

Round table on “Food Security” 7th November 2022

The incoming presidency of COP27 has identified implementation as the main focus of COP27 aiming at addressing climate related transition and transformation through a holistic approach that takes into consideration different aspects, including the social and economic development dimensions, enablers for a just transition, ambition in action and support to allow for an on time and at scale substantial progress in all aspects of climate change, with ambition on mitigation action as envisaged by science, a transformative adaptation agenda that responds to the current and future impacts of climate change and appropriate finance and technology transfer to allow for an inclusive and principle based transition with no one left behind.

Climate change impacts, both extreme weather and slow-onset events, have impacted several sectors of the national economies and activities, in particular agriculture and food production, augmented by other challenges be it geopolitical, cost of finance or supply chain related, and in a time of increased food insecurity, it is important to have deep discussions on ways to deal with the needed increase in agriculture productivity, shift to resilient agriculture, reduce losses in food production chain including through cooling solutions, and ensure relevant measures are in place for sustained food security and to manage any potential food crisis.

Science has identified the following as impacts of climate change: Loss of rural livelihoods and income; Loss of marine and coastal ecosystems and livelihoods; Loss of terrestrial and inland water ecosystems and livelihoods; food insecurity and break down of food systems.

Global food demand continues to grow as the world’s population is expected to hit the mark of 9.6 bn by 2050. Meanwhile, 820m people are suffering from hunger as of 2021¹, whereas climate change continues to have drastic impacts on agricultural lands and livestock productivity. IPCC estimates that agricultural land productivity already decreased by 21% compared to a scenario with no climate change, fueled by high temperatures and extreme rainfalls (damaging for soil health), along with increased levels of CO₂ (reducing nutritional quality of crops²). Additionally, a further 17% reduction in yields of coarse grains, oil seeds, wheat and rice is expected by 2050 for IPCC’s highest temperature increase scenario³. Livestock production is also severely impacted by climate shocks, which are becoming increasingly frequent: 20-60% losses in animals count were recorded during serious drought events in the past decades.

Besides being vulnerable to the impact of climate change, food systems are also a major contributor to GHG emissions (about one third of global emissions). Hence, it is imperative that food systems evolve to sustainably meet the growing demand globally.

1 UN FAO (2022) - <https://www.fao.org/newsroom/detail/un-report-global-hunger-SOFI-2022-FAO/en>

2 Food Navigator (2022) - <https://www.foodnavigator.com/Article/2022/04/05/IPCC-report-puts-food-at-the-heart-of-climate-battle-We-have-the-potential-to-mitigate-climate-change>

3 FAO (2015) - <https://www.fao.org/3/i5188e/I5188E.pdf>

Global Achievements:

Global effort and progress have been done to identify high-potential approaches and develop strategies to transform global food systems as follows:

- The Koronivia Joint Work on Agriculture (KJWA), launched in 2017, integrates soils, nutrient use, water, livestock, methods for assessing adaptation, and the socio-economic and food security dimensions of climate change, identifies approaches to transform food systems, and encourages commitments to action to follow through.
- Over 100 countries signed up to develop national food systems transformation strategies in the UN's 2021 Food Systems Summit. Pilots across Africa are exploring strategies to reward farmers implementing HYRAP⁴ with Carbon Finance, around 90% of developing countries have included adaptation in their NDCs, with agriculture as one of the main aspects.
- "Scaling up Climate Ambition on Land Use and Agriculture through Nationally Determined Contributions and National Adaptation Plans" (SCALA) 5-year program was launched by FAO and UNDP aiming to transform the climate sensitive agriculture sector⁵
- Youth for Green and Climate-Resilient Agriculture Programme (YCRA) was launched by FAO and IAAS⁶, to support and promote youth-led projects in the agriculture sector.
- Green Climate Fund "GCF" has invested more than \$1.6 billion to support climate resilient small holder farmers and meet the world's increasing food demand. The GCF focuses on three transformation pathways: support to resilient agriculture, support early warning systems for smallholder farmers, and reshape food supply chains, ensuring crops can reach markets more easily, and reducing food losses and waste.

Although there is continuous effort to tackle food insecurity, more work is needed. A shift towards sustainable global food systems implies advancing simultaneously on three fronts:

- Producing in climate smart/sustainable ways that will continue to improve productivity while lowering emissions and enhancing the resilience of food production to extreme weather and shocks
- Reducing food loss (currently ~33% of global food production) across harvesting, transportation and consumption stages; and enhancing access to cold chains (13% of global food production is lost due to lack of cold chains⁷)
- Shaping demand for food towards diets that can remain within planetary boundaries, including lowering meat consumption, developing alternatives, and spurring the shift towards more native plants, crops and grains (thus reducing the current reliance on wheat, maize, rice, potatoes and increasing the resilience of cultivations)

⁴ high-yielding, resilient, and adaptive practices

⁵ FAO (2022) - <https://www.fao.org/climate-change/programmes-and-projects/en/>

⁶ International Association of Students in Agricultural and Related Sciences

⁷ SEforALL (2022) - <https://www.seforall.org/chilling-prospects-2022/food-nutrition-and-agriculture>

Guiding questions:

This roundtable would be a platform for countries with different national contexts and priorities to identify ways of coming together to collectively tackle the present and future of food security worldwide. Developed countries could share views on how to encourage more balanced diets and minimize emissions per calorie (e.g. through reducing meat consumption), delivering successes in enhancing agriculture resilience, reduce food losses. Developing countries, that are suffering the most from decreased yields and weather events, could discuss the needed support for scaling resilient agriculture projects, enhancing livelihoods (e.g. on regenerative agriculture). Relevant International organizations could pinpoint ways to unlock more funds for resilience projects in developing countries, with a contribution from financial institutions and the private sector on the technical solutions to do so. Questions to guide the discussion shall then be:

- **Questions for developing countries:**
 1. How to encourage the production and widespread adoption of native resilient crops and reduce reliance on imported food?
 2. What actions can be taken to support small-scale food producers? What technologies can empower higher productivity?
 3. How to increase access to sustainable cold chains in developing agricultural sectors?
- **Questions for developed countries:**
 1. What measures can be taken to engage private sector and communities in minimizing waste across the full agricultural value chain?
 2. What actions can be taken to enhance research and development in relation to food production?
- **Questions for international organizations:**
 1. How can NAPs be leveraged to direct more funding towards food systems transformation?
 2. What mechanisms can be put in place to foster higher collaboration between developing and developed countries with a focus on technology transfer to enhance food security measures?
 3. How can countries enhance the resilience of small holders' farmers and ensure their livelihoods and shift to more climate resilient agriculture?
- **Questions for financial institutions:**
 1. How to employ de-risking techniques, e.g. first loss guarantees, to reduce cost of loans for the agriculture sector?
 2. Which solutions were employed for other sectors and could be brought more into play in the agriculture sector?
- **Questions for the private sector:**
 1. What are the financial and technological solutions for achieving just transition for food security and climate resilient food systems?