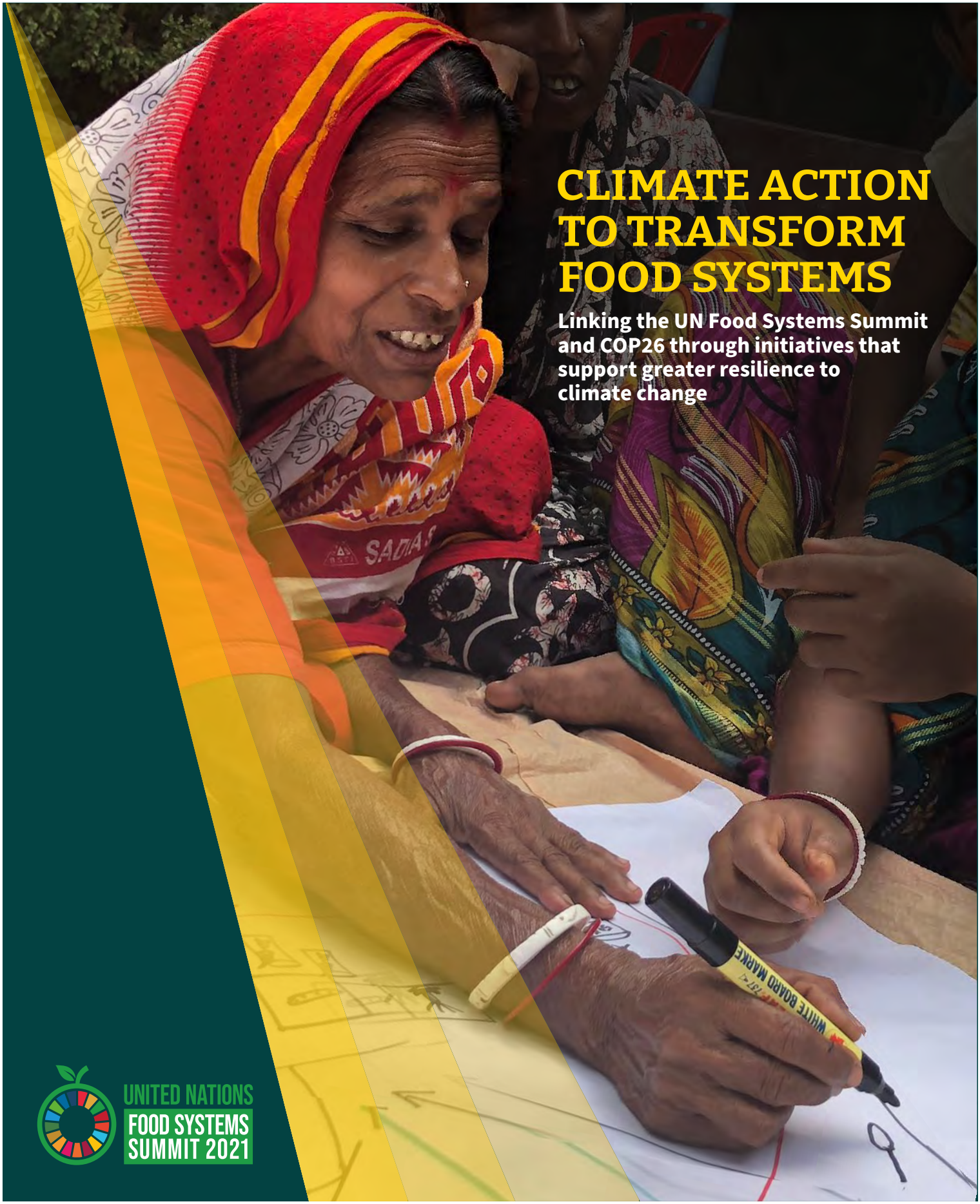

CLIMATE ACTION TO TRANSFORM FOOD SYSTEMS

Linking the UN Food Systems Summit and COP26 through initiatives that support greater resilience to climate change

UNITED NATIONS FOOD SYSTEMS SUMMIT 2021

CGIAR

WFP World Food Programme

REAP Risk-informed Early Action Partnership

InsuResilience GlobalPartnership

BLUEPRINT FOR DIGITAL CLIMATE-INFORMED ADVISORY SERVICES

GREEN CLIMATE FUND

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Photo cover @ Timothy J. Krupnik, International Maize and Wheat Improvement Center (CIMMYT), Bangladesh. Farm resource allocation map – Farmers of Jharvanga village in Batiaghata, Khulna district, Bangladesh are drawing a farm resource allocation map. This participatory tool enables farmers to understand the household's main farming systems and how these may be affected by weather and climate.

