

Conservation Agriculture (CA)

Why CAMA?

CONSERVATION AGRICULTURE PRINCIPLES:

1. Minimum soil disturbance (reduced or no tillage)
2. Soil cover (residues, cover crops)
3. Crop diversification (rotation, intercropping)

Mediterranean rainfed cropping systems could profit of CA benefits. However a **low adoption** (<2% crop area) of CA is observed in Mediterranean countries.
Why? How to increase the area under CA?

CONSERVATION AGRICULTURE BENEFITS:

1. Reduces soil degradation and erosion
2. Increases soil organic matter
3. Increases soil water infiltration and water holding capacity
4. Reduces cropping costs
5. Increase water use efficiency and maintain stable yields

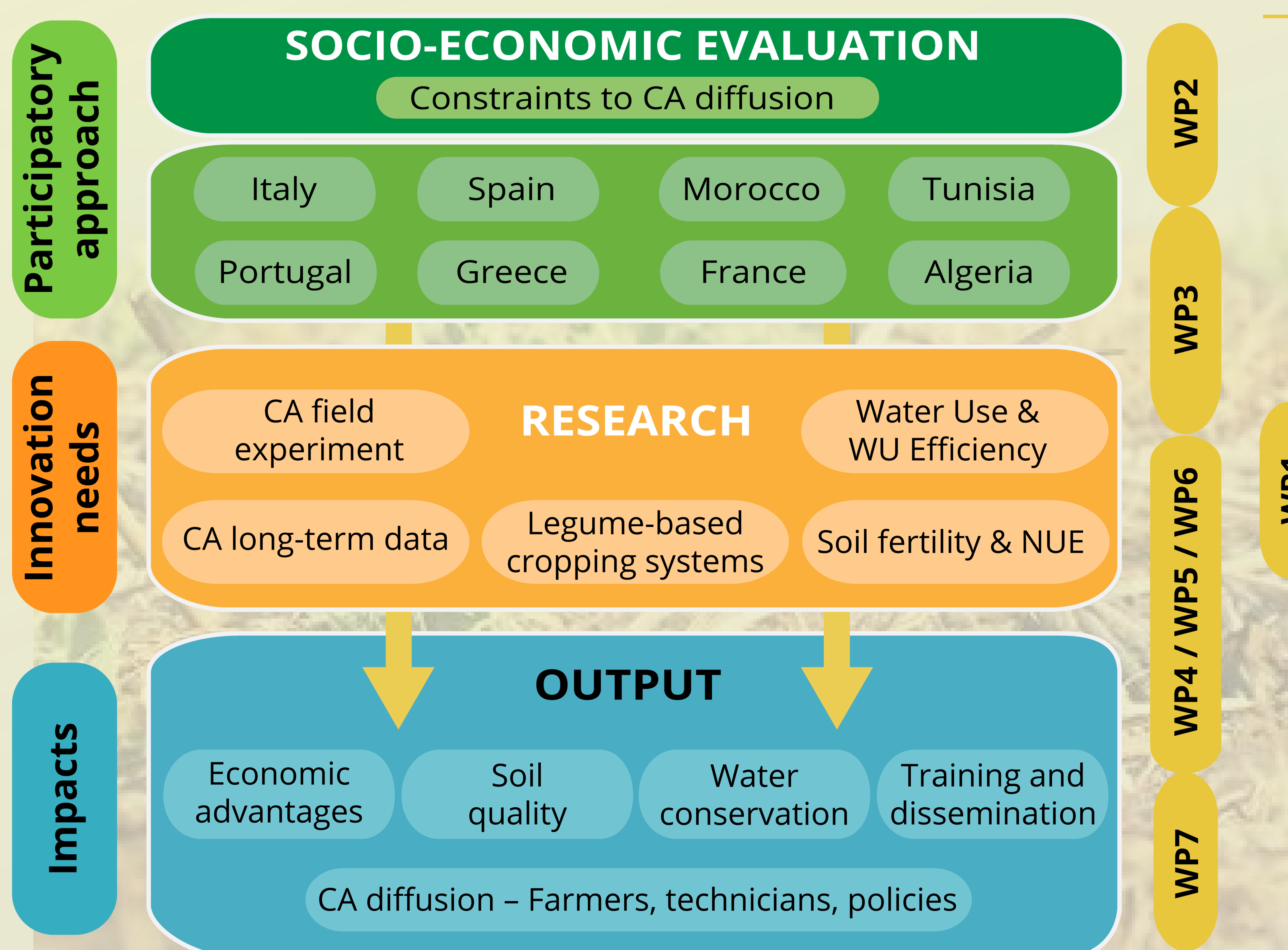
The **CAMA project** aims to identify the main barriers that hinder Conservation Agriculture adoption by smallholders of Mediterranean countries and to **overcome them** with a **participatory research** approach based on the use of **field experiments** and **pilot case studies** in several conditions and the development of an extensive programme of **dissemination and training**

