16th January 2023

PRIMA INFO DAY 2024

Topic 1.2.1-2024. IA

Transformative adaptation of Mediterranean dry farming systems using water harvesting technique to address extreme drought in arid and semi-arid environments

Fabrice DENTRESSANGLE, Project Officer

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PARTNERSHIP FOR RESEARCH AND INNOVATION IN THE MEDITERRANEAN AREA

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TOPIC FARMING SYSTEMS NEXUS SECTION 1

Topic 1.2.1 IA S1

In collaboration with EU Mission Soil Deal for Europe

Transformative adaptation of Mediterranean dry farming systems using water harvesting technique to address extreme drought in arid and semi-arid environments

9.6 M€

TRL 6-8

2 PROJECTS

Submission deadline Stage 1: 2/04/2024

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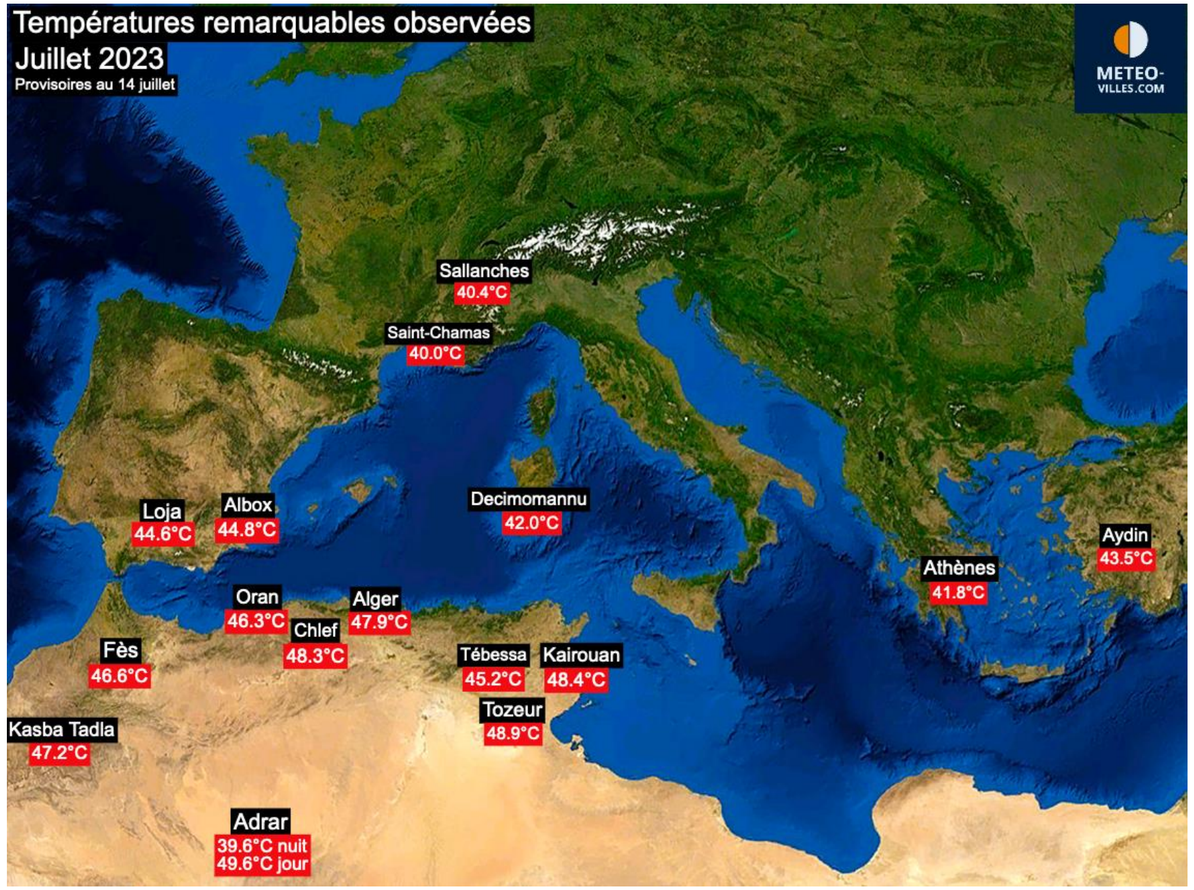
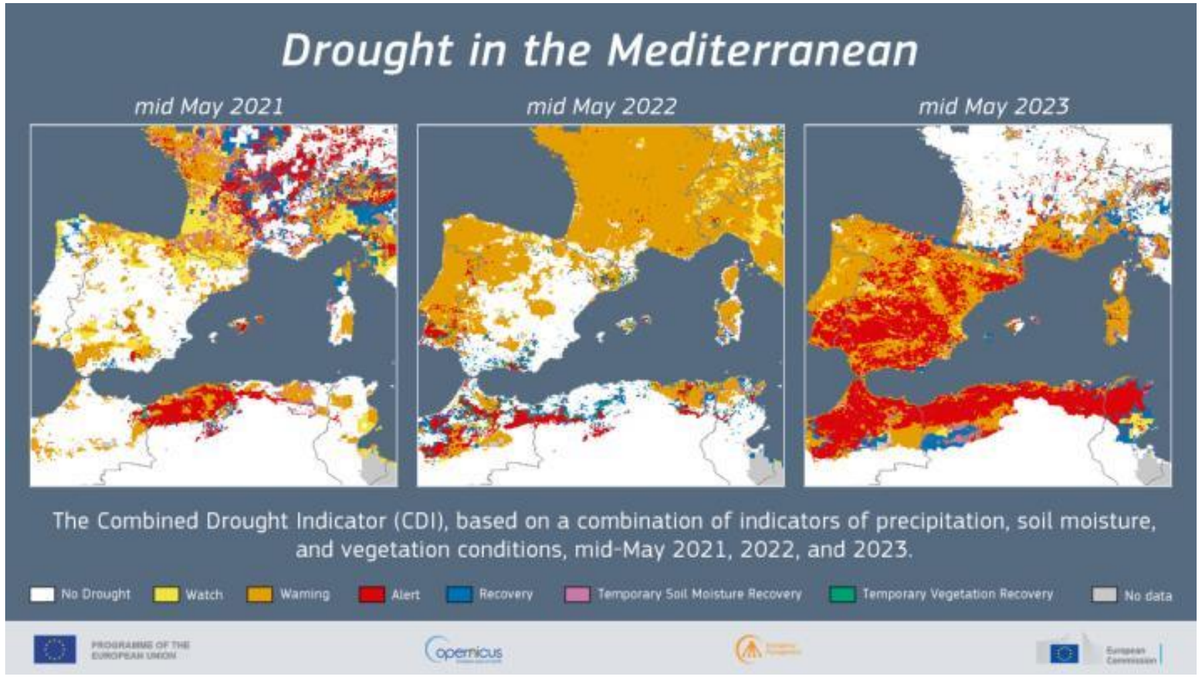
Context: Climate change-Extreme Droughts-Records in temperatures: A Difficult time for rainfed agriculture





