

1S5: Nature-based solutions for circular food systems under climate change

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Food systems are currently not delivering what is expected or needed to ensure their desired outcomes in terms of food security, an affordable, safe and healthy diet for all people, ecological sustainability and resilience. Climate change will add further stresses on food systems at multiple scales that need to respond to future trends of increasing population, changes in diet and urbanisation.

At the same time, actors in the food systems are also asked to reduce greenhouse gas emissions and to shift towards circularity in production, processing and consumption. Circular food systems better optimize the use of scarce resources and reduce food losses. Circularity in food systems focusses on efficient use of land and closing the water, nutrient and carbon cycles to minimize resource loss and environmental degradation. Nature-based solutions that are inspired by (inspired NBS) or make use of natural processes (intrinsic NBS) are considered to have potentials for increasing circularity in food systems operating under climate change conditions. For instance it is expected that reuse of treated waste water combined with NBS innovations makes food production less dependent on conventional water resources and offers opportunities to make both nature and food production more climate resilient.

Aim:

This scientific session aims to share knowledge and build an international network on the potentials and limitations of nature-based interventions and pathways to ensure food security, to deliver a safe and healthy diet, to produce equal and equitable benefits, and to sustainability maintain the environment, while using minimal natural resources.

Themes:

Topics that can be addressed include:

- Potentials and limitations of NbS to close water, nutrient and carbon cycles
- Potentials and limitations of NbS to minimize resources losses / reduce waste and environmental degradation
- Governance of NbS that aim to increase the climate resilience of food systems
- Lock-inns and enablers of a nature-based driven transition towards circular food systems under climate change