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Contents

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Key messages

- The climate crisis is a major threat to our food systems, undermining decades of progress in providing more nutritious diets to a growing global population. But it's these very food systems which contribute to the global climate emergency – producing as much as a third of all greenhouse gas emissions.

- Two key events take place in 2021 – the United Nations Food Systems Summit (UNFSS) and the 26th session of the Conference of the Parties (COP26) to the United Nations Framework Convention on Climate Change (UNFCCC). Both events could produce mutually reinforcing commitments and action at the intersection of climate and food challenges.

- Although these conferences are highly aligned in terms of their goals, they are not systematically feeding each other in a way that reinforces and amplifies their shared ambitions.

- This paper looks at how food systems transformation is an essential aspect of climate action - and sets out how to align climate action with efforts to promote more sustainable food systems.

- The revision of Nationally Determined Contributions (NDC)s in preparation of COP26 offers a unique opportunity to set targets and initiatives that reduce the impact of unsustainable food systems on the global climate – and at the same time helps the agricultural and food sectors become more resilient to the impacts of climate change.

- At the intersection between food systems transformation and climate action, a number of emerging and established Climate Risk Reduction and Management (CRRM) initiatives enable contributions to reduce risks in food systems that are aggravated and compounded by climate change – and protect the livelihoods of those who depend on these food systems.

- This paper outlines how such initiatives offer vulnerable countries a broad pool of knowledge and tools to couple objectives of climate action and food systems transformation, and opportunities for global collaboration and engagement to develop NDCs that tackle both the climate and the food challenge we face in a mutually reinforcing way.

The climate crisis is a major threat to our food systems

For decades, agricultural research and development have worked to tackle global hunger. Concerningly, however, the climate crisis is threatening the substantial progress made on this front. In July this year the United Nations (UN) reported that hunger shot up in 2020, both absolute and in proportional terms, outpacing population growth: some 9.9 percent of all people are estimated to have been undernourished in 2020, up from 8.4 percent in 2019 [1].

In addition, figures from the same year revealed an estimated 149 million children under five are stunted, an estimated 45 million wasted, and 38.9 million overweight or obese. Along with this, 45 percent of deaths among children under five are linked to undernutrition [1, 2]. Creating food systems that are able to feed the growing global population is clearly critically important, but it's not enough to feed people – we need to make sure these systems are sustainable as well.

Food systems will need to transform rapidly to meet growing demands of a changing climate and growing population, while in parallel helping improve diets and reduce food loss and waste. Time is running out to act. Only 10 years remain until 2030 – the proposed date to achieve the Sustainable Development Goals (SDGs) – yet many of the goals are still far out of reach [3].

Cross-cutting vulnerabilities have become a deeply ingrained feature of our food systems. It is clear that climate change will impact food security and nutrition, as well as human and planetary health in the coming decades [4], while short-term climatic impacts will continue to disrupt food systems directly and immediately [5, 6]. Climate and food systems are in a reciprocal relationship, which means climate shocks impact food systems, and vice versa. Climate-related disasters, such as floods and wildfires, which appear to be becoming more common, are a major threat to the stability of global, national, and local food systems. On the other hand, unsustainable food systems are known to cause deforestation and soil degradation and to contribute to global warming, with food production responsible for 21-37 percent of global greenhouse gas emissions [7]. It's not enough to look at these issues separately; they need to be addressed together.

It is clear that sustainable food systems are key to creating more resilient communities and maintaining peace and security. Unsustainable food systems are vulnerable and cannot cope with sudden shocks. In addition, food system failures can lead to crises – including food crises, malnutrition, loss of biodiversity and ecosystems. Conversely, crises such as these then create greater susceptibility to other exogenous shocks, such as conflicts and displacement, which also drive vulnerabilities and inequality. Many crises are thus rooted in food system failures, and climate shocks and stresses play a key role in this. For this reason, climate action is critical. This includes attempts to strengthen adaptation in food systems and their capacity to anticipate and manage climate risks (see Figure 1).

