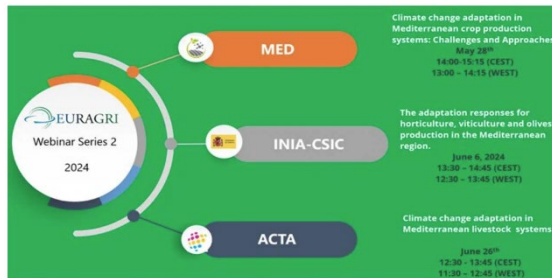


## THE EURAGRI WEBINAR SERIES 2

A series of three webinars hosted by MED Uevora (Pt), ACTA (Fr), and INIA-CSIC (Sp) on

CLIMATE CHANGE ADAPTATION FOR AGRICULTURE AND FOOD SYSTEMS IN THE MEDITERRANEAN REGION

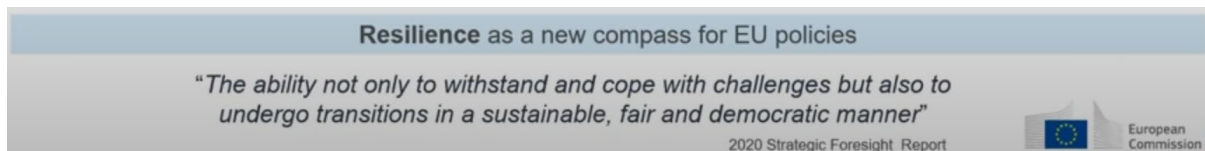


## Webinar #1 in Series 2

MED UEvora hosted the first of three webinars in Euragri's second 2024 Webinar Series on "Climate change adaptation for agriculture and food systems in the Mediterranean region". The first webinar's focus was Climate Change Adaptation in **Mediterranean Crop Production Systems: Challenges & approaches**.

The opening remarks by **Prof Jose Rafael Marques da Silva** highlighted the need for a new transition where the emphasis moves

from production efficiency to system resilience to address the challenges the region faces in tackling climate adaptation and its complexities.



**Prof Gottlieb Basch, MED**, outlined how climate change impacts the region where temperature increases are higher than global trends, and declining rainfall and its annual distribution result in significant changes in the traditional crop growing season. These changes and the increasing frequency of extreme weather events add to the uncertainty associated with crop production systems. Water, soil and crop adaptation management strategies were described. The water strategies included efficient irrigation systems, rainwater harvesting and a shift from full summer crop irrigation to supplementary irrigation of autumn-sown crops. Soil management included min-till or soil disturbance, permanent soil cover, and soil organic matter build-up. Using drought-resistant species, shorter crop rotations or diversification of crops sown were identified as the crop selection strategies. Implementing a mix of adaptation measures must start now, and they will increase crop production's resilience to climate change. **However, soil management is a critical adaptation management strategy.**

***"It is not the stronger of the species that survives, nor the most intelligent, but the one most responsive to change/adapt."***



**Dr. Michal Nekvasil**, European Commission DG for Climate Action, provided an overview of the EU policies fostering nature-based solutions and climate resilience. The European Green Deal is not only about the EU achieving Net Zero but also enhancing our resilience to adapt and prepare for the consequences of climate change. The EU has regulations in place to support the achievement of the Green Deal mitigation targets, including the Land Use, Land Use Change and

Forestry (LULUCF) regulation with a target to achieve a reduction of 310 Mt of CO<sub>2</sub> by 2030, The new Nature Restoration Law that aims that restoration measures should be in place for all ecosystems that require restoration which will contribute to greater resilience to climate change. The 2021 EU Adaptation Strategy sets out a vision of a climate-resilient Europe by 2050 based on smarter, more systemic and faster adaptation. The focus of nature-based solutions includes preserving natural landscape features (e.g. wetlands, peatlands, floodplains, and close-to-nature forests). There is also the requirement to attach monetary values to these landscape features and that the ecosystem services (water, soil, biodiversity, etc) they provide are integrated as part of the whole system. Adaptation action is based locally but will require regional, national and European supporting actions.

