

Planting the Seeds for Food Systems Change

THE IMPORTANCE OF SMALLHOLDER AGRICULTURE FOR THE COP28 CONVERSATION

Carlos Berto Molina, right, walks home after a day of work. Carlos promotes climate-resilient agricultural techniques within his community in El Salvador.



[Oscar Leiva/Silverlight for CRS]

Introduction

Food systems and agriculture are finally starting to receive the attention they deserve at the United Nations Framework Convention on Climate Change (UNFCCC) Conference of the Parties (COP). At this year's COP28, agriculture will be discussed in the "*Sharm el-Sheikh joint work on implementation of climate action on agriculture and food security*" (SSJW) negotiations, and several events are planned outside of the official negotiations, including the **Emirates Declaration on Sustainable Agriculture, Resilient Food Systems, and Climate Action**.¹ It remains to be seen whether this increased attention will translate into effective action.

COP28's focus on agriculture and food systems is certainly welcomed by Catholic Relief Services (CRS), the official development and humanitarian organization of the Catholic church in the United States. We have a long history of giving voice to the concerns of smallholder farmers in the regions of the world most vulnerable to climate change. Our mission is to support smallholder farmers and local organizations in scaling up proven landscape restoration models to improve agricultural production, food security, and income. We work primarily with the 600 million smallholder farmers around the world who face a variety of climate-related challenges. Our programs also demonstrate that it is indeed possible to help them overcome the challenges posed by global warming. The work of CRS has proven that prioritizing support for farmers, investing in soil and water management, and implementing sustainable agricultural practices can reduce the vulnerability of these communities to climate risks and can help them become resilient.

This policy brief reviews some of the key issues at stake in the upcoming negotiations at COP28 pertaining to smallholder agriculture in developing countries. Building agricultural resilience is crucial for developing countries since this economic sector is a major source of employment, food security, and contributes to reducing poverty. The agricultural sector is especially exposed to climate-change risks; therefore, promoting adaptation is crucial to protect this critical facet of the global economy. Additionally, agriculture contributes directly and indirectly to global greenhouse gas (GHG) emissions, together with land use change contributing to 20 percent of global GHG emissions. **Consequently, promoting the transformation of agriculture and food systems has the potential to improve the lives of millions of farmers and their families.**

But to achieve this goal, considering the context is essential in determining the most effective means to transform embattled agriculture and food systems. Since agriculture is practiced in diverse agroecological settings and national policy environments, and smallholder farmers are a heterogeneous group, context-specific actions promise to deliver the greatest and most enduring benefits. Consequently, the discussions and agreements at COP28 concerning this critical sector have the potential to send strong signals to national governments on how to promote smallholder agriculture.

Global Stocktake and Nationally Determined Contributions

As part of the Paris Agreement, governments agreed to review their progress towards meeting its mandated goals every five years with the intention of increasing their efforts as required. This process is known as the Global Stocktake (GST). In September 2023, the GST Technical Synthesis Report found that some progress is being made towards fighting climate change but significantly more needs to be done to achieve the goal of limiting the global temperature increase to 1.5 degrees Celsius (2.5 degrees Fahrenheit). This finding is important as the outcomes of the GST are intended to inform countries' Nationally Determined Contributions (NDCs). NDCs are mandatory, non-binding national climate action plans detailing targets, measures, and policies to reduce a country's GHG emissions and to address climate change impacts.

With regards to the agriculture sector, the GST Synthesis Technical Report contains a very clear message: "Reaching net zero emissions also requires curbing deforestation and protecting natural terrestrial and ocean-based sinks, restoring deforested and degraded lands, sustainably managing land, and shifting agricultural and food systems". It also

¹ "Implementing the Emirates Declaration on Sustainable Agriculture, Resilient Food Systems, and Climate Action." *COP28 UAE*. Accessed November 28, 2023. <https://www.cop28.com/schedule/implementing-the-emirates-declaration-on-sustainable-agriculture-resilient-food-systems-and-clima>.

acknowledges that measures taken regarding agricultural and food systems have sustainable development options and multiple synergies with the Sustainable Development Goals (SDGs).²