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Historic knowledge of water management for agricultural purposes in the Med region

Natural and constructed ponds- Storage systems

Water conveyance and distribution systems

Agricultural practices to avoid water runoff and erosion

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Scope: Develop new DRY farming systems under ARID-SEMI ARID conditions by revisiting ancestral hydro technologies with a modern NEXUS approach to face extreme droughts

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- Develop and Incorporate **modern water harvesting techniques inspired by traditional practices**, such as rainwater harvesting, atmospheric moisture capture, rehabilitating ancestral structures like canals, terraces….
- Use **varieties known to be drought - salt resistant**. Use of **neglected or underused species/varieties** is encouraged (halophytes, cactus…) for human food or animal feeds.
- Coupled with **eco-friendly** practices to increase **water retention, soil moisture and soil health** (Conservation agriculture, agroecology, agroforestry…) and **NATURE BASED SOLUTIONS** – use and valorize ECOSYSTEM SERVICES– Favor systems showing **low carbon footprint** and **minimal energy requirements** to ensure long-term sustainability and affordability, particularly for smallholders. **Livestock integration is also welcome**

- **WORK AT A LARGE SCALE** TO DEMONSTRATE TO STAKEHOLDERS – LAND MANAGERS – FARMERS-POLICYMAKERS THE BENEFITS OF YOUR SOLUTION IN REAL LIFE CONDITIONS
- Develop **organisational / Business models** to sustain the action beyond the end of the funding (creation of new value chains - new market activities- jobs for Young and women …) with a Circular Economy approach
- The proposed systems should provide **practical and affordable** (cost-benefit analysis) **solutions for smallholders** to maintain their livelihoods while ensuring food production in challenging conditions.

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Approach

- Take advantage of THE RESULTS (and/or SITES) of previous Projects and create synergies

PRIMA projects

Call 2021: Sustainable soil and water management for ***combating land degradation and desertification*** *and promoting ecosystem restoration*
Call 2022 Developing ***integrated soil data for the Mediterranean Region****: a gateway for sustainable soil management*
Call 2023: Actions to ***restore and return degraded lands*** *in the Mediterranean region into productive agroecosystems*

 # H2020 # HORIZON EUROPE #EU MISSION SOIL by developing common activities, living labs, capacity building, knowledge sharing….

