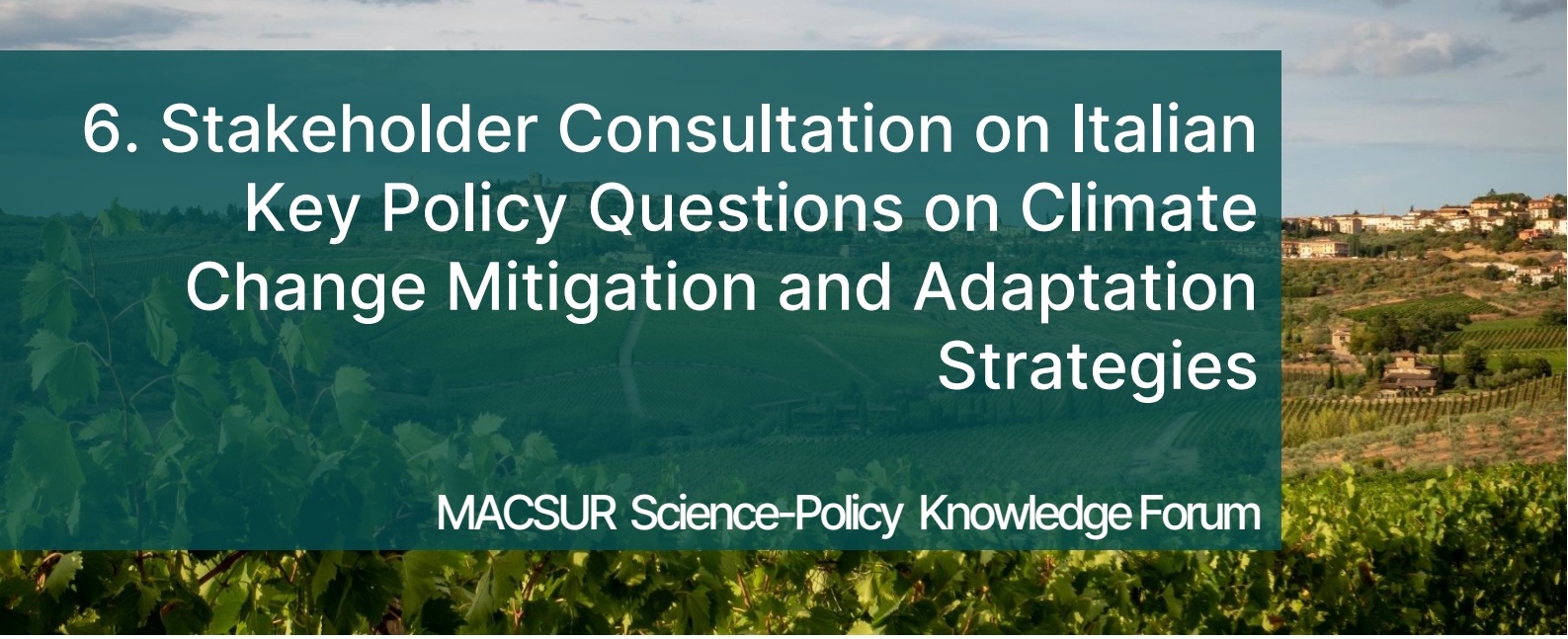

6. Stakeholder Consultation on Italian Key Policy Questions on Climate Change Mitigation and Adaptation Strategies

MACSUR Science-Policy Knowledge Forum

The policy brief provides a systems analysis of the needs and challenges identified by diverse Italian stakeholders involved in the primary sector, showing that more action is needed to reduce climate change effects.

Key Messages

- Climate adaptation and mitigation strategies in Italy are developed by combining economic incentives of the Common Agricultural Policy and national plans, but stakeholders ask that priority be given to the local context and combined agricultural systems.
- Dedicated financial programmes are needed on specific local issues such as livestock (revising the estimation of GHG emission protocols, diet changes to reduce the CH4), climate change impacts on aquaculture and fisheries, and the role of forests in carbon sequestration.
- More funding is needed to understand the climate change impacts at farm level, support long-term field experiments, and create and manage public databases.
- Clear language supported by science needs to be used in public communication to improve knowledge on climate change and agriculture and enhance citizen engagement

Relevance

Due to the heterogeneity of the Italian landscape, it is necessary to design contextualized strategies for climate change adaptation and mitigation. Moreover, the Italian national context is also characterized by a plurality of actors, both public and private, whose level of interaction and coordination is often limited and where the gap between science and policies is often accentuated. For this, the dialogue between stakeholders is crucial to understand if the mitigation and adaptation strategies proposed by research institutions are well contextualized, feasible and well-translated by policymakers.

Approach

At the beginning of the project, three Key Policy Questions (KPQs) were proposed by each National Policy Representative (Table 1). One question was asked on mitigation and two questions were asked on adaptation. These KPQs were validated and integrated during the project phases with the involvement of stakeholders.

