

AGROSUS

AGROecological strategies for SUSTainable weed management in key European crops

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Problem statement

Large-scale monocultures, which are highly susceptible to weed infestation due to their low ecological diversity and genetic homogeneity, still cover a large part of Europe's agricultural land. EU agriculture mainly relies on the use of synthetic herbicides for weed control, the massive and indiscriminate use of which has increased soil, air and water pollution in recent decades, resulting in an increase in the costs associated with the use of herbicides and the emergence of resistant weeds in agriculture, and caused serious problems in ecosystems and human health. The transition of agriculture to sustainable systems is hindered by the lack of information about the most problematic and resistant weeds in European agricultural areas, as well as their local impact on crop production and the efficiency of alternative weed management practices. Reducing herbicide use by sacrificing productivity does not represent a solution. The necessary paradigm shift must be implemented along the lines of increasing efficiency, replacing chemical plant protection agents and redesigning technology, which also means that farmers must stop having zero tolerance for weeds. However, this requires increasing their knowledge of the benefits of weeds and alternative weed control practices.

About the AGROSUS project

The aim of the project is to reduce reliance on synthetic herbicides and the correlated pressure on the environment. Therefore, AGROSUS will identify appropriate tools and agroecological strategies to prevent and manage weeds in relevant crops, in conventional, organic, and mixed farming, in 11 biogeographic regions of Europe. The four year project is coordinated by the Universidad de Vigo and involves 16 partners (Fig. 1.) from 11 European and associated countries.

