concrete evidence-based policies and plans to increase access to clean and modern cooking energy, and mainstream clean cooking into relevant development interventions, such as those impacting health, gender, climate, and environment.

4. **Promoting the utilisation of agricultural and food waste as alternative energy**, supporting the transition from fossil fuels to renewable energy sources. By harnessing these organic waste streams for energy, food systems can contribute to a circular economy approach, enhancing sustainability, resilience, and reducing vulnerability to energy price fluctuations, ultimately fostering a more environmentally friendly and self-sufficient energy approach.



Photo: UNDP

Dimension 3: Diversified, sustainable, resilient, and inclusive food supply chains

Current food systems are unsustainable and highly vulnerable to economic, conflict, climate and other shocks, as there is a high concentration in global food value chains that produce and trade a small number of crops which are exported and controlled by a small number of companies and countries. Developing countries that are food import dependent are highly vulnerable to shocks and crises that disrupt global food supply and that negatively impact the six dimensions of food security – availability, access, utilisation, stability, sustainability and agency. Low-income producers and consumers are particularly highly exposed to those disruptions, through price fluctuations in both production inputs and food products.

The **food system has become more "global",** as exports from developing countries and emerging economies made up more than one-third of global agri-food exports by 2018 with around a third of global agricultural and food exports traded within global value chains[27]. Global and regional trade can play an important role in poverty reduction and achieving more inclusive development, supporting improving livelihoods for farmers and people employed along the value chain, reducing food insecurities across the globe and providing better choices in consumer goods. However, trade is currently falling short in being fully economically, socially, and environmentally sustainable. Food producing countries face significant challenges to comply with international measures and standards. Trade rules, agreements and commitments need to be reformed, updated and enhanced, to not only ensure food security but also to prioritise and provide fair trade conditions to smallholders, to reduce vulnerabilities in food import dependent countries, increase the access and affordability of healthy diets, and to promote environmentally sustainable practices.

To respond to these challenges there is a need for **socially, economically just and resilient food supply chains**, to help outmanoeuvre uncertainty, ensure the diversification of food production as well as geographic concentration, and encourage lasting transformation towards inclusion, nutrition, and sustainability. Investors, buyers, traders, multinational corporations, and governments also have an essential role to play in shifting investments and trade, repurposing agricultural subsidies and creating enabling environments to foster inclusive, sustainable, and resilient supply chains. Countries most vulnerable to food insecurity need to build capacities for domestic production of key food products, while at the same time promoting a diversification of diets that considers diverse and traditional local products, that are more resilient and nutritious.


Photo: UNDP

[27] *The State of Agricultural Commodity Markets 2020.* (2020). Food and Agriculture Organization of the United Nations. https://www.fao.org/resources/digital-reports/state-of-agricultural-commodity-markets/en

UNDP actively collaborates with various UN organizations including FAO, WFP, UNEP and UNIDO and UNCTAD, as well as international financial institutions, and other stakeholders to promote diverse, sustainable, resilient, and inclusive food supply chains for achieving food security, reducing poverty, and promoting economic development. More information about UNDP's key partnerships can be found in Annex 2.

Together with these partners UNDP offers its comparative advantage in taking a **systemic approach to address long-standing structural food problems** which can complement and support the scaling-up of other agencies' crisis response – which focus largely on humanitarian and short-term responses aimed at increasing food production and access. **UNDP's work addresses systemic challenges by linking the improvement in capacities along food supply chains** with an inclusive growth perspective that places emphasis on small-scale food producers, processors and traders; on gender-transformative policies aimed at empowering women along the value chains; on environment and biodiversity conservation and sustainable use; on climate change adaptation and resilience; and on green and renewable energy access and use. More details about UNDP's experience and capabilities in this area can be found in Annex 3.

Dimension 3: Areas of intervention

1. Supporting countries to **diversify their domestic food production** by improving their capacity to produce resilient and nutritive native crops as well as key staple foods (mainly for those products in which countries want to reduce their import dependency). This should be accompanied by a diversification in the sources of food imports, in order to reduce risks related to global food value chain disruptions.

2. Accelerating a **transition towards sustainable food production through diversified agroecological systems**, including short term efforts to reduce the dependence on synthetic fertilizer – and fertilizer imports – and to increase the use of organic fertilizers; and scaling-up nutrition-sensitive agriculture and sustainable agricultural practices.

3. **Promoting sustainable fisheries and aquaculture (the blue food sector), livestock and forestry,** considering these sectors' important contributions to food production and better livelihoods and the access to healthy and nutritious food; and protecting and making better use of ecosystems.

4. Increasing capacities in the **sustainable production of high value-added and differentiated products** – such as fruits, nuts, vegetables and green commodities with export potential – as a means of providing improved and alternative sources of income and upward mobility, without compromising food production for domestic consumption.

5. **Strengthening shorter supply chains by supporting the capacity of territorial and traditional food markets, periodic rural markets, and street vendors,** and other means – such as supporting urban **agroecology** – to facilitate access to affordable, diverse, and healthy diets by linking local rural, peri-urban and urban markets; facilitating the connection between small-scale food producers and lower income consumers; and promoting the consumption of diverse local varieties produced by smallholder farmers and small-scale fisheries.

6. Promote a **better understanding and approach towards the informal sector in food supply chains,** recognising its important contribution to producing and providing affordable access to food, particularly in vulnerable contexts.

7. **Strengthen local food systems, from production to consumption**, adapting support to consider local drivers – climate, ecosystems, socio-economic, cultural – as well a greater connection between producers and consumers, and increased research and capacity building according to local contexts.

8. **Facilitate and promote regional trade to foster food security and resilience, through regional strategies and coordinated actions.** This should aim to reduce domestic food price

volatility (by shifting food from surplus to deficit regions and decreasing dependence on global trade); foresee and identify risks that inform regional food security strategies; and increase sustainable access to affordable, nutritious and diverse food.

9. **Empowering the participation of small-scale food producers, their communities, and small- and medium-sized enterprises along the food value chain** – such as processors, wholesalers, traders, and traditional food markets – in local, national, regional, and global supply chains, with a focus on promoting food sovereignty, improving their livelihoods – promoting income diversification and a living income – and supporting their ability to face future crises. This also includes increasing financial access and technical support for the transition towards sustainable agriculture systems and fostering financial literacy and implementation of digital tools to reach markets and consumers more directly and for better insight into prices, markets, and weather conditions.

10. **Enhance the resilience of food supply chains to climate change-related disruptions** by promoting the diversification of food production and expediting the shift towards sustainable agricultural models like agroecology. This includes the enhancement of integrated pest management methods, the promotion of organic inputs, and the adoption of efficient water utilisation and management techniques. Additionally, support the integration of post-production measures such as safeguarding harvests, establishing climate-resilient storage facilities and improving infrastructure for transportation systems to access markets, and reducing food loss and waste, among other initiatives.

