INTERNATIONAL CONFERENCE
GROUNDWATER, KEY TO THE SUSTAINABLE DEVELOPMENT GOALS
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Innovative social learning spaces to support tailored solutions for the sustainable management of coastal groundwater resources in the MED

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Research Question

How tailored solutions supporting adaptive management systems can emerge by strengthening the capacities of local communities to identify practical solutions for individual users?

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Approach

Set up Social Learning Spaces in Wedi el Bey (Tunisia), Malia (Greece) and Arborea (Italy)

Strengthening the capacities of local actors to:

- identify sustainable practices and
- promote behaviors change

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Cases studies Context

Wadi el Bey (Tunisia)

Problem: High discharge level of N, P, and COD in the ecosystem

Main Activity: Industry

Arborea (Italy)

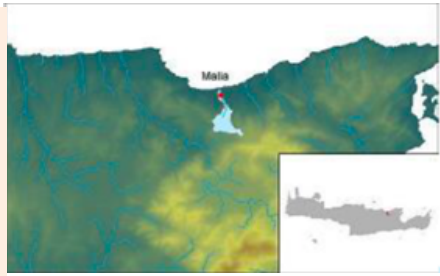
Problem: High groundwater nitrate pollution

Main Activity: farming

Malia (Greece)

Problem: over-pumping & organic materials discharge and nutrients in the groundwater

Main Activity: Tourist activity/hotels



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Social Learning Spaces Design Process

- Step1: Local users mapping
- Step2: Stakeholders sampling
- Sept 3: Support program design & implementation
- Step 4: Social learning process achievement and assessment

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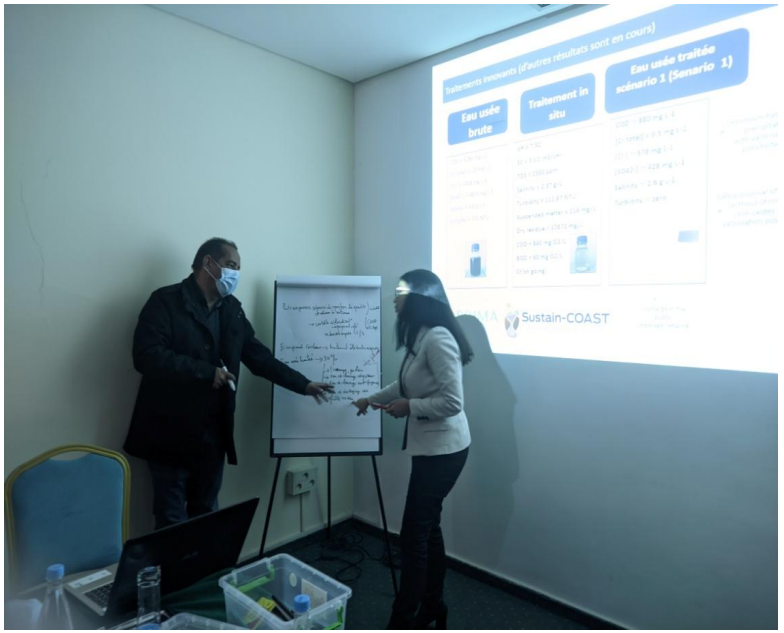
Wedi El Bey Social learning Space

- Objectives

Support main polluters to adopt the best available wastewaters treatment technologies

Improve treatment and reuse approach



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Wedi El Bey Social learning Process

- Implementation

- Outputs

Bilateral cooperation agreement between researcher team and involved industrials

Malia Social learning Achievement

Objectives

Enhance the capacity of local stakeholders in managing sustainably local water resources.