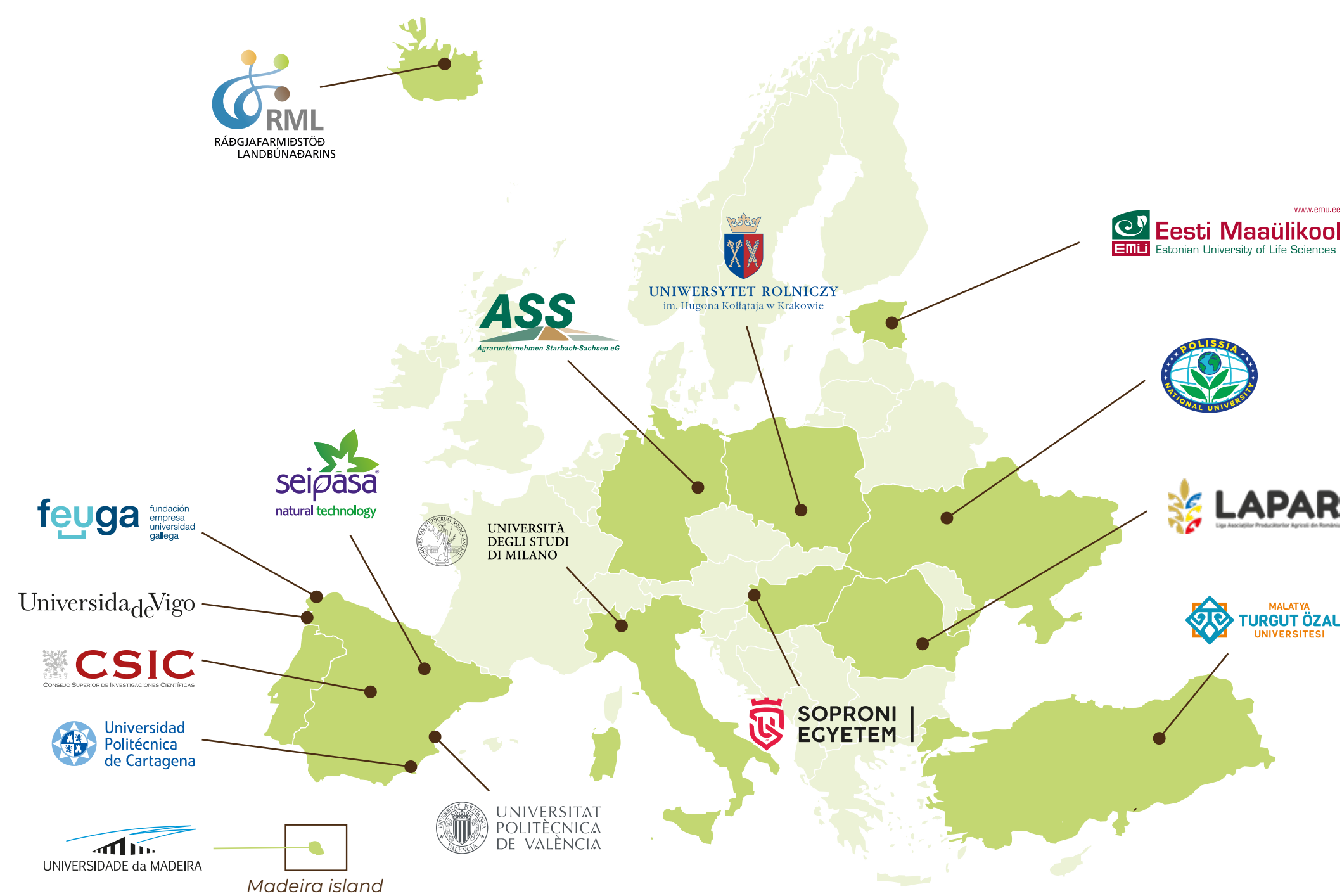


Fig. 1.: Partners map.

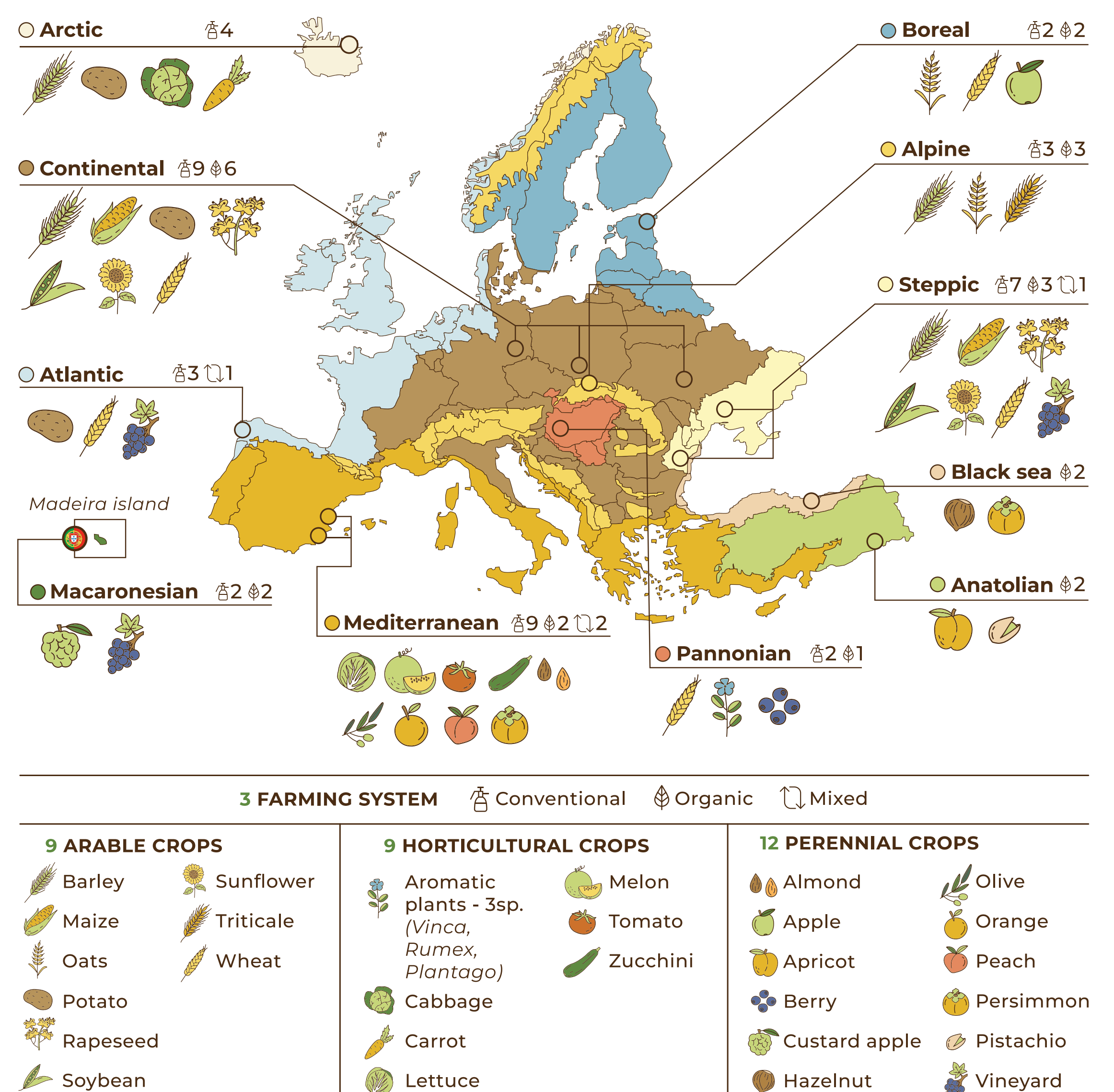


Fig. 3.: The investigated regions.