11. Build **circular food systems, strengthen capacities and support locally driven innovative solutions to address food loss and waste across the food value chain at national and local levels.** This includes both reducing agricultural products and food loss and waste, often during the production and consumption stage respectively.

12. **Supporting countries to design regulations and other effective mechanisms** to align business strategies and private investments from key actors along the food supply chain – producers, wholesalers, traders, retailers, etc. – with sustainable, healthy, and socially just food systems.

13. **Support countries in creating the conditions for stability and prosperity and ensuring that communities** can access and sustainably manage vital resources by strengthening community-based conflict resolution mechanisms, promoting equitable resource management practices and enhancing local capacities for agricultural production and food security. This will assist in building resilience and fostering sustainable peace in regions marked by farmer/herder conflicts, land and natural resource disputes and the adverse effects of conflict on food production, storage and distribution systems.


Photo: Pixabay

Dimension 4: Sustainable finance for food systems resilience and transformation

Finance and business are powerful enablers for transforming food systems towards sustainability, social inclusion, and nutrition. The way that decisions are made over public and private capital – on how it is used, and for what – shapes our current food systems. Where the environment, social inclusion and public health are prioritised alongside economic growth in policy, investment, and business decision-making, there is potential for accelerating progress on food systems resilience.

Overall, **global finance is not working for people or the planet.** Food systems generate US$12 trillion in hidden social, economic and environmental costs[28]. Ongoing commodity shocks and global food and nutrition security crises highlight the urgent need to address structural drivers of unsustainable food systems. Major global health, social and environmental problems require system-level responses supported by investment. UNDP therefore works with partners across sectors to change the financial architecture underpinning current food systems in a way that promotes food systems resilience and transformation.

Changing food systems requires changes in public policies as well as in investment and business practices across developed and developing countries, the reallocation of financial resources, and incorporating wellbeing considerations into decision-making processes.

To accelerate the transition to resilient food systems, two things are needed: more financing must go to where it is needed most (and to projects that contribute to sustainable food systems in developing countries); and decision-making by food system investors and businesses (and the policy environment supporting them) must change to maximise positive impacts on people, planet and profits.

UNDP has developed partnerships which make it possible to tackle the root causes of unsustainable food systems, reorient business and investment decision-making, and unlock public, private, and blended finance flows. UNDP works collaboratively with Ministries of Finance, Tax Authorities, Regulators, Central Banks, the Insurance Industry, International Financial Institutions and private funds and enterprises to enhance the impact of financial transactions and business decision-making on sustainable development. UNDP works closely with UN organizations like UNCDF, FAO, WFP, IFAD, UN Women, UNICEF, and others, as well as international financial institutions, civil society, the private sector and other relevant stakeholders, to advance public and private finance solutions to support resilient, fair and sustainable food systems. More information about UNDP's key partnerships can be found in Annex 2.

UNDP is uniquely positioned to realise a sustainable finance architecture by **working with multiple partners on well-tested tools and services that help:** mobilise financial expertise to sustainable development, bring sustainable development expertise to the private sector, strengthen impact management in public and private sector, design instruments for the delivery of vertical funds and innovative instruments, build a sustainable finance architecture at the country level, and facilitate South-South exchanges and horizontal knowledge-sharing on sustainable finance practices.

UNDP contributes with five strategic Service Offers that together serve to support the shifts at local, national, and international levels that are necessary to reshape the global financial architecture. More details about UNDP's Sustainable Finance Service Offers, experience and capabilities can be found in Annex 3.

[28] *Food Systems 2030.* (n.d.). World Bank. https://www.worldbank.org/en/programs/food-systems-2030/overview

Dimension 4: Areas of intervention

1. **Advocating for and supporting changes in the global financial architecture** underpinning current food systems to enhance resilience and transformation. Support global policy-making processes, inform public discourse and debate, influence financial industry narratives, and facilitate country level strategies and reforms to address structural drivers of unsustainable food systems.

2. Support sound management and decision-making processes to increase likelihood that **financing is authentically directed towards food systems transformation with positive impacts** on the environment, ecosystems, public health, and social inclusion. Reduce opportunities for green- nutri- or impact-washing by ensuring that sustainability, public health and inclusion inform strategy, management approaches, governance systems and transparent reporting of food system stakeholders.

3. In order **to promote food sovereignty, redirect finance and funding to local-level stakeholders** including communities, local governments, small- and medium-sized enterprises, investors, and associations to make decisions about their own food systems, and what to produce and consume.

4. **Promote sustainable, healthy, and inclusive private sector investment and business models** that balance the need for both longer-term sustainability and short-term profitability. Support a transition to more sustainable management practices and a shift in mindsets from profit-maximisation to maximisation of impacts across economic, environmental, social and public health dimensions.

5. **Direct private and public capital to priority areas with significant funding gaps,** especially towards activities aligned with: agroecological transition; sustainable fisheries and aquaculture; support and insurance to smallholder farmers, small-scale fisherfolk and fish farmers; climate change adaptation and mitigation for smallholder farmers; protecting biodiversity and the diversification of diets; among other priorities for food systems resilience and transformation. This can be done through financial incentives, fiscal planning, and expenditure management.

6. **Leverage subsidies and taxation to promote food system resilience and transformation,** through: i) supporting policy-makers to repurpose subsidies to improve ecosystems, public health, and social inclusion; ii) supporting governments to utilise taxes to improve food environments, food supply chains, and producer and consumer behaviour for improved sustainability, resilience, and health, including taxes on unhealthy foods, carbon and nitrogen pollution, among others; iii) targeting revenue from new taxes to promote food systems resilience and transformation, directing benefits to those that are most vulnerable and face greater challenges to afford food[29].

7. **Mobilise investments to collaborate with academia in the research** on undervalued, underutilised, and native crops that can meet the dietary needs of vulnerable populations sustainably and equitably.


Photo: Unsplash

[29] Food Systems Economics Commission. (2024). *The Economics of the Food System Transformation: Global Policy Report*. https://foodsystemeconomics.org/wp-content/uploads/FSEC-Global_Policy_Report.pdf

Conclusion and Call to Action

To echo UN Secretary General Antonio Guterres, broken food systems are not inevitable. They are the results of choices we have made. And we can make different choices in future that will repair our food systems and transform them into **sustainable, inclusive, and equitable, healthy, and resilient systems.** Across the four dimensions detailed here, there is much work to be done but there is a growing collective energy amongst food system actors to grasp the opportunity and transform the system.

This White Paper has identified the pivotal themes and presented transformative solutions and areas of intervention for current and future UNDP engagement. We urge every other player in the system to connect and collaborate with us to co-create the food systems of the future.