"Without thinking in systems, we cannot understand whether we are more part of the problem or part of the solutions to our broken food systems and overheating climate."

Gernot LAGANDA
Chief / Climate and Disaster Risk Reduction Programmes
UN World Food Programme (WFP)

"We need to make food systems more resilient in light of the climate crisis. The two are inextricably linked, we cannot do one without the other."

Saleemul HUQ
Director International Centre for Climate Change and Development (ICCCAD) and AT5 chair of the UN Food Systems Summit

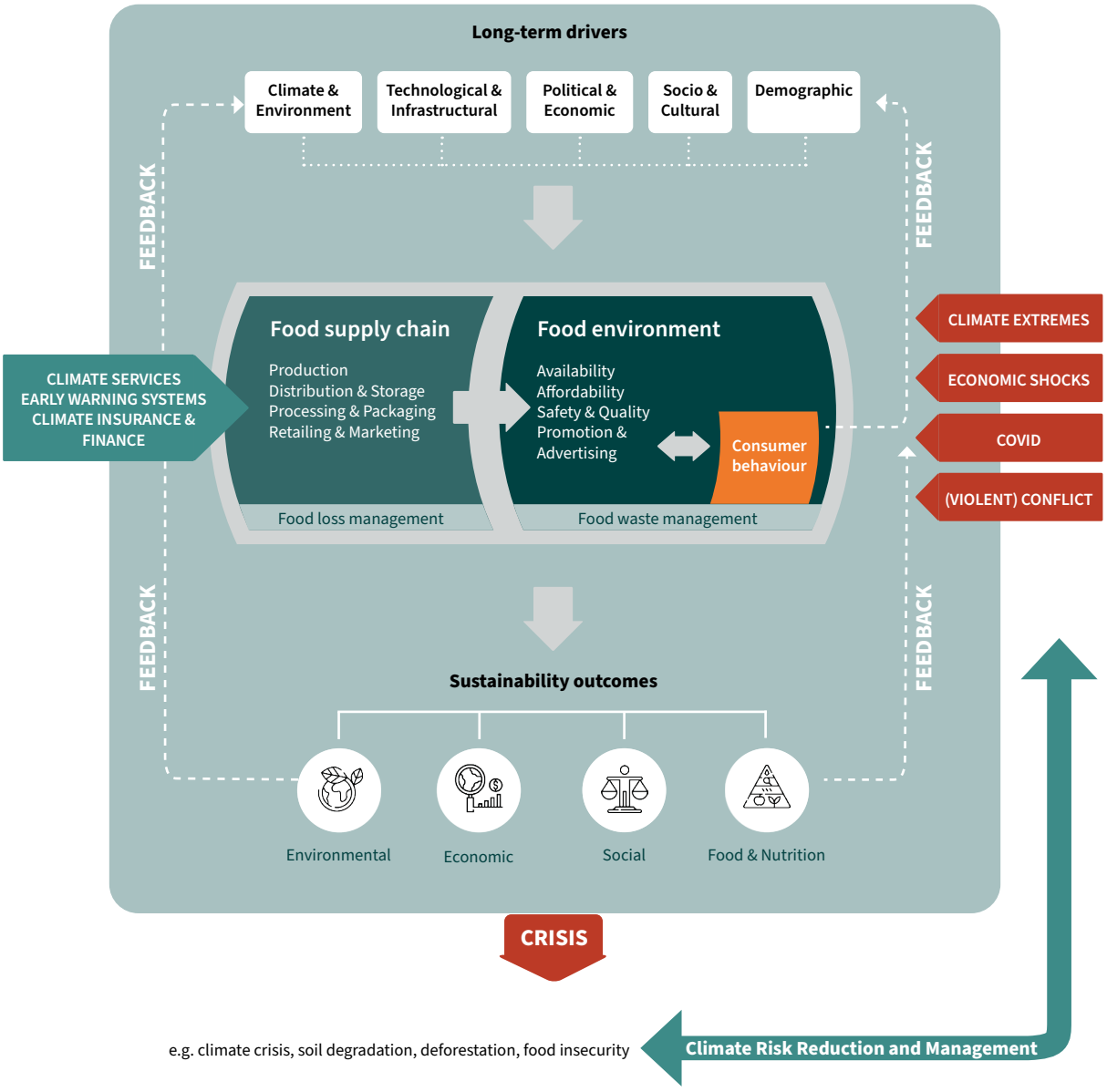

FIGURE 1. The role of climate in food system failures and how climate risk reduction and management strategies can help build resilience (Adapted from Bene et.al., 2019) [8].

Action on climate change & food systems must align

Two key events take place in 2021 – the UNFSS and COP26. Both events could produce mutually reinforcing commitments and action at the intersection between climate and food challenges.

2021 is a milestone year for food systems and climate action. Two key UN events are taking place: The United Nations Food Systems Summit (UNFSS) and the 26th session of the Conference of the Parties (COP26) to the UN Framework Convention on Climate Change (UNFCCC). COP26 is of particular importance, as governments, for the first time since the Paris Agreement, are expected to agree on concrete commitments and greater ambitions to limit global warming to 1.5°C.

Unfortunately, food systems are marginally represented at COP26 and so is climate at the UNFSS. The lack of integration between the two conferences is cause for concern across the scientific community and policymakers. There is, however, great potential for collaboration, and many of the stated goals between the two conferences are extremely aligned (Figure 2).