The 2024 European Climate Risk Assessment report identified that climate risk drivers are accelerating, some of which are already at critical levels. Regarding climate risks, EU policy preparedness is lagging behind the speed of change. The actions proposed to address these challenges are built around six impact clusters: natural ecosystems,

**4.1. Natural ecosystems**

- Implementation of legislation and better accounting of the value of natural systems
- Forest disturbances and carbon sinks
- Maritime ecosystems
- Climate-resilient landscapes

**4.2. Water**

- Safeguarding freshwater supplies
- Comprehensive stocktake of water issues

**4.3. Health**

- Occupational safety and health (linked to heat)
- European Climate and Health Observatory
- Monitoring on cross-border health threats
- Mobilisation of medical personnel and patient transfer
- Critical medical countermeasures

**4.4. Food**

- Food safety and affordability
- Future-proofing agriculture
- Fisheries policy

**4.5. Infrastructure and built environment**

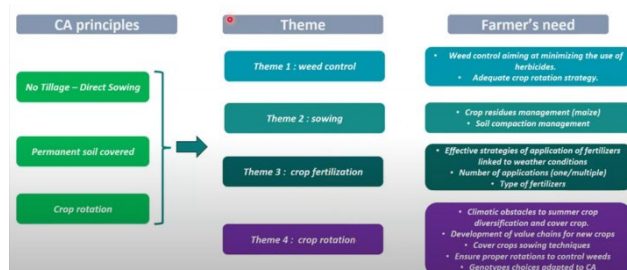
- Infrastructure and building standards
- Transport infrastructure
- Energy infrastructure

**4.6. Economy**

- Resilience of firms, notably SMEs and supply chains
- Fiscal sustainability
- Financial markets stability

water health, food, infrastructure, built environment, and economy. The Common Agriculture Policy post-2027 will continue to promote climate mitigation and adaptation. Key issues will be resilience, food security, sustainability, governance, and rural communities. One of the critical messages from the presentation was the need to support particularly young farmers to change their approach to land use management and their associated natural resources in a very different way than delivered by their predecessors to provide sustainable adaptive responses to climate change.

**Dr Mathieu Marguerie**, Arvalis Institut du Végétal, an applied research organisation dedicated to arable crops, described some of his work in the EU-funded CAMA (Conservation Agriculture in the Mediterranean Area) project on soil conservation agriculture (CA) and some feedback from participatory applied research in Mediterranean conditions. The project aimed to identify the main barriers that hinder CA adoption by smallholders of Mediterranean countries, overcome them with a participatory research approach based on field experiments



and pilot case studies, and develop a dissemination and training programme. The project and its results highlight the essential role of conservation agriculture in creating more resilient crop production systems. The initial project step outlined the farmer's concern regarding CA uptake. These included weed control, seeding, crop

fertilisation and crop rotation. The participatory applied research approach demonstrated no crop yield differences between conventional and CA and the critical importance of summer soil cover. The field results also indicated the advantages of CA in terms of soil water infiltration structural stability, water and nitrogen use efficiency, and soil biodiversity

(earthworms and microbial biomass). The results positively indicate the significant potential role of CA in contributing to crop adaptation to climate change in the Mediterranean region.

Prof Fatima Baptista, Director of the MED- Mediterranean Institute of Agriculture, Environment and Development, moderated the webinar provided some closing remarks. This first webinar in the second series of the EURAGRI webinars aimed to give an update on climate change adaptation research and policy for crop production in the Mediterranean region. Significant progress is being made, but many challenges remain, particularly in supporting farmers in transitioning to more climate-resilient systems. The new and growing research knowledge reservoir addresses the transition's complexities that require local multi-faceted solutions reflecting the unique characteristics and vulnerabilities across the region. Increasing crop resilience and adaptation requires a multi-dimensional approach that integrates crop-climate-smart practices, sustainable soil management, water-efficient technologies, new or adapted crops/varieties, pest and disease surveillance, biodiversity conservation, landscape planning, and others. It is a transdisciplinary task requiring strong collaboration and integration between academics, researchers, advisers, farmers, policymakers and all stakeholders involved in the food production sector. I believe that we are working in the right direction!