Photo: UNDP

Annexes

Annex 1: Key Global Initiatives on Food Systems

UNDP facilitates multiple global initiatives related to food and agricultural commodities systems. The Green Commodities Programme (GCP) promotes sustainable, economic, social, and environmental performance of agricultural commodity sectors at national and subnational levels. Through the Good Growth Partnership (GGP), UNDP joins forces with several UN and international non-governmental organization (INGO) partners to foster change at the global, national, and subnational levels aimed at stopping the deforestation that results from agricultural commodities supply chains, while at the same time ensuring resilient livelihoods for small-scale food producers.

Through the Scaling Up Agroecology Initiative, UNDP together with other UN partners, is supporting a forward-looking and action-oriented platform to catalyse cooperation on agroecology within the UN system. The Scaling up Climate Ambition on Land Use and Agriculture through NDCs and National Adaptation Plans programme (SCALA) responds to the urgent need for action to cope with climate change impacts on the agriculture and land-use sectors and ensures that the negative footprints of the agriculture and land-use sectors on climate change are mitigated. The Climate Promise can also be leveraged to strengthen support to countries to implement their NDC target in the agriculture sector and transition to holistic, resilient and agroecological farming practices.

In 2019, UNDP established the Resilience Hub for Africa, as the only thematic hub of its kind with a mandate on integrated resilience, covering 46 UNDP Regional Bureau for Africa countries in Sub-Saharan Africa.

The Resilience Hub supports UNDP country offices in mainstreaming resilience throughout their programme cycle and provides technical policy and programme support to country offices to apply a resilience building approach at the national and local level. It also delivers resilience at the margins by leading and supporting the development of regional initiatives to reach the most vulnerable in geographical hotspots and in particularly fragile contexts.

The Resilience Hub focuses its support on three key thematic areas:

- Disaster Risk Reduction and Recovery for Building Resilience (DRT)
- Governance and Peacebuilding
- Human Mobility

Channelled through two strategic pillars of work:

- Analysing the future: understanding risks better
- Delivering resilience: applying a resilience building approach at the regional, national, and local level

UNDP's Administrator is also a member, or "Champion", of the Champions 12.3 initiative which is a coalition of executives from governments, businesses, international organizations, research institutions, farmer groups, and civil society dedicated to inspiring ambition, mobilising action, and accelerating progress toward achieving SDG Target 12.3 (reducing food loss and waste by half) by 2030.
UNDP is a member of the **High-level Task Force on Famine Prevention and Response.** The objective of the HLTF is to coordinate, facilitate and support collective action in support of country leadership and operations to: (i) avert famine or famine-like conditions in the country's most at risk[i] and (ii) prevent or mitigate the key drivers of famine and food insecurity longer-term, reducing worsening food insecurity and strengthening resilience.[ii] Under the leadership of its principals and/or their delegates, the HLTF will:

1. **Support country leadership** to strengthen multi-sectoral emergency response to immediate needs, while addressing key drivers and facilitating investment in prevention, early action and resilience, drawing on available expertise and resources.

2. **Advocate and raise awareness** of rising food insecurity and the risk of famine, including the key drivers and ways to counter, mitigate and prevent worsening food crises, drawing on early warning and analysis produces and frameworks and lessons learnt.[iii]

3. **Build and harness partnerships, political support and new opportunities for resource mobilisation** to deliver comprehensive packages of measures that address gaps in famine prevention and response.

4. **Strengthen system-wide coordination and coherence** in support of famine prevention and response.

Founding members are FAO, WFP and OCHA. As of 8 May, the membership has been expanded to UNDP, IOM, UNHCR, UNICEF, WHO, and two NGO partners nominated by the NGO Consortia, ACF and IRC, as well as the UN Coordinator for Famine Prevention and Response (also representing OCHA) and the Global Network is there to support with data and analysis. An invite has been extended to the World Bank Group

UNDP has been invited to join the **IPC Global Steering Committee** and the **IPC Technical Advisory Group** to add a development voice with specific focus on the chronic food insecurity scale which is a new initiative-based consultation and a study that was published in March 2022.

UNDP is a member of the **World Bank led Food Security Crisis Preparedness Plans (FSCPP).** The **FSCPP** is a national operational plan that defines what constitutes a major food and nutrition security crisis for a country. The plan also explains how crisis risks are actively monitored and identified, and details step-by-step protocols, roles, and timelines for mobilising additional funding and early action. The FSCPP brings together these preparedness elements into a cohesive operational framework to support the systematic recognition of an emerging crisis and prompt timely joined-up action across government, humanitarian, and development partners to prevent and mitigate the impacts of future food and nutrition security crises. While the FSCPP is a World Bank requirement associated with receiving support from the ERF, the FSCPP extends beyond the World Bank's engagement and represents the country's national plan.

Membership of this process consists out of the Global Alliance for Food Security (GAFS), Global Network Against Food Crises (GNAFC), the Food and Agriculture Organization (FAO) of the United Nations (UN), the UN Office for the Coordination of Humanitarian Affairs (OCHA), the UN Children's Fund (UNICEF), the World Food Program (WFP), the UN Famine Prevention and Response Coordinator, and the World Bank Group (WBG). **UNDP joined as of April 2023.**

Annex 2: Key Partnerships

The scope of what needs to be done to transform food systems is enormous and requires collaborative work for systemic change at both the country and global levels. **Partnerships are, therefore, at the heart of everything UNDP does – working closely with governments, the UN system, multilateral organizations, INGOs, international financial institutions, the private sector, foundations and civil society organizations.** This approach is aimed at ensuring that each entity brings its respective expertise, resources and network to the partnerships for maximum impact, considering the global leadership of organizations such as the CFS and HLPE-CFS. Considering this strategy, it will be essential to further build on UNDP's collaboration and coordination with CSF and HLPE-CFS, as well as other expert bodies with a systemic perspective, such as IPES-Food, to include their recommendations in our work.

UNDP works closely across many levels with several of the UN agencies, including those specialised in food systems, such as the FAO, WFP and IFAD, as well as the UN Food Systems Coordination Hub. It also works closely with agencies working toward addressing the same and other structural challenges in the food system, including UNEP, WHO, ILO, UN Women, among others. UNDP is also working with other multilateral institutions such as the World Bank, as well as INGOs. For the areas of intervention, it will be essential to partner with various organizations that represent different stakeholders in the food systems, such as small-scale food producers, Indigenous and local communities, traders and processors.

As the co-chair of the UN Food Systems task force (UNTF), together with WHO; UNDP is actively engaged in the **follow-up mechanisms to the 2021 Food Systems Summit, alongside the Food Systems Coordination Hub in Rome.** The UN System has an important responsibility to ensure the Summit's commitments and outcomes are kept alive and realised. The chaired UNTF consists of more than 44 UN agencies (137 colleagues in total) and is responsible for ensuring a strategic and coordinated engagement of the UN System following up on the UNFSS outcomes.

UNDP partners with universities and research centres to maximise knowledge generation and dissemination for innovative thinking in new programmes. UNDP will further explore ways of broadening our partnerships with universities and research centres, including The Center for International Forestry Research and World Agroforestry (CIFOR-ICRAF) and Consortium of International Agricultural Research Centers (CGIAR) to bring in the science to inform policy and practice.