The UNFSS aims to raise global awareness and encourage commitments towards healthier, more sustainable, and equitable food systems in an effort to achieve the SDGs by 2030. It brings together stakeholders from science, business, policy, and public health, as well as farmers, indigenous people, youth organizations, consumer groups, environmental activists, and many more. It started out with five "Action Tracks" (ATs)* guiding pathways to achieve food system transformation while delivering progress on all 17 SDGs. These are:

"Preparedness is absolutely crucial. We have to switch towards a proactive approach. The climate crisis will impact all of us in one way or another, so we need to use this year and COP26 to set collective goals and shift towards an anticipatory approach."

Ben WEBSTER
Head of Risk-informed Early Action Partnership (REAP) Secretariat

1. Ensure access to safe and nutritious food for all;
2. Shift to sustainable consumption patterns;
3. Boost nature-positive production;
4. Advance equitable livelihoods;
5. Build resilience to vulnerabilities, shocks, and stress.

COP26 aims to secure global net zero by 2050 and keep the temperature of the planet under control by limiting its increase to 1.5 degrees. Countries will be expected to bring their own blueprints laying out specific and concrete plans to meet net-zero targets. Protecting communities and natural habitats, through adaptation, is also a key goal of the conference. It also aims to scale up climate finance by at least US$100 billion per year by 2020 to address the needs of developing countries.

*Following the pre-food systems summit the ATs are being converted into Action Areas, covering the same themes but clustered differently. The process has not been finalized at the time of writing this paper, that is why we refer to ATs here.