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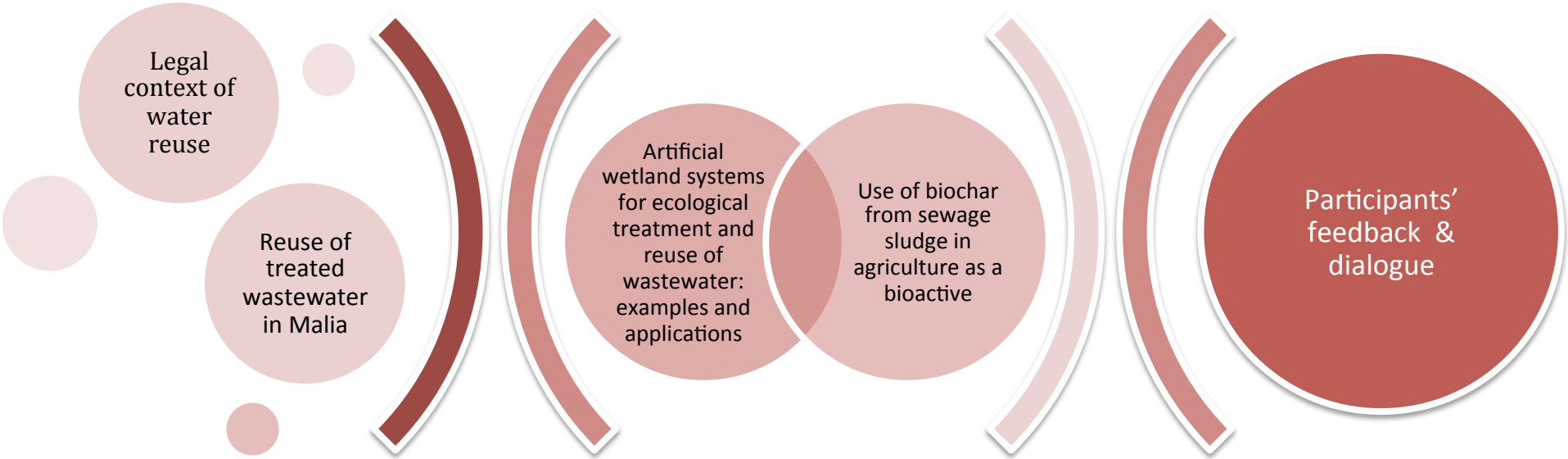
Malia Social learning Achievements

- Implementation



- Outputs

Agreement on actions plan: implementation of green solutions, promotion of cyclical management, wastewater reuse, implementation of artificial wetland systems

Arborea Social learning Space

- Objectives

increase local stakeholders the awareness of nitrate pollution issues & their capacity to reduce it

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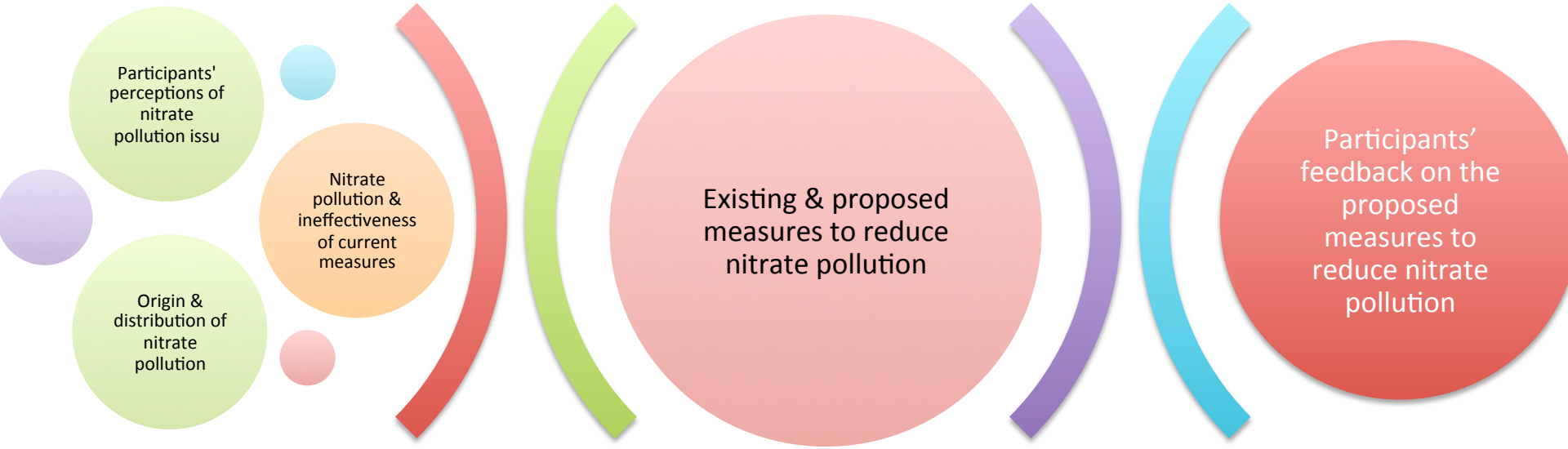
Arborea Social learning Space

- Implementation



Sharing the same understanding of the situation

Knowledge transfer

Co-construction of effective measures & stakeholders engagement

- Outputs

Voluntary agreement on an action plan

Conclusion

- The integration of priorities and constraints of different stakeholder groups unveiled new perspectives for the analysis of environmental issues, allowing identifying original participatory solutions.

- The deconstruction of the issues with stakeholders in the designed social learning spaces proved to be effective in identifying tailored solutions integrating scientific and local knowledge.

- The involved stakeholders defined options for implementing original solutions in a decentralized approach promoting cyclical management. The co-construction of the solutions was based on the 4R principle (Reduce, Recycle, Reuse, Recover).

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