

# LEarning and action alliances for NexuS EnvironmentS in an uncertain future LENSES



## **Project pilot Areas: Tarquinia Plain (Italy)**

## ADDRESSING THE SUSTAINABILITY OF AGRICULTURE AND ECOSYSTEM SERVICES IN THE PLAIN OF TARQUINIA

Being one of the most extensive agricultural production area of the Lazio Region (Italy), the plain of Tarquinia is currently facing the deterioration of the quality of its water resources, while farmers are dealing with increasing energy costs for pumping water from local irrigation networks. This scenario is further worsened by extreme weather events, such as flooding and drought, which are becoming increasingly frequent in the area, thus compromising tourism and agriculture, the two main economic sectors of the territory.

### **GENERAL CHARACTERIZATION**

- ✓ Tarquinia is part of UNESCO World Heritage.
- ✓ Location: Central Italy, Lazio Region, around 90 km north of Rome.
- ✓ Main economic activities: Tourism and agriculture.
- ✓ Area: 27.000 ha, 85% of which are designated as nitrate vulnerable zone. 67% of the territory is agricultural area, of which almost 10.000 ha irrigable, and 3.000 ha irrigated mainly with micro-irrigation systems.







## **LONG OLIVE TRADITION**







## **LENSES GOALS**

Contribute to improve water resources management and be part of the solution addressing Nexus challenges  $\hfill\Box$ 

- Structural and management issues + High pumping energy costs = Difficult to meet water summer demand.
- Contamination of groundwater by nitrates. Soil degradation problems due to intensive agriculture.
- Agricultural enterprises' contraction associated with reduction in the Utilised Agricultural Area (UAA).
- Complex technological modernization due to scattered distribution around the territory.
- Agricultural producers are often excluded due to their size compared to the large operators in the sector.





#### **HOW WILL LENSES WORK?**

Considering all the targets, the priority actions implemented in Tarquinia must focus on:

- Involve a multi-stakeholders working group to identify main challenges and barriers for a sustainable employment of natural resources in the area, which prevent the further development of the two key economic sectors (agriculture and tourism) and discuss possible strategies to overcome them.
- Raising awareness of stakeholders and end-users on innovative and easily implementable technical solutions and sustainable management practices useful for protecting, restoring or enhancing the status of natural resources in the area, with a focus on water management.
- ✓ Boost the adoption or scaling up of sustainable and integrated management practices (e.g. early warning systems for extreme weather events), aiming at increasing use efficiency of natural resources and especially of water, based on NEXUS approach, in the context of climate change.









### **COUNTRY PILOTS REGIONAL TEAM**

CREA conducts studies and researches on local agricultural and forestry ecosystems, with the aim to characterize them and to build space-time models through an interand multidisciplinary approach, ultimately supporting their sustainable management.

## FUTURE PERSPECTIVE "CALL TO ACTION"

"The project aims to identify innovative and easily implementable technical solutions and sustainable management practices, and to boost their adoption or scaling up within the area, with the final aim to protecting, restoring or enhancing the status of natural resources at local level. The objective will be achieved through an integrated and participatory approach, which brings together a large variety of stakeholders, going beyond mere development and sharing of best practices, rather producing shared knowledge and encourage action towards common goals".

**CREA Team** 