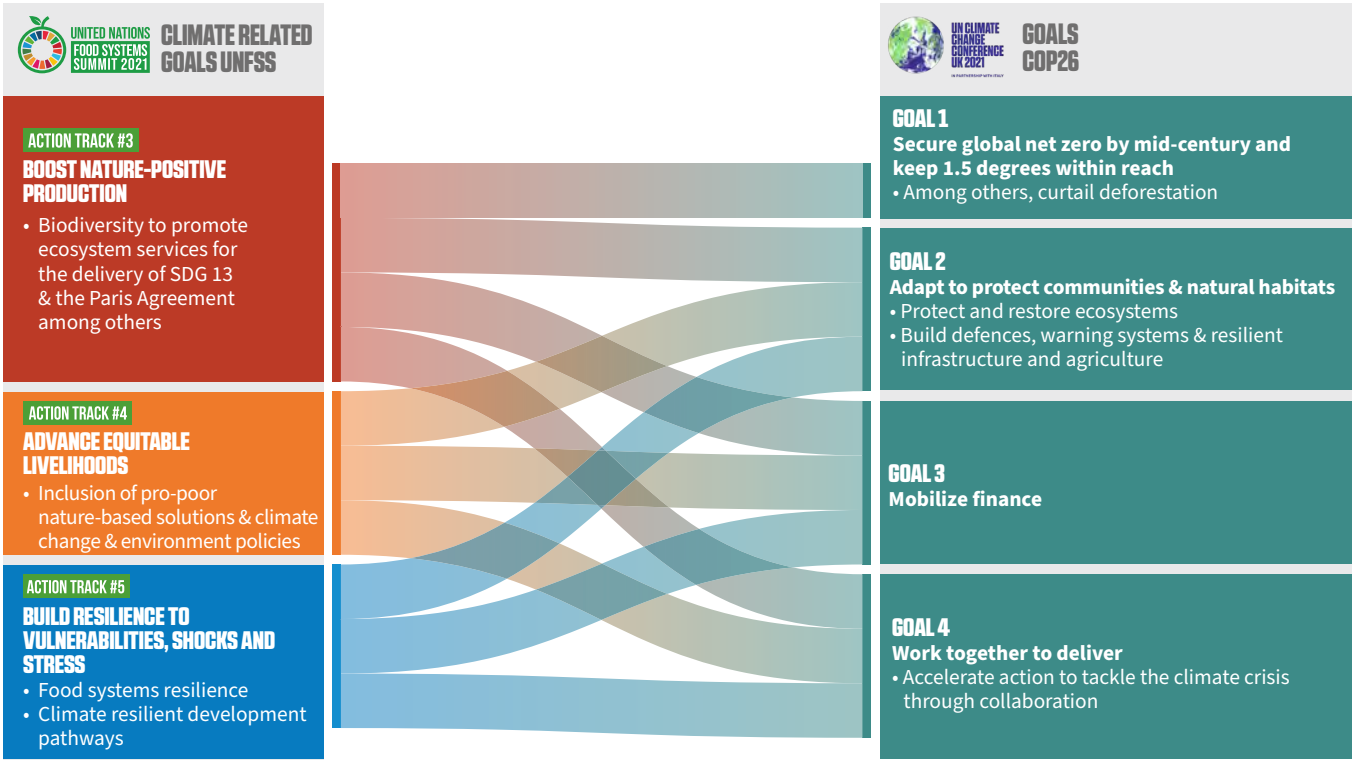

FIGURE 2. UNFSS and COP26 goals on climate action and entry points for alignment.

Connecting action on food systems & climate change

Although the UNFSS and COP are highly aligned in terms of their goals, practically speaking they are not systematically feeding each other in a way that reinforces and amplifies their shared ambitions. The revision of NDCs in preparation of COP26 offers a unique opportunity to set targets and initiatives that reduce the impact of unsustainable food systems on the global climate – and at the same time helps the agricultural and food sectors become more resilient to the impacts of climate change they are already committed to.

Nationally Determined Contributions (NDCs)

Revising NDCs for COP26 as well as accelerating SDGs (including SDG13), offers a unique opportunity to connect UNFSS and COP26 and bring the food and climate agendas closer together. More tangible and strategic goals are needed, alongside a greater focus on food systems at the national level to integrate adaptation and mitigation within multiple sectors of the food system.

The need to better connect the UNFSS and COP26 agendas is increasingly being recognized as a priority. For instance, the global campaign on Transforming Agricultural Innovation for People, Nature and Climate, which is co-chaired by the UK Foreign, Commonwealth and Development Office (FCDO) and the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS), has fostered a number of dialogues in which stakeholders expressed the need to secure mutually reinforcing commitments at UNFSS and COP26.

In the preparation of the UNFSS, each action track (AT) has received numerous submissions of solutions from a broad range of stakeholders. These solutions hold vast potential to push the boundaries of thinking across food systems and form a solid foundation to develop future projects and programs. While climate is a cross-cutting theme in most ATs, initiatives and solutions around "Climate-resilient development pathways", specifically highlight how the transformation of food systems can support global climate action, and conversely, how climate action can support the de-risking and transformation of food systems.