Indeed, compelling evidence demonstrates the adaptation and development benefits of addressing land degradation. In Sub-Saharan Africa (SSA), for example, 65 percent of arable land suffers from soil degradation.¹ This results in reduced crop yields which then threatens food and nutrition security. Land degradation has a more severe impact on women than men due to their reliance on agriculture and natural resources. However, outdated social norms have resulted in women being given less access to secure tenure, credit, and agricultural extension services.³ Degraded soils are more vulnerable to erosion and mineral leaching and are thus more susceptible to the effects of climate. For example, every dollar invested in landscape restoration and sustainable land management can yield up to USD \$30 in economic benefits, including increased crop yields, improved water availability (more water, better soil moisture retention, lower water loss due to evapotranspiration), and reduced landscape degradation.⁴ Improved agriculture, agroforestry, and watershed management activities also promote the diversity of nutrient-rich crops that improve nutrition, increase the yield of cash crops, and provide a habitat for important pollinators and food/medicine sources. The adoption of sustainable practices can also mitigate the impacts of extreme weather events caused by climate change, reducing crop losses for farmers, and thereby helping farmers to recover faster from these events. Restoring degraded areas is a nature-based solution that can have cascading benefits for farmers who depend directly on the land and natural resources for their livelihoods.



Postgraduate soil science student Thabo Masobeng, processing soil samples in the laboratory at the National University of Lesotho (NUL). [Dooshima Tsee for CRS]

² United Nations Framework Convention on Climate Change. *Technical Dialogue of the First Global Stocktake: Synthesis Report By the Co-Facilitators on the Technical Dialogue*. United Nations. 2023. <https://unfccc.int/documents/631600>.

³ Aguilar, Lorena. *Study on the Differentiated Impacts of Desertification, Land Degradation, and Drought on Women and Men*. United Nations Convention to Combat Desertification. 2022. <https://www.unccd.int/sites/default/files/2022-11/Gender%20study%20.pdf>.

⁴ Dickson, Barney, Lera Miles, Hazel Thornton, and Erin O'Connell. *Becoming #GenerationRestoration: Ecosystem Restoration for People, Nature, and Climate*. United Nations Environment Programme. 2021. <https://wedocs.unep.org/bitstream/handle/20.500.11822/36251/ERPNC.pdf>.

Because of the importance of agriculture to human existence and because it lags behind other sectors in terms of climate commitments and actions⁵, Parties need to commit to strengthen their NDCs, specifically with regards to agriculture and food systems. Generally, only a minority of NDCs include measures to address food systems or to link them explicitly to promoting greater equity and inclusion. Also, more opportunities exist within NDCs to include nature-based solutions, highlighting the synergies around adaptation and development.⁶ This is also where the Sharm el-Sheikh Joint Work (see below) can assist countries to strengthen their sustainable approaches to agriculture and take a more holistic approach that includes food systems to ensure that all the elements contribute to resilience, equity, and inclusion.

Recommendations:

1. COP28 must provide leadership and direction in addressing food systems and building the resilience of smallholder farmers.
2. COP28 must recognize the important role that community-driven nature-based solutions have for reversing degradation and promoting climate change adaptation.
3. GST must acknowledge and reference the work of SSJW for coherence and alignment.

Climate Finance for Agriculture

Finance is the critical enabler for accelerated action in agriculture and food systems. And yet, agriculture is not being given the priority it deserves in international climate finance. More importantly, the small-scale producers remain underserved by global climate finance. A report in 2020 estimated that out of a total tracked climate finance of USD 20 billion for agriculture, forestry and land use, only USD 8.1 billion targets small-scale farmers, agri-entrepreneurs and value chain actors serving them.⁷ Almost half of tracked finance was for climate adaptation and for addressing the vulnerability of small-scale agricultural actors to climate change. The conclusion of the authors of the report was that climate finance to small-scale agriculture is disproportionately low when compared to the importance of agriculture for the gross domestic product of developing countries. In some ways this should not come as a surprise since banks and microfinance institutions have historically considered financing farmers as far too risky. Even where banks are willing, farmers do not possess the necessary means – e.g., collateral – to secure loans or other financial support. Over the course of the last decade, a wide array of innovative financial services have been developed to address chronic lack of access to financing for smallholder farmers.⁸ But inadequate capital remains a key barrier to scaling some these financial services to meet the need.

Climate finance is therefore a critical component of any strategy to deal with the challenges of smallholder agriculture. In 2009, developed countries promised to provide USD 100 billion per year by 2020 to help developing countries adapt to climate change. This commitment to provide USD 100 billion was to be split between adaptation and mitigation. At COP26 in Glasgow, developed countries agreed to double adaptation finance by 2025. However, developed countries have failed to keep this promise.⁹ In the face of increasing frequency and severity of disasters, this refusal to live up to commitments must stop. In the coming years, climate change is expected to alter pest and disease outbreaks, increase the frequency and intensity of droughts and floods, and increase the likelihood of poor yields, crop failure and livestock

⁵ Nielson, David. *Considering a Soil Initiative for Africa*. The Chicago Council on Global Affairs, 2020. https://globalaffairs.org/sites/default/files/2020-11/report_soils-initiative-africa_20200131.pdf; *OECD Meeting of Agriculture Ministers 2022: Background Note*. OECD. 2022. <https://www.oecd.org/agriculture/ministerial/documents/Agriculture%20and%20Climate%20Change.pdf>.