To promote greater preparedness to major food and nutrition security crises, the World Bank as part of the Global Alliance for Food Security (GAFS) – in close collaboration with UNDP and other organizations, is supporting countries as they develop and operationalise the Food Security Crisis Preparedness Plans (FSCPPs) and the linked Global Food and Nutrition Security Dashboards.

UNDP will further explore ways of engaging with and amplifying the voices of marginalised and vulnerable groups in its work, including Indigenous peoples, women's associations, grassroots organizations, and food movements, who are key agents of change and provide invaluable insight into the needs, challenges and solutions of frontline communities, landless farmers, and others involved in food systems.

South-South and Triangular Cooperation (SSTC) modality, which plays an indispensable role in today's development landscape, is also an essential approach to development cooperation and an integral partnership modality, connecting countries and applying their knowledge and experience. SSTC is also an effective tool for mobilising and engaging a broad range of stakeholders.

The **private sector can make an important contribution towards resilient and sustainable food system transformation by fostering innovation**, managing intentionally for positive impacts, adopting sustainable

internal management practices, providing impact-driven investments, directing capital to where it is needed most to advance the SDGs, promoting entrepreneurship and economic development, and supporting equitable business models that value and promote sustainable production and consumption. Private sector actors at the international level are also looking to UNDP to be a convener and help scale up or act as a broker to move towards more sustainable production. UNDP partners with industry organizations such as the Global Steering Group for Impact Investing, the International Chamber of Commerce, and the World Association of Investment Promotion Agencies, as well as a variety of leaders from the private and public sector who sit on the UNDP SDG Impact initiative's Steering Group, to align and leverage private capital for the SDGs.

Both **global and local foundations are providing strong backing for UNDP's activities,** offering essential knowledge on a range of issues ranging from governance and environment to health and financial inclusion. **UNDP also partners with civil society organizations in programme implementation and policy advocacy**. At the country level, this often means working with such organizations to provide basic services in the areas of health, education, water delivery, agricultural extension and micro-credit provision.

Some detailed and relevant partnerships in the field of sustainable finance below:

FAO
UNDP's SDG Impact initiative is fully aligned with FAO's Sustainable food systems concept and framework. We provide the means to implement the Principles for Responsible Investments in Agriculture and comply with emergent sustainability reporting regulations.

UNICEF
UNICEF and SFH are collaborating on child lens investing, including collaboration on a Children's Bond Standard, integration of the child lens investing taxonomy on the SDG Investor Platform, and the development of the UNICEF Child Lens Investing Framework. In addition, UNICEF is working alongside UNDP to support governments in more than 40 countries as they operationalise INFFs.

UNWOMEN
UN Women and SFH are collaborating on the UNDP SDG Impact Standards. UN Women's "Women's Empowerment Principles" are a core building block of the UNDP SDG Impact Standards, and UN Women provided technical backstopping to UNDP to ensure a gender lens was adequately built into the Standards Guidance. In addition, UN Women is an active partner supporting governments to operationalise Integrated National Financing Frameworks, working alongside UNDP in more than 15 countries.

UNCDF
UNCDF is working alongside UNDP to create project pipelines and blended finance deals based on the SDG Investor Maps, especially in Africa.

EAT GFFN
UNDP is already driving changes in business and investment decision-making to **deliver net positive impacts and sustainable food systems.** UNDP does this by driving awareness and adoption of sustainable management practices among entrepreneurs, early-stage companies, investors, and policymakers in the national and international food sector, and through working with public sector to align the enabling environments. For example, UNDP is working with EAT and the Good Food Finance Network to develop a Good Food Investing Framework, based on the SDG Impact Standards, that will further help food system actors manage their impacts and accelerate the transition to sustainable food systems. The Good Food Finance Network (GFFN) is a coalition of organizations that aims to accelerate the flow of capital towards sustainable food systems. The core partners of the GFFN are committed to increasing targeted financial flows to support the food systems transformation towards equity and sustainability. The Network is convened and coordinated by the EAT Foundation, Access to Nutrition Initiative (ATNI), the United Nations

Environment Programme (UNEP), and the World Business Council for Sustainable Development (WBCSD). The GFFN is closely supported by the FAIRR Initiative, Food Systems for the Future, Global Environment Facility (GEF), Just Rural Transition, Rabobank, S2G Ventures, UNDP, United Nations Conference on Trade and Development (UNCTAD), the World Bank, and as of October 2023, UNDP.

Italy
Italy, via the Multi Partner Trust Fund under the Executive Office of the Secretary General, has partnered with UNDP SDG Impact on a pilot on "Catalysing private finance for sustainable food systems" in January 2023. This pilot used the SDG Investor Maps, pipeline building, SDG Impact Standards education and awareness raising to catalyse changes in food systems. Italy has also been supporting the development of SDG Investor Maps and the SDG Investor Platform, as a one-stop-shop for the private sector to explore, engage and manage investment opportunities with economic, social and environmental impact that contribute to achieving the SDGs. In addition, Italy held the Presidency of the G20 in 2021 and championed INFFs as a major focus of discussions among G20 members, and Italy continues to support INFF operationalisation through the Technical Assistance Facility as a supporting partner.

International Organization for Standardization (ISO)
In 2023, UNDP launched a partnership with the International Organization for Standardization (ISO). Together, we will develop PAS 53001, guidelines for the SDGs which is already well progressed and should be released in Q1 2024, and a new ISO International Management System Standard both based on the SDG Impact Standards.

Work on the draft international standard is scheduled to commence later this year. UNDP is also contributing to other ISO and CASCO working groups on sustainability information/data requirements and standards for sustainability related conformity assessments.

G7 Impact Taskforce
SDG Impact's director was a Working Group Member of the G7 Impact Taskforce, a global initiative comprising businesses, investors and other institutions committed to harnessing investment for the good of people and the planet. Its goal is to create better systems to simulate the flow of investment that makes a difference.

G20 Sustainable Finance Working Group
UNDP has been the Secretariat for the G20 SFWG since its revival under the Italian Presidency in 2021. The G20 SFWG is co-chaired by US Treasury and People's Bank of China. The G20 SFWG Roadmap – endorsed by G20 Sustainable Finance Working Group (SFWG) G20 Leaders in Rome – demonstrates a new political direction for the financial system required to support the delivery of the 2030 Agenda and Paris Agreement through policy and regulatory actions. SDG Impact experts have been contributing to the work to direct attention towards managing for impact.