AT5 also notes the importance of meeting the NDCs and SDGs at national, local, and global levels to support food systems transformation. The Paris Agreement and the attainment of long-term greenhouse gas (GHG) emission targets are built around the NDCs. NDCs represent each country's efforts to cut national emissions and adapt to climate change impacts. More than 90 percent of country NDCs do not take into consideration the entire food chain, but mainly focus on land-use targets. The 2019 IPCC Special Report on Climate Change [7] acknowledges the impact of agricultural land expansion on GHG emissions, but also emphasizes how other food system aspects, e.g., consuming healthy and sustainable diets and reducing food loss and waste, are key for reaching GHG reduction targets. Including diets, food loss, and waste in national climate plans might result in a 12.5 Gt CO_2e reduction in annual GHG emissions. In other words, improved climate action on food systems can deliver 20 percent of global emissions reductions needed by 2050 [9, 10].

There is an opportunity to mainstream and strengthen the food systems related targets further in the NDCs, and the UNFSS voluntary commitments can align with commitments made at COP26, especially with a view on climate change adaptation and sustainable agriculture.

"Most NDCs don't consider our entire food system, so there's a huge opportunity to include the agriculture and food sectors in NDC revisions for COP26."

Peter LÄDERACH
Principal Climate Scientist, CGIAR / UN World Food Programme (WFP)

How Climate Risk Reduction and Management (CRRM) initiatives can underpin effective NDCs

At the intersection between food systems transformation and climate action, a number of emerging and established Climate Risk Reduction and Management (CRRM) initiatives enable contributions to reduce risks in food systems that are aggravated and compounded by climate change – and protect the livelihoods these food systems depend on and support. This section presents examples to couple objectives of climate action and food systems transformation, and opportunities for global collaboration and engagement to develop NDCs that tackle both the climate and the food challenge we face in a mutually reinforcing way.

Climate shocks and stresses play a key role in food system failures. Therefore, climate action is a critical entry point for transforming food systems. Climate action that aims to de-risk livelihoods, farms, and agricultural value chains from climate shocks is particularly effective. Both the UNFSS and COP26 have stressed the importance of resilience, promoting programs that manage and reduce the risk of climate shocks and stressors. CRRM are approaches that focus on actions to mitigate the impacts of climate change and climate-driven disasters, by deploying solutions that rely on information to trigger action, programming, relief, and finance.

It uses information and knowledge about climate-related events, trends, or forecasts to support more climate-resilient decision-making, while at the same time reducing the impacts of climate shocks on sensitive sectors, communities, or geographical areas [11].

The unprecedented risks food systems are facing require an unprecedented degree of collaboration. No organization, country or sector can address these risks in isolation. Several existing global initiatives using CRRM are helping realize transformative ambitions. These include the InsuResilience Global Partnership (IGP), the Risk-informed Early Action Partnership (REAP), and the Blueprint for Digital Climate-Informed Advisory Services (DCAS). All these global climate action consortia are represented in AT5 of the UNFSS, with a focus on the de-risking of food systems along climate-resilient development pathways.

These large existing coalitions have the potential to drive action, not only offering countries a broad pool of knowledge, tools, and potential for global collaboration and engagement, but also the opportunity to contribute to ambitious global targets which help to adapt to climate change and achieve more resilient and sustainable food systems. Below, we introduce the three coalitions, IGP, REAP, DCAS, and highlight examples of how they achieve the dual goals of adapting to climate change and transforming food systems (Table 1).

TABLE 1. Targets of three climate risk reduction and management coalitions contributing to climate change adaptation and food systems transformation

