



International Society of Organic Agriculture Research



2022 IFOAM-Goesan  
International Organic EXPO Industry Fair

## ISO FAR scientific workshop on “Climate Smart Organic Agriculture” at the 2<sup>nd</sup> International Organic Expo October 2-3, 2022, Korea- Goesan



ISO FAR was the International partner of the 1<sup>st</sup> International Expo 2015 and is proud to be also the partner of the 2<sup>nd</sup> International Expo 2022, again. ISO FAR, as global and independent network of Organic Farming scientists, has organized the scientific workshops at the IFOAM Organic conference - who is celebration their 50<sup>th</sup> anniversary with the Expo – from October 1-3, 2022 in Goesan, Korea.

The 15 participating scientists from 13 countries were invited to contribute to the conceptional discussion of Organic Agriculture in the future. Our specific goal is to have a healthy, affordable, sufficient, efficient and environmentally found food system for everyone on earth within the context of significant global climate change impacts now and in the future.

The international community has agreed to keep global average temperature increases limited to 1.5°C. Organic agriculture has to contribute to this goal, mainly by reducing CH<sub>4</sub>, CO<sub>2</sub>, and N<sub>2</sub>O emissions, but also to CO<sub>2</sub> sequestration with healthy soils. Organic agriculture has not achieved the target to be a climate-neutral or even net carbon sink food production system. This is not achieved by any food system, yet. On the one hand, science and organic farming practice

need to think out of the box to test new approaches for GHG mitigation. On the other hand, weather extremes will appear more often (droughts, heavy rains, thunderstorms) and the resilience of food and farming systems will be increasingly challenged – this will also put some organic farming systems at risk. Therefore, the organic sector needs to move forward and diversify to meet the challenge of climate change adaptation. Organically managed systems emphasize soil and plant health and increase resilience to the impacts of climate change by offering alternatives to an external input-reliant farming system.

**The workshop participants discussed the following issues; papers are available in the conference proceedings:**

1. How do organic philosophy and regulations deal with climate change currently?
2. Organic agroforestry systems in Europe - a tool to make Organic Farming more climate-smart and circular?
3. How can organic agriculture (and agroecology) contribute to solving the climate crisis in a healthy world?
4. Enhancing resilience in Mediterranean perennial agroecosystems under organic management
5. Crop rotation and use of early warning system (EWS) in climate-smart organic agriculture
6. Scaling up, out, and deep: involving citizens in more agroecological food systems
7. Balancing multifunctionality with climate-focused performance in organic agriculture
8. Enhanced diversity of local production systems through participatory approaches is key for climate-resilient organic farming
9. Increasing energy efficiency in Organic Agriculture to offset climate change
10. Is it possible to construct a sustainable agrifood system as a resilience strategy to climate change?
11. The need for the reduction of emissions and the limits of carbon farming in EU CAP: a holistic perspective
12. Translating organic agriculture through the food system into human diets – vegan, vegetarian, and omnivore contributions to GHG emissions
13. Sustainability and resilience of Organic and non-organic farming systems: a holistic assessment framework
14. Climate friendly organic livestock farming by tribal communities in India: The way forward
15. Towards novel slow release biofertilizers as a resilient strategy to increasing fertilizer cost in organic vegetable production in arid regions





- Different practices in organic food systems exist that mitigate GHGs and help with climate change adaptation and are yet to be considered in the true value & cost accounting for their ecosystemic role (Organic 3.0)
- Growth of organic agriculture with a climate change focus must consider the social dimension of organic;
- upscaling organic can result in lower environmental performance
- Participatory approaches to research and sector development are critical for organic agriculture to remain socially and environmentally responsible
- Organic agriculture cannot make climate mitigation/adaptation/resiliency the singular focus; organic must be considered as a multifunctional system with services often (but not always) supporting each other
- Complex farming systems can be a solution to climate issues, but can also create challenges with management and market access; producers end up dealing with these challenges
- Different aspects like the use of fossil fuels, energy consumption, and energy efficiency are not covered in the current organic guidelines leading to the fact that little attention is given to them at the moment
- Organic livestock production can be inefficient, especially in small-holder and developing countries where livestock efficiency/productivity would reduce environmental performance (ex. methane produced per kg of meat or milk).
- But still more strategies on a FOOD SYSTEM level must be explored to improve the current situation

### **Conclusions and recommendations**

- We need to integrate topics like energy use and saving practices, carbon capturing etc. in the further development of organic food systems but they should not be explicitly included in the standards, these aspects should be included on a conceptual level when developing farms and enterprises (e.g. development of scenarios on how energy could be saved throughout the value chain) to increase awareness and transformation
- We need to increase the South-North dialogue within the organic movement and identify best practices to tackle the global climate challenges
- We need to address the climate challenges on a food system level to increase diversity within the system starting at the farm level and going up to the consumption habits to strengthen climate resilience
- We need farmers' and civil society participation as well as other actors of the value chain to reduce the reaction time toward the global climate challenges
- Crop livestock mixed systems and reduced animal intensities based on grazing can help in mitigating adverse climate impacts due to circulatory agriculture

- Strategies for mitigation and adaption need to be localized and contextualised including indigenous knowledge and culture