Annex 3: Experience and Capabilities Related to the Dimensions

Systemic governance, collaboration, and solutions

UNDP **has been working with countries to transform their farmer support systems** and strengthen multi-stakeholder mechanisms that provide systemic support to smallholder farmers within commodity supply chains. As part of this work, UNDP recently launched a guidance note entitled *Multi-stakeholder Collaboration for Systemic Change: A New Approach to Strengthening Farmer Support Systems,* which promotes and provides guidance on how to develop new partnerships; enable innovation; and strengthen financing for farmer support systems for sustainable commodity production.

In 2021, FAO, UNDP and UNEP launched the report *A multi-billion-dollar opportunity: Repurposing agricultural support to transform food systems* which calls for governments to rethink the way agriculture is subsidised and supported. By providing evidence on the potential positive impacts of eliminating negative agricultural support, this report presents the case for repurposing such support, which represents a significant opportunity to help transform food systems, support climate action, and achieve the SDGs. It emphasises the clear need for action at country, regional and global levels to phase out the most distortive, environmentally, and socially harmful support, such as price incentives and coupled subsides, and redirect it towards investments in public goods and services for agriculture, such as research and development and infrastructure, as well as decoupled fiscal subsidies.

UNDP already works to **bring together different stakeholders – including governments, other development agencies, the private sector, Indigenous Peoples and farmers' organizations** – as well as to facilitate co-creation processes for coordination and systems change for socially and environmentally sustainable production. This work includes various projects to promote effective collaborative action, fostering spaces for deeper collaboration and reflection, and thus allowing food systems stakeholders to work more collaboratively and systemically, such as UNDP's role as the convener of the Conscious Food Systems Alliance – the goal of which is to promote deep collaborative work, strengthening inner capacities and partnerships for food systems transformation.

UNDP works on **strengthening food systems governance and multi-stakeholder dialogues and cooperation.** As part of the follow-up for the 2021 UN Food Systems Summit, UNDP and FAO are piloting a joint Country Support Programme in pilot countries that aims to support the design and implementation of national sustainable food system pathways. Under this mechanism, UNDP will be supporting multi-stakeholder dialogues on food systems that should be used to develop systemic and longer-term solutions – linked to immediate and short-term crisis responses – aligning the priorities of multiple stakeholders and drawing on their strengths to support food systems transformation. In 2021 UNDP launched the Effective Collaborative Action methodology – a guide which provides practical ways for how to change food systems through deep collaborative action, with a focus on strengthening the participatory and inclusive governance of food systems. Through dialogues and multi-stakeholder processes, UNDP is constructing the spaces that allow for the important discussions to take place, working through friction and conflict, and with an emphasis on ensuring all voices are heard.

UNDP also works as a standard-setter for what sustainability requires from the private sector with the UNDP Global SDG Impact Standards. These independent **management practice standards** help investors and enterprises integrate sustainability into how they do business and invest (i.e., into strategies, management systems, governance, and decision-making). The SDG Impact Standards are fully aligned with and provide a decision-making framework to operationalise the Principles for Responsible Investments in Agriculture.

Structural drivers in food systems

Poverty and inequality: inclusive growth and social protection in food systems

UNDP has significant experience in providing **social protection** through cash payments and other means. Demand for these services spiked in the wake of COVID-19 because of the urgent need for better social safety nets to address food insecurity. In Yemen, UNDP is providing nutrition-sensitive cash transfers, temporary employment, and increased access to basic services and economic opportunities for food-insecure populations affected by both COVID-19 and the on-going conflict and climate-related shocks, as well as to strengthen the capacity of national service delivery institutions.

Through its Crisis Offer, UNDP **links crisis responses to capacity building for social protection**. In Afghanistan, UNDP leads the UN socio-economic recovery in the country under the One-UN Transitional Engagement Framework (TEF). In October 2021, UNDP launched an ambitious local recovery programme, ABADEI, to safeguard livelihoods through temporary work and market access, and offering small productive activities.

UNDP launched the **Global Accelerator on Jobs and Social Protection for Just Transitions**, a platform that can support the creation of jobs on sustainable food supply chains. UNDP has already been doing work to promote improved livelihoods and employment creation, with interventions in the agriculture and food production sectors.

Health: promote sustainable and healthy diets, and safe environments

UNDP **has promoted interventions that improve households' economic access to fresh food of high nutritional value** to increase the diversity and quality of their diets. In Paraguay, UNDP developed and evaluated the impact of an intervention that provided vouchers for food of high nutritional value to members of households.

UNDP plays a critical role in addressing pollution that ultimately improves food access, nutrition, and security to improve human health outcomes. Through the **Advancing Health and Environmental Sustainability through Action on Pollution project**, UNDP has codeveloped a set of tools that allows countries to determine the social, health, and economic cost of illness from pollution, while providing countries with tailored intervention options to reduce pollution that if invested in, can reduce loss of life and increase a country's GDP.

To further enable a system to address pollution, UNDP has developed a framework to evaluate the **legal and policy landscape surrounding pollution** in a country in order to identify enabling areas for new policies, regulations, and cross-sectoral collaboration. These tools provide a powerful form of communication that allows countries to see the incentives for investing in reducing pollution. These tools are being developed and demonstrated in Ethiopia, Mongolia, and India, with the plan for expansion to address pollution in many low and middle-income countries.

As a part of the UNDP programme on 'Green Recovery Pathway for India: Transitioning towards a green and resilient COVID-19 recovery,' the Department of Animal Husbandry in Uttarkashi has been provided a Rapid Zoonotic Disease Diagnosis Vehicle, or the 'One Health Van'. Fitted with modern diagnostic equipment, this van doubles up as a sample collection and disease diagnosis lab on the go, enabling health workers to effectively respond to emergencies.

Gender transformative solutions in food systems

Globally, UNDP has significant experience at the country level on gender transformative programs and projects and partners with other agencies and organizations to promote an integrated approach on gender and food systems.

The Good Growth Partnership (GGP), led by UNDP, published in 2020 the report *Gender Mainstreaming in Agricultural Supply Chains Can Accelerate Good Growth*, which seeks to **underline and stress the added value of using a gender lens in the design and implementation of activities in agricultural supply chains**, and reflects on current trends in gender mainstreaming, opportunities to accelerate action, and critical lessons-learned from initiatives that have already been implemented. Further, UNDP conducted a number of gender analyses in countries including Bhutan, Ghana, Kenya, Lebanon, Trinidad and Tobago, and Uganda to better understand the gender differentiated impacts of climate change.

Informed by gender and marginalised analysis, UNDP produces market intelligence on SDG-enabling investment opportunity areas in the food and agriculture sector. UNDP's gender lens investing experts and on-the-ground stakeholder consultations identify gender-linked business and impact opportunities and risks the private sector uses to develop gender-responsive investment theses, project pipelines, and business models to meet urgent SDG needs at country level.

UNDP already plays an **important role in promoting gender-transformative policies** – designed to address the root causes of gender inequality – at the country level in all regions in the world. For example, in 2021, UNDP helped 73 countries expand gender-responsive social protection and care systems. In projects aimed at improving livelihoods and food security, the focus is on strengthening women's economic empowerment and addressing their specific needs and opportunities by reducing gender inequalities.