⁶ Seddon, Nathalie, Sandeep Sengupta, María García-Espinosa, and Irina Hauler, et al. *Nature-based Solutions in Nationally Determined Contributions: Synthesis and Recommendations for Enhancing Climate Ambition and Action by 2020*. IUCN and University of Oxford. 2019. <https://portals.iucn.org/library/sites/library/files/documents/2019-030-En.pdf>.

⁷ Chiriac, Daniela, Baysa Naran, and Angela Falconer. *Examining the Climate Finance Gap for Small-scale Agriculture*. IFAD and Climate Policy Initiative. 2020. <https://www.climatepolicyinitiative.org/publication/climate-finance-small-scale-agriculture/>.

⁸ Colina, Clara, Kafui Adjogatse, and Kusi Hornberger. *Towards Market Transparency in Smallholder Finance: Early Insights from Sub-Saharan Africa*. IDH, Dalberg, and Mastercard Foundation. 2022. https://assets.foleon.com/eu-central-1/de-uploads-7e3kk3/48897/fsp_sdm.5ae103597a43.pdf.

⁹ Kahlfan, Ashfaq, Astrid Nilsson Lewis, Carlos Aguilar, and Jacqueline Persson, et al. *Climate Equality: A Planet for the 99%*. Oxfam. 2023. https://www.oxfamfrance.org/wp-content/uploads/2023/11/Sous-embargo-20-nov_Oxfam-rapport-Climate-Equality-A-Planet-for-the-99-_version-anglaises-integrale_compressed.pdf.

mortality. Increasing investments to support small-scale agriculture is much needed, particularly with respect to women farmers who are desperate for help to reduce their vulnerability to climate change.

COP28 needs to deliver a major course correction in dealing with the climate crisis. Parties need to focus in achieving the following:

Recommendations:

1. Developed countries must honor their promise to deliver USD 100 billion a year over 2020 to 2025, ensuring that this finance is delivered in the form of grants.
2. Countries' National Adaptation Plans (NAPs) need to prioritize actions that will support the resilience of the smallholder sector and acknowledge the important role that local communities play in environmental management.



Diego Toji Pu, left, is a producer from Tonicapán, Guatemala who produces chickpeas which are purchased by Yummus Foods, a participant of CRS' Isidro Fund. The Isidro Fund lends to small- and medium- sized agricultural enterprises (SMEs) to elevate their operations, and in turn, enhance local markets.

[Oscar Leiva/Silverlight for CRS]

Sharm el-Sheikh Joint Work on Implementation of Climate Action on Agriculture and Food Security (SSJW)

At COP27, the four-year “*Sharm el-Sheikh joint work on implementation of climate action on agriculture and food security*” (SSJW) was established. SSJW builds upon the work of its predecessor, the *Koronivia Joint Work on Agriculture*, that was established at COP23. The SSJW is the official mechanism for coordinating agricultural action in the UNFCCC. Discussions and agreements occurring in this forum can help countries to ensure that agriculture and food systems are better integrated into NDCs. It could also help to advocate for greater finance for agriculture, particularly smallholders. The SSJW is also in a strong position help foster greater synergy and linkages with United Nations (UN) agencies such as the Food and Agriculture Organization of the UN (FAO) and International Fund for Agricultural Development (IFAD).

At COP28, Parties will discuss a workplan for the SSJW that includes workshop topics, governance structure, coordination mechanisms, and levels of participation. The desired outcomes should be as follows:

Recommendations:

1. SSJW should present a clear roadmap and timeline for taking concrete steps to address agriculture and food systems with a focus on aiding smallholder farmers.
2. SSJW should ensure policy alignment within UNFCCC and help to coordinate UN agencies working on food and agriculture.

Loss and Damage

A recent report by FAO found that over the last 30 years an estimated USD 3.8 trillion worth of crops and livestock production has been lost due to disaster events, which is the equivalent of an annual average loss of USD 123 billion, or 5 percent of annual global agricultural GDP.¹⁰ The FAO’s report also found that at the global level, extreme temperatures and droughts are hazards that have the largest impact per event, followed by floods, storms, and wildfires.