- **Adopt Multi actors and a multidisciplinary approach for the co-construction of the proposal** (scientists, extension services, farmers, municipalities, private sector-SME, citizens, NGOs, associations…)

- Focus on the roles and responsibilities of **women and youth** to empower them, stimulate job creation and promote gender equality

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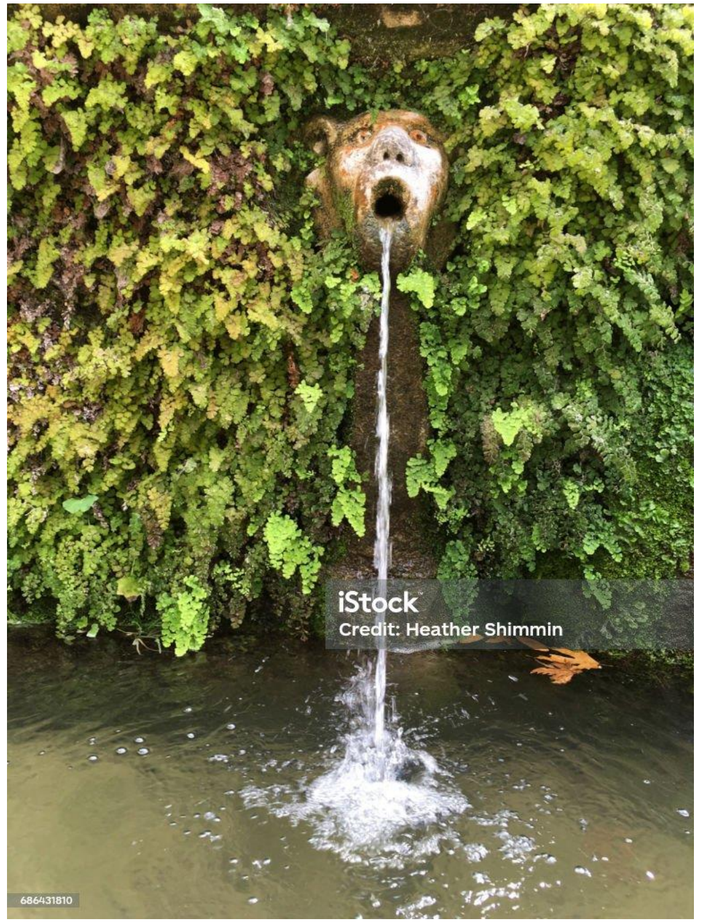
Expected Impacts

- Establish "**large demonstration" sites in arid and semi-arid zones**, offering a practical showcase of the project's effectiveness.
- Innovate **new water harvesting systems**, drawing inspiration from time-tested ancestral hydro-technologies.
- **Create new products** for both human consumption and animal feed that value and incorporate underutilized species/varieties.
- Develop new **value chains and organizational-business models** that can adapt to changing environments and market conditions.
- **Improve the water use efficiency**.
- Prioritize effects on soil health. Anticipated outcomes should improve **indicators** such as soil organic content, carbon sequestration, and water retention capabilities. This impact area should be thoroughly evaluated, **considering the broader environmental consequences.**
- Develop **practical and affordable solutions** specifically designed to benefit smallholders, addressing their unique challenges and limitations.
- Projects selected within this call shall **produce a joint policy brief** that aligns with the call's scope and objectives with the aim to translate the main lessons learnt, knowledge and evidence generated through project work into key messages for policy makers



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KPI: KEY PERFORMANCE INDICATORS

- Demonstration Sites
- Water Harvesting Systems
- Crop Diversity
- Value Chain and Organizational Models
- Smallholder Adoption Rate

Contributions to EU policies, HE Mission and Partnerships

- EU Soil Strategy for 2030- Mission soil
- Biodiversity Strategy for 2030- Green Deal
- EU Adaptation Strategy for climate change
- Partnerships on agroecology-Living Labs

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Linking your project with SDG

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SDG 2 (zero hunger), to ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively **improve land and soil quality.**

SDG 3 (good health and well-being), by enhancing **food security** and other livelihood benefits, and by increasing the resilience of the land and the populations depending on it;

SDG 6 (clean water and sanitation), through its contribution to sustainable water management

SDG 13 (climate action), by increasing resilience and creating synergistic actions for climate change adaptation and mitigation, for example, by **increasing soil carbon stocks**;

SDG 15 (life on land) Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, **combat desertification, and halt and reverse land degradation and halt biodiversity loss**..

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Thank you

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