Through the joint programme, *'Building Effective Resilience for Human Security: The Imperative of Gender Equality and Women Empowerment in a Strengthened Agriculture Sector'* UNDP provided technical support to women farming groups and other farming individuals in Dominica to strengthen the advocacy platform of women farmers. This intervention will allow women's voices to be included in decisions related to improved policy development.

UNDP in partnership with Uttar Pradesh State Rural Livelihoods Mission (UPSRLM) embarked in July 2020 on a project to organise women from farming families into a collective and equip them with skills to develop a farm to market efficient supply chain. This intervention, which lasted till March 2021, was part of a larger COVID-19 socio-economic recovery initiative and aimed to bring women to the forefront of the agri-business industry.

Environment, biodiversity, and sustainable food production

Food production depends entirely on nature: the pollinators, the soil, the seeds, biodiversity that allows for better adaptation, the water, the climate variability. With nature being degraded (biodiversity loss, soil crisis, water scarcity, loss of ecosystems that protect from hurricanes and floods e.g. forests, mangroves, etc.) yields and nutrition decrease, forcing smallholders to go and open forests or pristine ecosystems to find more fertile land.

UNDP's work includes making better decisions on land management based on improved data and climate information to ensure transparency and consistency; greening value chains from farms to urban areas; promoting climate-resilient agricultural practices; improving storage, while limiting carbon output with green approaches to transport and refrigeration; and helping farmers rethink the way they do business,

reach markets, process goods and adapt their enterprises and livelihoods to the unique realities of the 21st century.

Through the Small Grants Programme (SGP), a corporate programme of the Global Environment Facility (GEF) and implemented by UNDP, UNDP is supporting bottom-up actions for global environmental issues by empowering local civil society and community-based organizations in 128 countries. In partnership with governments, the private sector and other stakeholders, SGP facilitates upscaling and replication of successful initiatives. SGP also promotes civil society's participation in national and global policy dialogues and its decision making on environmental and sustainable development issues. The SGP focuses on biodiversity, climate change, land degradation, sustainable forest management, international waters and chemicals.

The UNDP Water & Ocean Governance Programme (WOGP) helps countries achieve integrated, climate-resilient, sustainable, and equitable management of water and ocean resources, and universal access to safe water supply and sanitation. Focusing on governance, WOGP supports the enabling environments and long-term and comprehensive partnerships for the sustainable use and protection of freshwater and marine resources, and the efficient and equitable provision of related services.

UNDPs Global Plastics Offer – Planet, People & Plastic – forms a critical part of UNDPs environment signature solution. UNDP seeks to address the sourcing, use and disposal of plastic by eliminating, innovating, circulating and managing waste, as well as scaling up awareness, private sector responsible production, financing coalitions and policy influence.

UNDP has over **40 years of experience in the biodiversity and ecosystems field,** supporting around 400 projects in over 130 countries to access GEF and other vertical funds' grant finance for biodiversity conservation, combating land degradation, sustainable forest management, and ecosystem-based mitigation and adaptation to combine this with domestic and bilateral sources of finance. Since 2000, UNDP's global biodiversity program has been successful in helping to strengthen over 3,000 protected areas, covering more than 680 million hectares including marine, terrestrial and Indigenous and community conserved areas; and undertaking interventions in production sectors and development planning, covering more than 250 million hectares of production landscapes and seascapes. For example, in Colombia UNDP is working with the Ministry of Environment and Sustainable Development and the GEF, together with local communities to address the loss of the **dry forest ecosystem** and promote peace in Montes de Maria under the banner **'Forests 4 Peace'.** During the project 33,400 hectares of dry forest was conserved in Montes de Maria and other regions together with local communities through conservation agreements, in-situ conservation strategies, agroforestry projects, and enrichment of the dry forest with native species.

UNDP, FAO, UNEP and World Bank are currently working together under the GEF-funded **Food System, Land Use and Restoration (FOLUR) Impact Programme.** FOLUR promotes sustainable integrated landscapes and efficient food value chains at scale. **UNDP, leading the GGP, supports this Impact Programme**, which consists of a Global Platform providing support services to **27 Country Projects targeting the production landscapes of eight commodities: beef, cocoa, corn, coffee, palm oil, rice, soy, and wheat.**

Climate change resilience and adaptation in food systems

UNDP supports countries to make bold pledges to tackle the climate crisis. UNDP's Climate Promise is the world's largest offer of support to developing countries on NDCs which are crucial steppingstones towards net-zero emissions and meeting the Paris Agreement goals. The Climate Promise supports over 120 countries, in collaboration with over 35 partners and is a major contribution to the NDC Partnership. As of November 2022, 106 Climate Promise-supported countries submitted enhanced NDCs to the UNFCCC.

This represents 30.24 percent of global GHG emissions and 84 percent of developing countries worldwide.

UNDP is scaling up support to solidify countries' ambition and help turn their NDC targets into concrete action on the ground. Over 90 percent of Climate Promise countries feature the agriculture sector as a key NDC sector, which represents a great opportunity to promote bolder commitments and climate action in food systems, helping countries to transition to sustainable agricultural practices such as agroecology, reduce emissions and build climate resilience.

As politically backed blueprints for investments in key engines of sustainable development, NDCs offer opportunities to unlock potentials for a just transition. The Climate Promise leverages this engagement and political buy-in on NDCs to support countries to mobilise both public and private investments to realise NDC targets while also simultaneously achieving SDGs. Climate Promise support is provided to countries along three mutually supportive pillars: Scale and Speed; Amplifying Ambition; and Lasting Inclusivity. To complement and support country engagement, a global component provides state of the art technical expertise in key cross-cutting areas including gender mainstreaming, circular economy, just transition and urban issues, among others.

Linked with the NDCs and UNDP's Climate Promise, UNDP has since 2017 engaged with 37 countries to advance their National Adaptation Plans (NAPs) processes with funding from the Green Climate Fund Readiness Programme. Adaptation planning and policy support under these programmes is integrally aligned to UNDP's Climate Promise and support to NDC enhancement and implementation. The GCF Readiness Programme grants funding up to $3 million to support country-driven initiatives by developing countries to strengthen their institutional capacities, governance mechanisms, and planning and programming frameworks towards a transformational long-term climate. UNDP works with governments across national and subnational levels, offering integrated and multi-sectoral solutions. UNDP's on-the-ground presence and long-standing experience on climate change adaptation programmes over two decades, serves as the foundational architecture for countries to integrate adaptation in development planning.