This is critically important for the implementation of model ensembles to identify the extent to which management interventions influence C-N fluxes and stocks before promoting food security and climate policies are implemented.

Specific meetings with national stakeholders (farmers, agronomists, national and regional policymakers, researchers from public and private non-profit research bodies, etc.) were organized in order to confirm and integrate the Key Policy Questions with national needs and to pursue other objectives such as: identifying knowledge gaps and highlighting the research needs of stakeholders; reduce the gap between policy and science; propose effective tools and technologies in the medium and long term; understand if the mitigation and adaptation strategies proposed by the research institutions are feasible and well contextualised. A national stakeholder workshop was organised to validate the KPQs, on 14th October 2021. The participants included policymakers, researchers, farmers' associations and experts. Before the workshop, three questions were shared with stakeholders through a survey. The collected information was then synthesised and organised based on the major themes. The KPQS were revised and addressed in the MACSUR SciPol pilot based on the emerging needs of the stakeholders.

Table 1: Key policy questions

Sector	Key policy questions from the policy makers
Mitigation	• What is the contribution of aquaculture and forestry in mitigating climate change? (necessary policies)
Adaptation	• What is the contribution of new technologies (precision farming, weather forecast, breeding…) to CC adaptation? • What can we do to strengthen the renewable energy sector (avoiding trade-offs from biomass and natural resources utilisation)?

Key findings

The science-policy interaction in this pilot phase initiated the stakeholder consultation that goes beyond science and policy actors. The demand-driven nature of science-policy interfaces could be enhanced through structured stakeholder interactions for effective evidence uptake. The main results concerning needs and challenges are reported in Table 2.

Further Reading

IPCC, 2019: Climate Change and Land: an IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems [P.R. Shukla, J. Skea, E. Calvo Buendia, V. Masson-Delmotte, H.-O. Pörtner, D. C. Roberts, P. Zhai, R. Slade, S. Connors, R. van Diemen, M. Ferrat, E. Haughey, S. Luz, S. Neogi, M. Pathak, J. Petzold, J. Portugal Pereira, P. Vyas, E. Huntley, K. Kissick, M. Belkacemi, J. Malley.

ISPRA, 2021. Italian Greenhouse Gas Inventory 1990-2019. National Inventory Report 2021.

Table 2: Stakeholder needs and challenges in Italy

Key Policy Questions	Needs and Challenges
What do you think are the key questions that Italian policy makers must ask to face the challenges of climate change, in line with European guidelines (Green Deal, Farm to Fork, CAP 2023-2027, Biodiversity Strategy)?	**Economy and production** • How to achieve the carbon neutrality objectives without reducing agricultural production? • How can climate actions become a business opportunity? • Evaluate the economic sustainability in the application of adaptation and mitigation measures for medium-sized farms **Consumption** • How to increase the awareness of consumers and orient their choices towards certified and local products in order to reduce the ecological footprint of agriculture? **Agro-forestry systems** • What type of agricultural system will be able to guarantee food security while avoiding compromising natural resources? • What adaptation and mitigation interventions need to be implemented to reduce emissions in the livestock sector? • What actions must the forest sector take to increase its carbon sequestration effectiveness and its important role in safeguarding biodiversity?
What decision support tools, combined with the use of simulation models, do you think can be useful to increase Italian agro-forestry systems' adaptation capacity to climate change?	**Knowledge sharing** • Increase knowledge on the impact of climate change in the aquaculture and fisheries sector where knowledge is limited • Increase awareness and knowledge on climate risks and the effects of climate change (variations in water consumption and costs linked to extreme events, stress on reproductive performance of animals and food quality, nutritional characteristics of forages, etc.) **Interdisciplinary tools** • Soil database • Seasonal weather forecast • Use of free access, interdisciplinary and geo-referenced Decision Support Tools at both national and international levels • Life Cycle Assessment
What are in your opinion the gaps, or research and innovation needs regarding climate change?	**Communication** • Lack of a common and simple language on climate change • Lack of involvement of the local population and administration in issues related to climate change and the need to adequately explain how to deal with it in a practical way **Research** • Absence of homogeneous detailed databases to carry out more targeted and-effective -searches • Lack of long-term trials in different contexts **Economy** • Lack of adequate financial support at national level for multidisciplinary research

The MACSUR SciPol knowledge forum is a pilot exercise initiated by the Joint Programming Initiative for Agriculture, Food Security and Climate Change (FACCE-JPI) to bring science and policy actors together for the strategic design of climate change adaptation and mitigation solutions in the agri-food sector in Europe. This policy brief contributes to this mission by providing evidence-based information to policy for achieving carbon neutrality by 2050, adapting to climate change and understanding synergies and trade-offs in achieving these targets.

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