

# UNLOCKING AND SCALING CLIMATE SOLUTIONS IN FOOD SYSTEMS: AN ASSESSMENT OF NDCs FOR FOOD SYSTEMS TRANSFORMATION

## WHY IT MATTERS

- 1. We cannot achieve the Paris Agreement goals without transforming our food systems as they account for a third of global greenhouse gas emissions. We need a rapid transition away from emission-intensive production and consumption, toward nature-positive food production, healthier and more sustainable diets, and radically reduced food loss and waste. However, climate action in food systems has been limited to date.
- 2. Despite significant improvements in how food is considered in NDCs, most updated NDCs still lack a holistic approach to food systems transformation. A food systems approach (including production, consumption and loss and waste) to NDCs could unlock the potential to deliver at least 20% of emission reduction needed to meet the 1.5°C target of the Paris Agreement.<sup>1</sup>
- **3.** While sustainable food production is largely integrated in the updated NDCs, few of these national climate plans also include policy measures and targets for addressing food loss and waste or a shift to sustainable and healthy diets. A shift toward healthier diets and reducing food loss and waste globally, can increase mitigation by as much as 2.5 GtCO2e per year.<sup>2</sup>
- 4. While more countries are considering the role of Indigenous Peoples and Local Communities (IP and LC) in updated NDCs, the majority of NDCs still lack concrete policy measures to address IP and LC rights. Recognizing and supporting IP and LC rights and resources would result in more than 1.5 GtC2e of avoided emissions per year.<sup>3</sup>

# RECOMMENDATIONS

# Global

- 1. Shift to nature-positive production
- 2. Reduce food loss and waste and increase in circularity
- **3.** Transition to healthy and sustainable diets
- 4. Collaborate at all levels of the food systems

## National

- 1. Include all parts of food systems in NDCs
- 2. Include quantified and measurable targets and milestones for food systems measures in NDCs
- **3.** Increase inclusion of agroecology for climate change mitigation and adaptation
- 4. Increase focus on aquatic ecosystems for food production
- 5. Increase post-harvest measures, including circularity, food waste and food loss prevention measures, and dietary changes
- 6. Increase engagement with smallholder farmers, IP and LCs and other marginalized groups

# **RECOMMENDATIONS IN DETAIL**

# At the global level, transforming food systems calls for collective efforts to:

- 1. Shift to nature-positive production: Governments should integrate nature-positive food production systems, based on the 10 agroecological principles established by Food and Agriculture Organization (FAO), into national climate pledges and actions. These sustainable and regenerative practices enhance biodiversity and rehabilitate degraded ecosystems to deliver a future in which people and nature can thrive.
- 2. Reduce food loss and waste and increase in circularity: Food loss and waste is a major cause of emissions and over-use of resources and land. There needs to be an increasing emphasis on circularity to reduce emissions and build more sustainable food systems.
- 3. Transition to healthy and sustainable diets: A transition to diets that are based on local food contexts and produced within planetary boundaries can reduce GHG emissions, protect and restore wildlife, reduce land-use, and improve health.
- 4. Collaborate at all levels of the food systems: A transformative food systems approach to climate change needs to be inclusive and collaborative, involving all stakeholders.

# At the national level, all countries should strengthen their national climate plans and raise global ambition by better incorporating food systems measures in their next NDC submissions, and:

- 1. Include all parts of food systems in NDCs: From production to consumption, national policymakers should work with stakeholders across food systems to prepare and implement NDCs. This includes reducing food loss and waste and a shift to healthy diets.
- 2. Include quantified and measurable targets and milestones for food systems measures in NDCs. Clear measurable targets and milestones can help to monitor and track progress at the national level and as part of Global Stocktake under the Paris Agreement
- **3.** Increase inclusion of agroecology for climate change mitigation and adaptation: Agroecology and agroforestry both advance ecosystem diversification, which in turn provides livelihood diversification and poverty alleviation, while advancing decarbonization.
- 4. Increase focus on aquatic ecosystems for food production: Management, conservation, and restoration of all ecosystems can advance food security. This includes the greater consideration of how aquatic healthy ecosystems like wetlands, peatlands, and mangroves can contribute to mitigation, adaptation and food systems overall.
- 5. Increase post-harvest measures, including circularity, food waste and food loss prevention measures, and dietary changes.
- 6. Increase engagement with smallholder farmers, IPLC, women, youth, and other marginalized groups.