Co-led by UNDP and FAO, the **Scaling up Climate Ambition on Land Use and Agriculture through NDCs and National Adaptation Plans (NAPs), or SCALA programme** responds to the urgent need for increased action to cope with climate change impacts in the agriculture and land use sectors. SCALA supports twelve countries in Africa, Asia and Latin America to build adaptative capacity and translate their NDCs and NAPs into actionable, transformative and gender-responsive climate solutions in land-use and agriculture through multi-stakeholder engagement. SCALA provides opportunities to enhance support to countries on strengthening evidence for climate action and risk-informed planning and budgeting, as well as contribute to the SDGs.

The **UNDP Climate and Forests Team** supports countries with the design and implementation of national policies and measures to reduce deforestation and manage forests sustainably, hence contributing to the mitigation of climate change and advancing sustainable development.

Over the past 12 years, **UNDP's climate change adaptation projects have supported** more than 4.8 million smallholder farmers in sustainable agriculture; incorporating new techniques in water harvesting, crop and income diversification; developing markets for climate-resilient crops; facilitating community aggregations, agricultural-enterprise development and setting up financial schemes, including weather index insurance to incentivise climate resilient value chain development that help minimise losses and damages due to climate change as well as improving land and water management at a farm and landscape level.

Building on the experiences and lessons from a portfolio of initiatives in over 137 countries, **UNDP advances a 'whole-of-society' approach aimed at accelerating resilience and adaptation.** It also continues to support countries to mobilise public and private finance and to implement their adaptation priorities, which include those related to food systems. UNDP assists government partners to scale up the integration of climate change adaptation into policy, planning, and investments at both national and local levels through the support to the NAP process and the NDCs.

For example, in Zambia UNDP is working together with the government, FAO and WFP to strengthen the capacity of farmers to plan for climate risks that threaten to derail development gains, promote climate resilient agricultural production and diversification practices to improve food security and income generation, improve access to markets, and foster the commercialization of climate-resilient agricultural commodities.

Sustainable energy in food supply chains

UNDP works to increase energy access for those most in need and aims to expand the **use of renewable sources** and energy efficiency measures in food supply chains. It **works with a systemic approach, linking energy, food and sustainable development goals in other areas**, bringing together agencies and ministries with portfolios for energy, infrastructure, food production, livelihood and employment.

Responding to the UN Secretary-General's urgent call for international action to prioritise transforming energy systems and speeding up the shift to renewable energy, UNDP's Strategic Plan 2022-2025 has set the ambitious target of reaching 500 million people with renewable energy, especially for those further behind, which requires dramatic acceleration. To respond to this need, it will be essential to remove roadblocks to knowledge sharing and technological transfer, greater investment, and partnerships and incentives through sustainable good practices that protect ecosystems and cultures. South-South and Triangular Cooperation (SSTC) can also contribute to making this a reality.

UNDP's support for energy access and renewable energy solutions focuses on integrated approaches to climate, inclusive growth and development, including systemic programs that combine sustainable energy and agriculture. These initiatives aim to improve resilience and productivity, as well as reducing drudgery for smallholder farmers and larger agricultural cooperatives. UNDP's support to sustainable cities also includes integrated solutions that combine renewable energy and efficiency measures with other aspects of urban design that are key for sustainable food systems, such as sustainable mobility and transport and waste management.

Reducing GHG emissions is critical to stabilising the climate and protecting food systems and human health. UNDP's Solar for Health initiative has established solar energy systems in over 1,000 rural health and medical storage facilities in 15 low-income countries, helping to reduce emissions and increase health security. Under the Sustainable Health in Procurement Project, UNDP addresses emissions from the health sector supply chain, which is responsible for about 70 percent of emissions.

The project "Promoting the use of solar technologies for agricultural and rural development in Cambodia and Myanmar" is a joint initiative between the Ministry of Agriculture, Food and Rural Affairs (MAFRA) of the Republic of Korea and UNDP. This project has been designed to build the resilience of smallholder farmers through the promotion and scaling of resilient agricultural practices, solar-powered pumping for irrigation and drinking, as well as the agricultural product market facilities in both Cambodia and Myanmar.

Under the 2021-2025 Kazakhstan Country Programme, UNDP is working to address climate change, improve energy efficiency and promote clean energy. Efforts focus on scaling up financing mechanisms for clean technologies, energy conservation and developing low-carbon businesses through green and

socially equitable financing, green bonds, renewable energy auctions, carbon trading and other innovative mechanisms facilitate the development of low-carbon businesses.

Promoting clean cooking energy solutions can help address a series of environmental, social and health challenges in a holistic way. The governments of African countries recognise this, as evidenced by the inclusion of domestic energy or clean cooking in their climate commitments under the Paris Agreement. In addition, with support from UNDP under its Climate Promise, seven countries in the West African Region (including three in Sahel) have including cooking energy targets in their NDCs.

Diversified, sustainable, resilient, and inclusive food value chains

UNDP's current work on food supply chains covers multiple areas. UNDP has been working on supporting value chains for more than twenty years, providing support to strengthen SMEs resilience across various areas, such as access to green finance and investments in digitalization and innovation, among others. UNDP collaborates with multiple ministries and public agencies to promote inter-sectorial solutions to complex food challenges, involving coordinated policies and actions that range from fiscal incentives and subsidies to capacity building and social programs.

UNDP works with governments around the world on disaster risk reduction and recovery. UNDP helps affected communities return to sustainable development as soon as possible, while building resilience to future shocks.

UNDP brings experience in strengthening food systems in crisis contexts, including work in Syria and Yemen. UNDP's approach combines short-term livelihoods support to producers to provide immediate access to food and income (to purchase food), while also investing in the rehabilitation of productive assets such as irrigation systems to lay the foundation for longer-term food security and build resilience to future crises.

Through Aid for Trade projects, UNDP works on fostering inclusive and sustainable economic growth patterns, particularly in rural areas, by promoting trade and increasing competitiveness within green productive sectors, including the food and agriculture sector. Through cross regional projects in Central Asia and Eastern Europe, UNDP supports governments and small and medium-sized enterprises to build productive and export capacities for niece products, identified in the agricultural, agro-industrial but also in other employment rich and green sectors.

By supporting an increased demand for sustainable products and facilitating their financing, UNDP enables sustainable supply chains. UNDP also facilitates access to new credit schemes, by establishing favourable fiscal incentives allowing farmers to make necessary investments in productive infrastructure.

UNDP builds on its decades-long experience and recent innovations in engaging with private sector actors, to help food system investors and enterprises enhance their contributions to the SDGs. UNDP's Sustainable Finance Hub and flagship initiatives such as SDG Impact, Tax for SDGs, Digital Finance, and Insurance and Risk Financing Facility offer a range of services and tools at country level to harness private and public capital for the SDGs, including a portfolio of work specifically addressing food systems transformation.

UNDP is working with countries to identify and capitalise opportunities within circular approaches as part of their NDC across sectors such as waste and agriculture. This includes carrying out circular economy assessments to identify priority areas for circular action and building communities of practice for private sector engagement. For example, under the Climate Promise, UNDP supported the government of Gambia to conduct a circular economy assessment which resulted in the inclusion of measures to reduce food losses in the revised NDCs. UNDP is also helping catalyse more private capital for NDC priority areas,

including circular economy approaches, through identifying specific investment opportunity areas with its SDG Investor Maps market analyses.