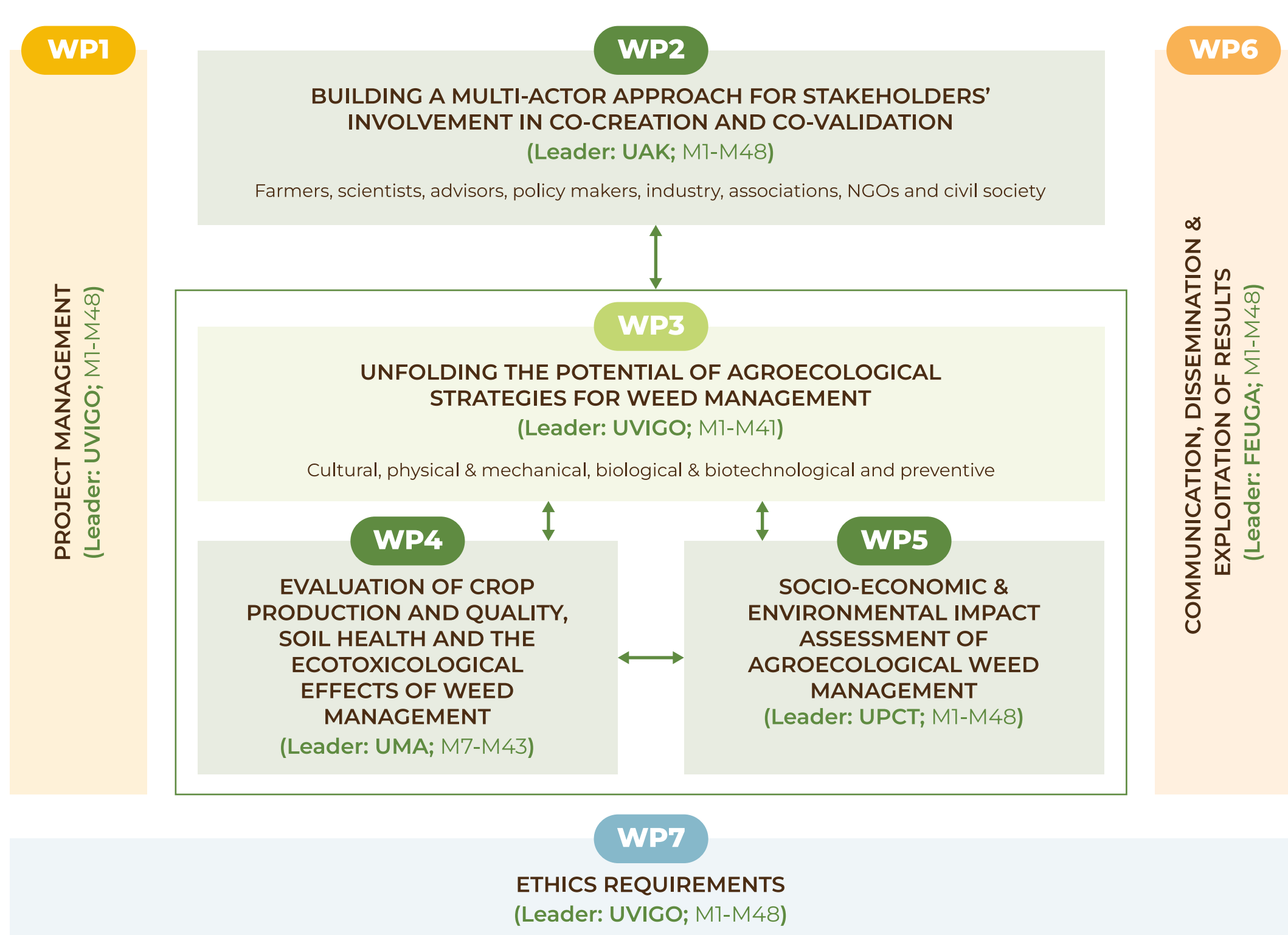


Fig. 2.: Work packages



Fig. 4.: Multi-actor approach project

Main results to expect

- Stakeholder network (farmers, advisors, scientists, industry, policy makers, associations, NGOs, civil society).
- Environmental and socio-economic impact.
- Stakeholder's recommendations.
- Robots and drones potential.
- List of the most problematic weeds in Europe.
- Best agroecological approaches.

