



UNFCCC COP 27
Sharm El-Sheikh, Egypt
06– 18 November 2022

Session title – Sustainable agri-food systems as a lever for climate neutrality and food security: the role of partnership and cooperation in research and innovation

Lead organization – PRIMA

Session coordinator – Angelo Riccaboni (angelo.riccaboni@unisi.it) – Giovanni Stanghellini (giovanni.stanghellini@unisi.it)

Background - Food systems are central to the global economic and social debate. This is due to their impact on climate change and biodiversity loss, the economic, social, and cultural importance of the sector, and the effects of nutrition on the well-being and health of individuals and societies. In addition, the relevance of food security in all countries has become an urgent priority. Last year's Food System Summit testifies to this relevance and today's challenges confirm the need for action in both the short and long term. The war in Ukraine and the subsequent spike in food prices are turning this situation into a dramatic international food crisis. Ukraine and Russia contribute 30% of the world wheat market, 55% of the sunflower oil market and high percentages of other key food products. Russia is one of the world's leading exporters of fertilizers, while wheat is a key food for 35% of the world's population and 26 countries for more than 50%. Moreover, food systems transversally affect the SDGs, impacting seemingly distant goals such as zero poverty, good health, or climate action.

Recent IPCC Assessment Reports highlight the vulnerability of global food systems to climate change and the negative consequences of climate extremes on food security. Crop yields are being compromised by surface ozone, methane emissions, warmer and drier conditions are increasing tree mortality, desertification, soil erosion, ocean warming, and acidification are decreasing fishing activity yields. Moreover, higher temperatures will spread toxigenic fungi, plant and animal-based pathogens, and harmful algal blooms. Similarly, more frequent flood events will increase food contamination, considerably affecting human health. Moreover, environmental degradation hinders the access to nutritious food and increases the risks of the emergence of climate-driven zoonoses. Moreover, climate extremes negatively affect economic prosperity and food accessibility, particularly among the most vulnerable groups such as women, children, and the elderly. All these complexities and challenges are even more severe



in the Mediterranean region, which is a hot spot for climate change and whose Countries are highly dependent on the import of wheat.

Nonetheless, food systems are key elements not just in the problem but also as a driver for a solution. Innovation and the uptake of adaptation strategies available to food systems will be a fundamental step in mitigating climate change, given the considerable role that such systems play in environmental degradation. Food systems are responsible for one-third of global GHG emissions, biodiversity loss and global water footprint. This is due to the production of food commodities, their processing, distribution, and the management of the system's waste. In addition, food systems are also highly inequitable, with 10% of the global population still facing hunger and 65% of people under the poverty threshold working in the agricultural sector.

In this regard, research and innovation are indispensable factors in addressing the food emergency in the Mediterranean area and increasing agricultural production sustainably, optimizing water, soil, energy, fertilizers and other inputs. Cooperation and partnerships in enhancing and implementing similar R&I solutions are pivotal, and no solution or deterrence of climate change can be achieved without the complete commitment of all stakeholders comprising food systems.



Selected day: 9 November 2022 (10.00-11.00 local time)

Type of event carried on - Panel debate

Session format Hybrid

Speakers & Show Flow

Time	Activity	Speaker
5 minutes	Welcoming remarks	Angelo Riccaboni – Chair PRIMA Foundation
10 minutes	Keynote Speech	Jeffrey Sachs – Director of the Center for Sustainable Development at Columbia University
40 minutes	Panel	
		Heba Al Hariry – FAO NENA Regional Office
		John Bell – Director Healthy Planet, DG Research and Innovation at European Commission
		Stefano Gatti - Special Envoy for Food Security of the Ministry of Foreign Affairs and International Cooperation
		Arianna Giuliadori - Secretary General WFO
		Phoebe Kondouri – Co-Chair SDSN Europe
Q&A		
5 minutes	Final remarks	Mohamed El-Shinawi – Co-Chair PRIMA Foundation

Please note all events/slots will have strictly 1h maximum duration and ensuring gender balance is highly recommended.