IGP targets	REAP targets	DCAS targets
500 million poor and vulnerable people covered by climate and disaster risk finance and insurance solutions.	50 countries have reviewed and integrated their crisis/disaster risk management and climate adaptation laws, policies, and plans to ensure that they reduce climate change impacts and exposure on people and the environment.	300 million vulnerable people with access to DCAS. About US$7 billion — funded through a combination of donor, private and government investment — is needed between 2021 and 2030 to reach this goal.*
150 million poor and vulnerable people covered by microinsurance.	1 billion people covered by financing and delivery mechanisms connected to effective early action plans, ensuring they can act ahead of predicted disasters and crises.	Commit to and implement principles of good practice.
80 countries with comprehensive disaster risk finance strategies in place.	US$500 million invested in early warning system infrastructure and institutions to target early action in "last/first mile" communities, building on existing initiatives.	Build and maintain partnerships that allow for the continuous development, deployment, and improvement of DCAS that suit a diversity of user contexts and needs.
70 countries have developed property and agricultural microinsurance solutions.	1 billion more people are covered by new or improved early warning systems, including heatwave early warning, connected to longer-term risk management systems, and supported by effective risk communication and public stakeholder dialogue to prompt informed action.	Identify key strategies for reaching scale, not only in terms of geographic coverage but also in terms of diversity of coverage and integration in local to national policies and programs.
60 countries with new or enhanced (sub-) sovereign pre-arranged risk financing and insurance mechanisms for critical infrastructure and/or rapid funding for disaster response.		
US$ 5 billion of total risk capacity offered by the insurance industry for climate risk insurance (based on the Insurance Development Forum (IDF) private sector commitment).		

* based on an estimated investment need

THE INSURESILIENCE GLOBAL PARTNERSHIP (IGP)

The InsuResilience Global Partnership (IGP) was launched at COP23 in Bonn in 2017, as an initiative of industrialized countries and most climate-vulnerable countries. Guided by its "Vision 2025", IGP puts forward an actionable and transformative agenda to strengthen the resilience of developing countries and protect the lives and livelihoods of poor and vulnerable people against the impacts of climate risks and disasters. More specifically, it promotes more timely and reliable disaster response using climate and disaster risk finance and insurance solutions, and the expansion of financial protection in developing countries as part of comprehensive disaster risk management strategies. More than 100 members from across sectors have joined the partnership since its launch in 2017.

Examples of IGP initiatives

The **African Risk Capacity (ARC),** is an initiative designed to improve responses to drought-induced food crises, building on member states' capacities to manage these risks with index-based weather insurance pool and early response mechanism. The humanitarian sector has adopted this approach through the ARC Replica initiative, which enables the World Food Programme (WFP) and the START network of non-governmental organizations (NGO)s to purchase drought risk insurance policies to broaden the risk financing instruments available for a faster and better coordinated humanitarian response in climate risk hot spots.[12]

PHOTO @ C. Schubert / CCAFS

PHOTO @ N. Palmer / CIAT

The **R4 Rural Resilience Initiative (R4)** was launched by WFP and Oxfam America in 2011 to enable the poorest farmers to access crop insurance. Access to insurance coverage is provided in conjunction with communal risk reduction and savings activities. In 2020, the R4 Rural Resilience Initiative has allowed nearly 180,000 farmers (55 percent women) to access index insurance products and a range of complementary risk management services in ten countries.[13]

THE RISK-INFORMED EARLY ACTION PARTNERSHIP (REAP)

The Risk-informed Early Action Partnership (REAP) launched at the UN Climate Action Summit (UNCAS) in September 2019, brings together an unprecedented range of stakeholders across the climate, humanitarian, and development communities with the aim of making 1 billion people safer from disaster by 2025. Partners work on risk-informed early action for a wide range of climate- and non-climate-related shocks and stresses, including individual and inter-related hazards. With the upcoming COP26 as one of its initial milestones to catalyse international action, the primary remit of REAP is early action in anticipation of more frequent and intense climate hazards. In the context of COVID19, ongoing responses to the pandemic highlight the interrelatedness of climate and other risks, which all require anticipatory action. REAP is supported by governments, public and private organizations, UN agencies and donors that share its ambition for making 1 billion people safer from disasters and identify their own concrete actions and commitments towards achieving REAP targets. Established with the support of 24 convening partners and 15 countries, REAP continues to grow diverse partnerships.

Examples of REAP initiatives

PHOTO @ NA Omolo

Anticipatory Cash Transfer. Since 2015, WFP, the Bangladesh Red Crescent Society (BDRCS) and the Red Cross Red Crescent Climate Centre (RCCC) have been collaborating closely with the Bangladeshi government to support the anticipatory humanitarian assistance ahead of severe weather events. In July 2020, before what would become one of the most severe flooding events on record, humanitarian REAP partners distributed anticipatory cash transfers based on the national early warning system, mitigating the impact of the flood shock on the food security, lives and livelihoods of affected populations [14].