Losses in agriculture have a cascading effect impacting food security, income, and employment as well as the local ecology. In extreme cases, these climate disasters lead to large-scale population displacements and outward migration of rural communities. In addition to the losses due to sudden-onset events, there are also impacts of slow-onset hazards – the shifts in average temperature and precipitation - caused by climate change which are already reducing crop yields. NASA research, for example, shows that climate change will decrease average global yields of maize by 24 percent by the end of the century.¹¹ Maize is a staple food crop in many developing countries so a decrease on this scale will result in considerable hardship. But for some indigenous peoples of Mexico and Central America, maize is more than a food staple. It represents an essential component in their religious beliefs, collective identity, and culture. Reductions in the yields of staples therefore cause both economic and non-economic losses and damages. The non-economic aspects of reduced maize yields are harder to quantify but no less destructive.

The FAO’s report also found that agricultural losses are not comprehensively assessed or reported as part of total economic losses in existing global, multi-hazard disaster databases.¹² Currently, two sets of methodologies are used to collect information on disaster losses in agriculture: post-disaster needs assessment and the Sendai Framework for Disaster Risk Reduction. But regardless of the methodology used, significant underestimation is likely, given the limitations and delays of data reporting.

Given this situation, the COP27 decision to create a fund and funding mechanism for loss and damage could offer much-needed and overdue relief to developing countries and to the agricultural sector in particular. At COP27, the Parties agreed to create a Transitional Committee to develop a plan for operationalizing the proposed Loss and Damage Fund,

¹⁰ *The Impact of Disasters on Agriculture and Food Security 2023: Avoiding and Reducing Losses Through Investment In Resilience*. FAO. 2023. <https://www.fao.org/3/cc7900en/cc7900en.pdf>.

¹¹ “Impact of Climate Change on Global Agricultural Yields.” *NASA Scientific Visualization Studio*. March 2, 2022. Accessed November 28, 2023. <https://svs.gsfc.nasa.gov/4974>.

¹² *The Impact of Disasters on Agriculture and Food Security 2023: Avoiding and Reducing Losses Through Investment In Resilience*. FAO. 2023, pg. 17. <https://www.fao.org/3/cc7900en/cc7900en.pdf>.

including its scope, implementation model, and sources of funding. The Transitional Committee has developed a proposal which Parties will discuss at COP28.

A Loss and Damage Fund can assist developing countries in addressing the losses and damages in their agriculture sectors. The Fund should also be able to release funds for anticipatory action – pro-active measures designed to prevent a disaster to protect the lives and livelihoods of farmers. For smallholder farmers, these preventative steps could include access to specific seeds, farm equipment, micro-irrigation kits, etc. tailored to the specific climate hazard. More generally, climate information services, capacity building, extension services and targeted policy interventions will help build resilience of smallholder farmers. Specifically, COP28 should focus on the following outcomes:

Recommendations:

1. At COP28, Parties must agree to operationalize the Loss and Damage Fund.
2. The Loss and Damage Fund needs to quickly provide funds to countries. Quick assistance to farmers can assist in the recovery process.

UAE Food Systems Declaration

Outside of the official negotiations, the UAE COP28 presidency has called for a Food Systems Declaration at COP28. It plans to unveil the "*Emirates Declaration on Resilient Food Systems, Sustainable Agriculture and Climate Action*". An entire day will also be dedicated to food, agriculture, and water. A declaration on food systems has the potential to spark long-overdue action in the agricultural sector but can only be transformative if those who sign it are sincerely committed to bringing about the kind of change that truly addresses the climate crisis and embraces the principle that no one should be left behind. Signatories to the declaration cannot use this as an opportunity for greenwashing: real and effective measures are required. Therefore, the Declaration must include measurable targets and have an established reporting system to ensure accountability and transparency. This will lend credibility to the Declaration.

Recommendations:

1. The *Emirates Declaration on Resilient Food Systems* should commit unequivocally to transforming food systems based on sustainable and agroecological principles.
2. Indigenous peoples, local communities and smallholder farmers, particularly women farmers, are essential to ensuring sustainable, resilient food and agriculture systems. Addressing access to land, water, seeds, and key natural resources are essential, as well as policy and market factors.



[Jennifer Lazuta for CRS]

Monique Seya, left, is a maize farmer in the Kesai Oriental Province of the Democratic Republic of Congo. She plants a special variety of drought-resistant seed that helps her to increase yields.