Specific Objectives

- > **Identifying the major social, economic and agronomic barriers** to CA implementation by smallholders of Mediterranean countries.
- > **Establishing a network of CA experiments** and farmers groups adopting CA to apply a participatory research approach.
- > **Improving legume-based rotations in rainfed CA** cropping systems, with genomic and farmer-participatory research aimed to enhance legume crop yield and resilience and research on crop/residues management.
- > **Quantifying the effects of CA** application and developing agronomic innovation to increase soil fertility, soil physical status and nitrogen and water use efficiencies, and to decrease soil erosion.
- > **Disseminating the CA concept and techniques in Mediterranean countries**, tailoring them to the specific pedo-climatic and socio-economic conditions.
- > **Increasing the technicians, advisors and farmers know-how for a better adoption of CA**, with the organisation of two training courses and their participation in the research activities.

Project Structure

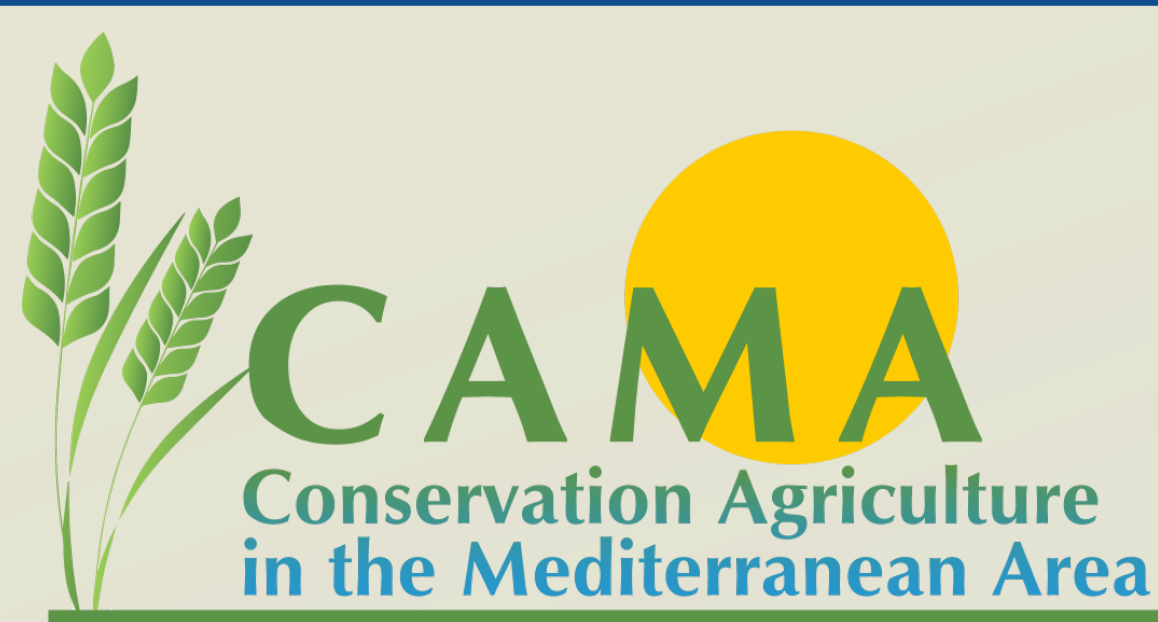
- > **WP1: Project management**, undertakes scientific coordination, financial control, quality monitoring, risk analysis and addressing intellectual property rights and administrative management.
- > **WP2: Identification of socioeconomic CA adoption constraints**. Meetings, driven discussions, interviews and comprehensive surveys with potential CA adopter farmers from 8 countries to understand reasons for a low adoption of CA in Mediterranean farming.
- > **WP3: Participatory approach: Definition of research needs and demonstration fields**. Networks of local CA adopters will define the main research needs and develop demonstration fields to test innovative solutions regarding several CA practical aspects in different conditions.
- > **WP4: Genomic and farmer-participatory selection of novel legume genotypes** for innovative and diversity-based cropping systems oriented to CA.
- > **WP5: Agronomic assessment of CA based on water conservation and use**. Short- and long-term effects of CA on crop yield and its variability, soil water infiltration and availability, and water use efficiency, under different management and climate conditions and scenarios in different agroecosystems.
- > **WP6: Environmental assessment of CA based on soil conservation** in different agroecosystems. Impacts of CA on soil fertility (NPK, soil organic carbon, microbial biomass) and risk of soil erosion, and prediction of changes under different management and climate scenarios.
- > **WP7: Dissemination, capacity building and transfer**. Transmission of project results of scientific and technical relevance for stakeholders involved in the transition to CA in the Mediterranean countries, namely farmers, advisors, farmers organisations, agronomists and applied researchers, with special emphasis on capacity building of young professionals.



CAMA partners' countries and experimental sites geographical distribution



- CAMA participating countries
- Partner institutions and experimental sites



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Consortium

