



EU CAP Network Brokerage event ‘Accelerating the innovation process through Horizon Europe multi-actor projects’

Antwerp, Belgium
19-20 October 2023

CLIMATE ACTION

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HORIZON-CL6-2024-CLIMATE-01-01

Improving irrigation practices and technologies in agriculture



Innovation Actions

*Indicative budget: 10 M€ in total
(5 M€ per project)*

HORIZON-CL6-2024-CLIMATE-01-01



POLICY CONTEXT



- EU water-related policies

Contribute to increasing the resilience of agriculture to drought with innovative irrigation systems that increase efficiency in water management.



EXPECTED OUTCOMES

- **Solutions and prevention tools for improving water management**, in particular in areas experiencing recurrent or permanent **water scarcity** to anticipate solutions for current and future challenges in water management.
- **Support available for end-users** seeking to take up innovative solutions in irrigation technologies.
- Unlocking the potential of **recycled sewage sludge and other biowaste streams** as alternative, safe **water and nutrient supply** resources for agriculture.
- Increased socio-economic and environmental potential of **alternative irrigation practices** such as fog harvesting.
- **Reduced agricultural water demand**, as a result of optimized irrigation systems, including new opportunities for **alternative water supplies**, and expected innovations from the transition towards **more sustainable farming systems**, including agroecology.

HORIZON-CL6-2024-CLIMATE-01-01



SCOPE

- Improve the **understanding** of the composition, potential for irrigation in terms of **efficiency, reliability and cost-effectiveness** of **sewage sludge** and other biowaste streams, on condition that a **safe** use is possible, **without a negative impact** on the environment while ensuring high **nutrients** efficiency.
- **Integration and upscaling** of the **on-farm water management** practices and results at the **catchment level** by quantifying the impacts of **water recycling**, optimizing catchment-based agriculture production, reducing runoff patterns and possible changes in hydrological cycles.
- New or improved **tools** for an **efficient combined use of water and fertilizers** for **different agricultural systems**, including agroecology, organic production, as well as conventional, intensive or urban agriculture.
- New, **innovative forms of alternative water for agriculture** (e.g., superabsorbent polymers/‘solid water’), including evaluation of their socio-economic, environmental and health impacts.
- **Improve practices and solutions** in small and large-scale farms to deal with the effects of **water abundance (rapid showers, floods) and/or water scarcity**.
- **Identification** of **societal and regulatory barriers** hampering upscaling of **recycled water use** and development of suitable solutions to increase the uptake in practice.
- **Recommendations** for improved and targeted **incentives and policies** at regional, national and EU-level to **reduce financial risks for early adopters** of practices developed in the project.



KEEP IN MIND



- **Multi-actor approach**
- Activities are expected to achieve TRL 6-7 by the end of the project.
- Eligible costs will take the form of a lump sum.
- Build and expand on achievements of past and current projects, including PRIMA.
- Dedicated task to collaborate with HORIZON-CL6-2023-ZEROPOLLUTION-01-01 and HORIZON-CL6-2024-BIODIV-02-01-two stage.
- The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.

HORIZON-CL6-2024-CLIMATE-01-3

Paludiculture: large-scale demonstrations



Innovation Action

*Indicative budget: 20 M€ in total
(10 M€ per project)*

HORIZON-CL6-2024-CLIMATE-01-3



POLICY CONTEXT

- **Carbon farming (CF)**
 - Communication *Sustainable carbon cycles* (2021): CF practices incl. restoration of peatlands
 - Proposed Regulation on *Carbon removals certification* (Nov. 2022)
- EU **Biodiversity** Strategy for 2030 and proposed **Nature Restoration Law**
- EU **Adaptation** Strategy
 - Implementing *nature-based solutions* on a larger scale to increase climate resilience



EXPECTED OUTCOMES

- **Practical** options for the **development** of paludiculture and pathways for the **conversion** of degraded organic agricultural and forest soils to paludiculture are **demonstrated**.
- **Recommendations** for the approach to be taken towards **large-scale deployment** of paludiculture are developed.
- The carbon **sequestration potential** of paludiculture is quantified, including an **assessment** of its potential contribution to the achievement of EU targets.

HORIZON-CL6-2024-CLIMATE-01-3



SCOPE

- Establish **large-scale** paludiculture demonstration in **three areas** of at least 50 hectares each
- Involve all relevant **actors** (farmers/foresters, scientists, advisors, local/regional public authorities, industry, etc.) throughout the different stages of project development and implementation
- Consider the potential for activities demonstrated in the project(s) to be replicated and **scaled up**, and to this end develop **recommendations** for policymakers and land managers



KEEP IN MIND

- **Multi-actor** approach
- **Collaborate** with previous topic (Socio-economic aspects)
- **Linked** to other HE topics/projects, incl. in Cluster 5, Mission Soil, Mission Adaptation, Mission Ocean & Waters

HORIZON-CL6-2024-CLIMATE-01-4

Land use change and local/regional climate



Research and Innovation Action

*Indicative budget: 12 M€ in total
(6 M€ per project)*

HORIZON-CL6-2024-CLIMATE-01-4



POLICY CONTEXT

- Revision of the EU **LULUCF** Regulation
 - EU-27 target: net GHG *removals from land sector* of at least 310 Mt CO₂eq by 2030
- EU **Adaptation** Strategy
 - Improve the state of the art on *adaptation modelling*, risk assessment and management tools



EXPECTED OUTCOMES

- Solutions for understanding, modelling and optimising the relationships between **net removals** from LULUCF and **biogenic emissions** from the agriculture sector at local/regional level
- Strategies at local and regional level to **deal with impacts** of climate change and to maximise **co-benefits** for other objectives, including biodiversity protection

HORIZON-CL6-2024-CLIMATE-01-4



SCOPE

- Analyse, model and project **impact** of past, present and future **land use** and land use change on the local and regional evolution of the **climate**, incl. with innovative technologies
- Develop **strategies** for policy-making to **mitigate** adverse evolutions of climate at the regional/landscape level, with attention to **trade-offs**
- Propose solutions for **improved land management**, making use of various relevant instruments



KEEP IN MIND

- **Multi-actor** approach
- **Collaborate** with other relevant HE topics/projects, incl. in Cluster 5, Mission Soil, Mission Adaptation

Thank you



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All information on the brokerage event is available on the event webpage:

https://eu-cap-network.ec.europa.eu/events/eu-cap-network-brokerage-event-accelerating-innovation-process-through-horizon-europe_en