UNDP **provides specific support to value chains** to produce high value-add and differentiated products, creating decent jobs that enable upward mobility as well as sustainable and circular production models. These value chains tend to focus either on high-quality, niche products in smaller volumes, or platform-based products. Its work on value chains leverages the experience and networks developed through the Green Commodity Programme, SDG Value Chains Methodology and the Aid for Trade portfolio.

UNDP **supports small-scale food producers** in becoming active participants in the increasingly digitised agri-food value chain and participating in developing digital public goods that engage smallholder farmers. It has worked on food supply chains by supporting fisherfolk and farmers with digital tools and platforms to receive payments and trade their products. UNDP has also supported governments in modernising informal and traditional food markets, with the goal of facilitating access to food at the local level and connecting local producers with consumers. UNDP's experience with the private sector – which extends to inclusive business, inclusive value chains, and SME competitiveness – is key to supporting governments in promoting policies and regulatory environments for inclusive and sustainable food supply chains.

UNDP supports Accelerator Labs, which comprise a vast global learning network that pilots a variety of experimental projects in 91 locations. In Zimbabwe, a project was established to combine data for better understanding of informal food markets; in Vanuatu solar energy systems were developed to dry and preserve food; and in Barbados, shipping drums were converted to gardens to offset food shortages during the COVID-19 pandemic. These projects provide better livelihoods to the most vulnerable and empower communities to produce food at local and sustainable scales.

Sustainable Finance Hub

The UNDP SFH Service Offers can be found here:

Public Finance:
https://sdgfinance.undp.org/our-services/public-finance

Private finance:
https://sdgfinance.undp.org/our-services/private-finance

Impact management:
https://sdgprivatefinance.undp.org/aligning-capital/impact-management-and-measurement-trainings

Integrated National Financing Frameworks:
https://sdgfinance.undp.org/resource-library/integrated-national-financing-frameworks-and-tax

A selection of UNDP SDG Finance initiatives, tools and services are listed below:

Financial Centres for Sustainability (FC4S)
FC4S is a global network of 39 financial centres, representing 82 percent of global equity market, and working together to achieve the objectives of 2030 Agenda and the Paris Agreement. Financial centres are the foundation to the structure, function, and dynamics of the global economy. Through regulatory, coordination and investment channels, financial centres can fundamentally shape the incentives of individual companies to integrate aspects of sustainable development into regular business.

Integrated National Financing Frameworks

INFFs are a country-led approach for mobilising and leveraging public and private financing for sustainable development. They help governments bring together the full range of policies, regulations and instruments at their disposal – those that mobilise and spend public resources, and those that regulate and promote private investments – and align them with national priorities. INFFs help governments and their partners navigate the synergies and trade-offs between policy areas and strengthen collaboration across the public and private sectors.

SDG Impact
UNDP's SDG Impact flagship initiative works to accelerate private sector contributions to the SDGs by 2030. Its objective is to help businesses and investors put sustainability at the core of management decisions and direct capital to where it can make the most difference to people and planet. It achieves this through two pillars of work: 1) Impact management awareness and capacities through the UNDP SDG Impact Standards: voluntary management standards designed to guide businesses and investors on their sustainability journeys. Organised around 12 implementation actions, the SDG Impact Standards provide a holistic universal framework and management approach for embedding sustainability and the SDGs in all decision-making across organizational purpose and strategy, internal management, disclosure, and governance practices. To support the adoption of the SDG Impact Standards, SDG Impact has developed education and training courses to strengthen sustainability and impact management capability and capacity across the market. 2) The SDG Investor Map is a market intelligence tool that makes visible SDG-enabling investment opportunity areas – investment themes and business models – in emerging markets that are aligned to national sustainable development needs, government policy priority areas, and investor interest. The SDG Investor Map makes it easier for organizations to identify business and investment opportunity areas with the highest impact potential and direct activity and capital to where it is needed most. Impact and market data on over 500 investment themes and business models across 30 countries are available for free on the SDG Investor Platform – another 20 are in development. Over one third of the investment opportunities identified are within food and agriculture, making it the first priority area for SDG-enabling investments globally.

UNDP Insurance and Risk Finance Facility (IRFF)

IRFF supports the development of innovative insurance products and services. The IRFF team works closely with industry partners to deliver policy advice, guidance, tools, methodologies, and networks that boost country and community resilience towards socio-economic, health, climate and other shocks. The Facility also examines legislation, regulatory and institutional capacity development, and invests in advocacy, training, and education.

Digital Finance
UNDP and UNCDF are delivering a series of joint service offers to support developing countries in advancing their sustainable digital financing ecosystems, to catalyse SDG financing and spearhead a dialogue to strengthen the inclusive international governance of global digital finance platforms. Through the joint work, UNDP and UNCDF are advancing the key recommendations of the UN Secretary General's Task Force on Digital Financing of the SDGs (DFTF), which in August 2020 issued an Action Agenda on how to harness the digital finance revolution to accelerate financing for the SDGs.

SDG Finance Academy
SDG Finance Academy ensures all stakeholders can receive the knowledge, skills and training required to understand (i) different financial tools and approaches and their role and use; (ii) how these tools and approaches link to the SDGs; (iii) what these tools and approaches mean for policy reform, and (iv) the scope and opportunities to tailor these tools and approaches to organizational and national development needs. The Academy aims to equip UNDP staff in 170 countries as well as its public and private sector

partners with the right tools and skills to deliver on the SDGs. Modules are tailored to regional and local context of each UNDP Country Office, technical practitioners, economists as well as public and private sector external audiences.

Tax for SDGs

In 2021 UNDP launched "Tax for SDGs" – a new initiative to help countries leverage taxation and mobilise more domestic resources to make progress on the Sustainable Development Goals (SDGs). Through taxation, the UNDP's Initiative helps developing nations strengthen their economic resilience against external shocks and equip national tax administrations and finance ministries with skills and knowledge to combat tax evasion and align their tax and fiscal policies with the SDGs for sustainable growth.

[i] As determined by the Integrated Food Security Classification (IPC), Cadre Harmonise and other relevant frameworks.
[ii] Famine prevention can be understood to include efforts to (i) arrest and reverse the process of famine; (ii) prevent or mitigate the shocks and stressors that drive or contribute to famine risks; and (ii) reduce vulnerability to shocks and stressors in the longer term. For broader discussion of the topic see Famine: A Landscape Report by the Feinstein International Center, to be published).
[iii] Global Network Against Food Crises information and analysis products, including the Hunger Hotspot Report, FAO/WFP's Monitoring food security in food crisis countries with conflict situations: Joint update for the United Nations Security Council, and the IASC Early Warning Early Action Report.


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