# **PROGRESS IN INTEGRATING FOOD SYSTEMS MEASURES IN THE NDCs**

As of September 30, 2022, 160 Parties to the UNFCCC (which includes the EU-27 representing 27 member states of the European Union) have submitted 134 updated or revised NDCs. An analysis of these updated NDCs shows that while more and more countries are recognizing that food systems are a crucial part of climate action through their international pledges compared to their previous NDCs, additional measures and implementation of these plans are needed.

Overall, there is a positive trend in the recognition of food systems as part of climate solutions. Most of the 134 updated NDCs (93%) include at least one measure related to food systems. This is an increase from 79% of previous NDCs. 106 Parties improved the integration of food systems in their updated NDCs compared to their previous NDCs, while for 17 there was no change and for 11 there was a decline. Several trends emerge when looking at various food systems measures in these NDCs.

# A holistic food systems approach is still absent in the NDCs:

- Only 19 updated NDCs include measures for both sustainable food production and for reducing food loss and waste.
- Only 5 updated NDCs include measures for both sustainable food production and consumption
- Only 2 updated NDCs have measures for sustainable food production, addressing food loss and waste, and shifting to sustainable and healthy diets.

# **Sustainable Food Production:**

- 94 updated NDCs include specific mitigation measures for agriculture, an increase from 58 previous NDCs. 101 updated NDCs include adaptation measures for agriculture, an increase from 87 of the previous NDCs.
- 63 updated NDCs have mitigation measures that consider sustainable livestock, an increase from 27 previous NDCs.
- 55 updated NDCs mention climate-smart agriculture, livestock, or forestry techniques as part of holistic food production systems, compared to 28 previous NDCs.
- 15 updated NDCs explicitly include agroecology, compared to 11 previous NDCs.
- 70 updated NDCs include agroforestry, compared to just 49 previous NDCs.
- 54 updated NDCs have fish and aquaculture in the adaptation measures, an increase from 35 previous NDCs.

## Food Loss and Waste and Sustainable Diets:

- 36 updated NDCs consider post-harvest food systems measures that may reduce food loss, compared to 21 previous NDCs.
- 19 updated NDCs include reducing food loss and waste explicitly, compared to two previous NDCs.
- 5 updated NDCs all developing countries include measures for shifting to sustainable and healthy diets, compared to one previous NDC considering this.

## **Ecosystems considered:**

- 77 updated NDCs include more ecosystems than was included in previous NDCs.
- 86 updated NDCs consider marine or coastal ecosystems, compared to 77 previous NDCs.
- 77 updated NDCs include wetlands, compared to 42 previous NDCs.
- 93 updated NDCs include mitigation measures for forests, an increase from 67 previous NDCs.

- 49 updated NDCs consider mangroves, an increase from the 32 previous NDCs that consider this component of coastal ecosystems.
- 33 updated NDCs consider savannahs or grasslands, an increase from the 13 previous NDCs.

## Equity considerations

- 64 updated NDCs explicitly consider the role of IPLCs compared to 45 previous NDCs.
- 50 updated NDCs explicitly mention the role of smallholder farmers, compared to 24 previous NDCs.
- 85 updated NDCs include food security considerations, a 29% increase from 66 of the previous NDCs.

#### FULL REPORT AVAILABLE HERE

# For more information

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<sup>1</sup> WWF. (2020). Enhancing NDCs for Food Systems Recommendations for Decision-Makers. Retrieved from https://climatefocus.com/wp-content/uploads/2022/06/200909\_WWF\_NDC\_Food\_final\_low.pdf.

<sup>2</sup> Conservation International. (2022). Exponential Road Map for Natural Climate Solutions. Retrieved from

https://cicloud.s3.amazonaws.com/docs/default-source/s3-library/publication-pdfs/exponential-roadmap-for-natural-climate-solutions.pdf.

 ${\scriptstyle 3}$  Conservation International. (2022).