Modelling European Agriculture with Climate Change for Food Security: Science-Policy Knowledge Forum (MACSUR SciPol Pilot)

Agriculture Food Security and Climate Change

Summary: The European Joint Programming Initiative for Agriculture, Food Security and Climate Change (FACCE JPI) commenced the MACSUR SciPol as a pilot to bring science and policy together to strategically design a response to climate change adaptation and mitigation challenges in the agri-food sector in Europe. The SciPol pilot will generate key lessons to establish and operationalise a science-policy knowledge forum. The forum works on model generated knowledge synthesis for evidence-based policy support to achieve carbon neutrality by 2050, adapt to climate change and understand synergies and trade-offs in achieving these targets.

Agenda: The MACSUR SciPol will be implemented from June 2021 for 18 months as a follow up to MACSUR 1 and 2 (https://macsur.eu/). It will initially address key policy questions from eight participating countries with the aim to expand to further policy needs and transnational initiatives for long term functioning. The key policy questions are connected to the 70% emission reduction targets for 2030 and carbon neutrality by 2050 under the Green Deal or the Paris Agreement, and to core themes of the FACCE Strategic research agenda. These topics are categorised into Mitigation, Adaptation, and Impacts. Mitigation topics address emission reduction strategies linked with livestock, cropping and aquaculture systems, carbon sequestration, consumer preferences, and conflicting land demands. Adaptation topics address measures to implement in agriculture, livestock, and consumer trends in different climatic conditions. Topics associated with the impacts focus on assessing ecosystems services and biodiversity, human and animal health, rural development, equity and the global footprint, spill over and rebound effects on the food and nutrition security.

Transdisciplinary approach: The MACSUR SciPol pilot adopts a transdisciplinary co-design process with deep engagement of stakeholders. It consists of a coordinated network of scientists, policy makers, and stakeholders from farming, civil society, and business. The results from modelling assessments will be discussed in participatory multi-stakeholder dialogues to support the policy decisions. As a result, research syntheses will become increasingly relevant and sensitive to policy issues.

Outcome: The core output of the MACSUR SciPol is an established procedure of science-based response to policy questions that proved operational in exemplary cases related to mitigation and adaptation measures, their impact, synergies, and trade-offs.

Partners: Leibniz Centre for Agricultural Landscape Research (ZALF, Germany), Federal Research Institute for Rural Areas, Forestry and Fisheries (TI, Germany), Aarhus University (AU, Denmark), Institute of Agricultural Economics (AKI, Hungary), The Irish Agriculture and Food Development Authority (TEAGASC, Ireland), University of Florence (UNIFI, Italy), University of Birmingham (UoB, UK), Queens University Belfast (QUB, UK), Stichting Wageningen Research (WR, Netherlands), University of Natural Resources and Life Sciences (BOKU, Austria).

Further Information: https://www.faccejpi.net/en/FACCEJPI/FACCE-JPI/Actions/Core-Theme-1/Knowledge-Hub-MACSUR-SciPol.htm