The DARAJA project, meaning 'bridge' in Swahili, provides an example of how important it is to make sure people are at the center of early warning and early action. The project stresses the need to tailor solutions to local and regional needs. In informal settlements in Dar es Salaam, Tanzania, and Nairobi, Kenya, DARAJA has successfully built bridges between communities, weather and climate information providers [15].

PHOTO @ S. Samuel / CCAFS

THE BLUEPRINT FOR DIGITAL CLIMATE-INFORMED ADVISORY SERVICES (DCAS)

The Blueprint for Digital Climate-Informed Advisory Services (DCAS) [16] provides a conceptual foundation for building the resilience of 300 million smallholders by 2030. The Blueprint, launched in 2021, highlights tools, platforms, and activities that integrate climate information into decision-making, helping users to adapt to climate variability and change. In agriculture, the Blueprint will be increasingly important to help people and value chains address the climate impacts that threaten today's and tomorrow's agri-food systems. The Blueprint puts forth key principles for good practice, an estimation of the needed investment for scaling services and preliminary ideas for targeting these investments for reaching the most vulnerable and marginalized. The Blueprint is a product of collaboration between the World Resources Institute (WRI), the World Business Council for Sustainable Development (WBCSD), WFP, the International Research Institute for Climate and Society at Columbia (IRI), the Global Center on Adaptation (GCA) and over 25 other contributing organizations.

Examples of DCAS initiatives

PHOTO @ N. Palmer/CIAT

Rwanda Climate Services for Agriculture provides locally actionable climate information for farmers and other agricultural decision-makers. It was used to build the capacity of the Twigire Muhinzi national agricultural extension service and other intermediaries to communicate climate information with farmers and support farmers' risk management decisions using a set of participatory tools [17].

Digital Green collaborates with governments, private firms, and rural communities to cocreate digital solutions that are nutrition sensitive, climate resilient, and inclusive. It has developed a suite of services to fit local contexts, often combining advisory services with capacity building and training as well as other information services such as transport logistics [18].

PHOTO @ CCAFS

Astrid ZWICK
Head of InsuResilience Global Partnership (IGP) Secretariat

"The NDCs and National Adaptation Plans (NAPs) are key to implementing the Paris Agreement. InsuResilience are promoting to integrate climate risk management and insurance into the NDCs through 5 defined action areas and we will follow up on our recently launched report in collaboration with the NAPs Global Network on the "Entry Points for Climate and Disaster Risk Finance and Insurance (CDRFI) in NAPs" to guide country adaptation strategies."

Jerry VELASQUEZ
Director Division of Mitigation and Adaptation,
Green Climate Fund (GCF)

"The Green Climate Fund is looking to double its programming to invest into food security and agriculture, investing about US$200m per year into these projects."

Walter BAETHGEN
Director of the Regional and Sectoral Research Program, International Research Institute for Climate and Society (IRI)

"When you start tailoring your work, not based on your research interests, but based on user demands, then you start seeing really dramatic progress in these communities."

Conclusion

The climate crisis is a major threat to our food systems, undermining decades of progress in providing more nutritious diets to a growing global population. But it's these very food systems which contribute to the global climate emergency – producing as much as a third of all greenhouse gas emissions. Two key events take place in 2021 – the United Nations Food Systems Summit (UNFSS) and the 26th session of the Conference of the Parties (COP26) to the United Nations Framework Convention on Climate Change (UNFCCC). Although these conferences are highly aligned in terms of their goals, they are not systematically feeding each other in a way that reinforces and amplifies their shared ambitions. This paper outlines how established Climate Risk Reduction and Management (CRRM) initiatives offer vulnerable countries tools to couple objectives of climate action and food systems transformation, and opportunities for global collaboration and engagement to develop NDCs that tackle both the climate and the food challenge we face in a mutually reinforcing way.

"It is now up to us to walk the talk, build on the past pioneer achievements and make climate action, anticipatory actions and food system transformation work of the people, by the people, for the people."

Christine SCHNEEBERGER
Deputy Head Global Cooperation,
Swiss Agency for Development and Cooperation (SDC)

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