



Sustainable Rivers: Bridging Local and European Initiatives

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21 May 2024

Camera di Commercio, Rome, Italy





**BLUEPRINT FOR
ATLANTIC-ARCTIC
AGORA**

**ON CROSS-SECTORAL COOPERATION FOR
RESTORATION OF MARINE AND COASTAL
ECOSYSTEMS AND INCREASED CLIMATE
RESILIENCE THROUGH TRANSFORMATIVE
INNOVATION**



Co-funded by
the European Union



UK Research
and Innovation

the EU Mission



Mission Restore our
Ocean and Waters

Atlantic & Arctic
Basin Lighthouse

A-AAGORA

**Coastal Restoration with
Nature and People**

Consortium



naumspace



INOVA+

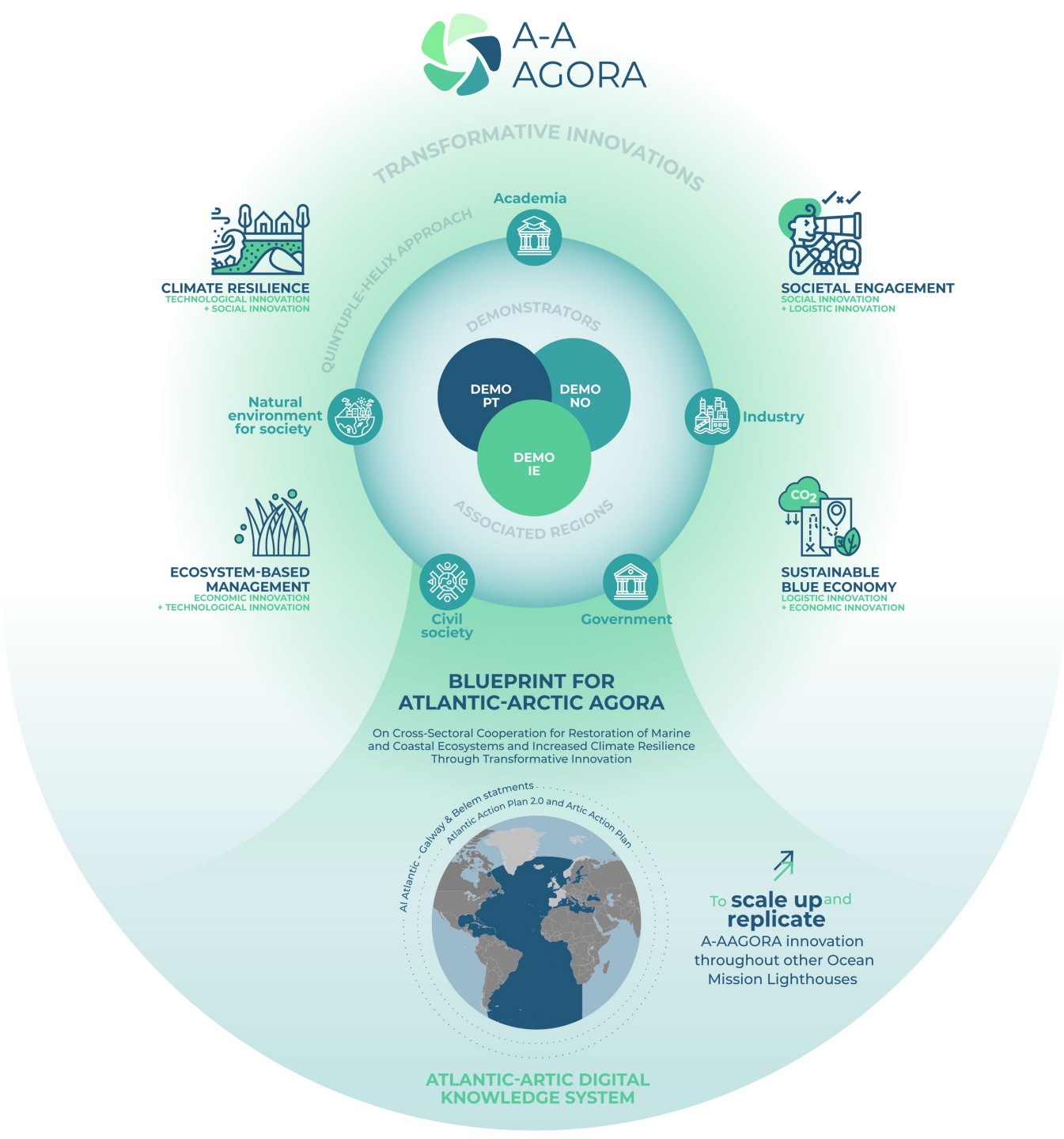


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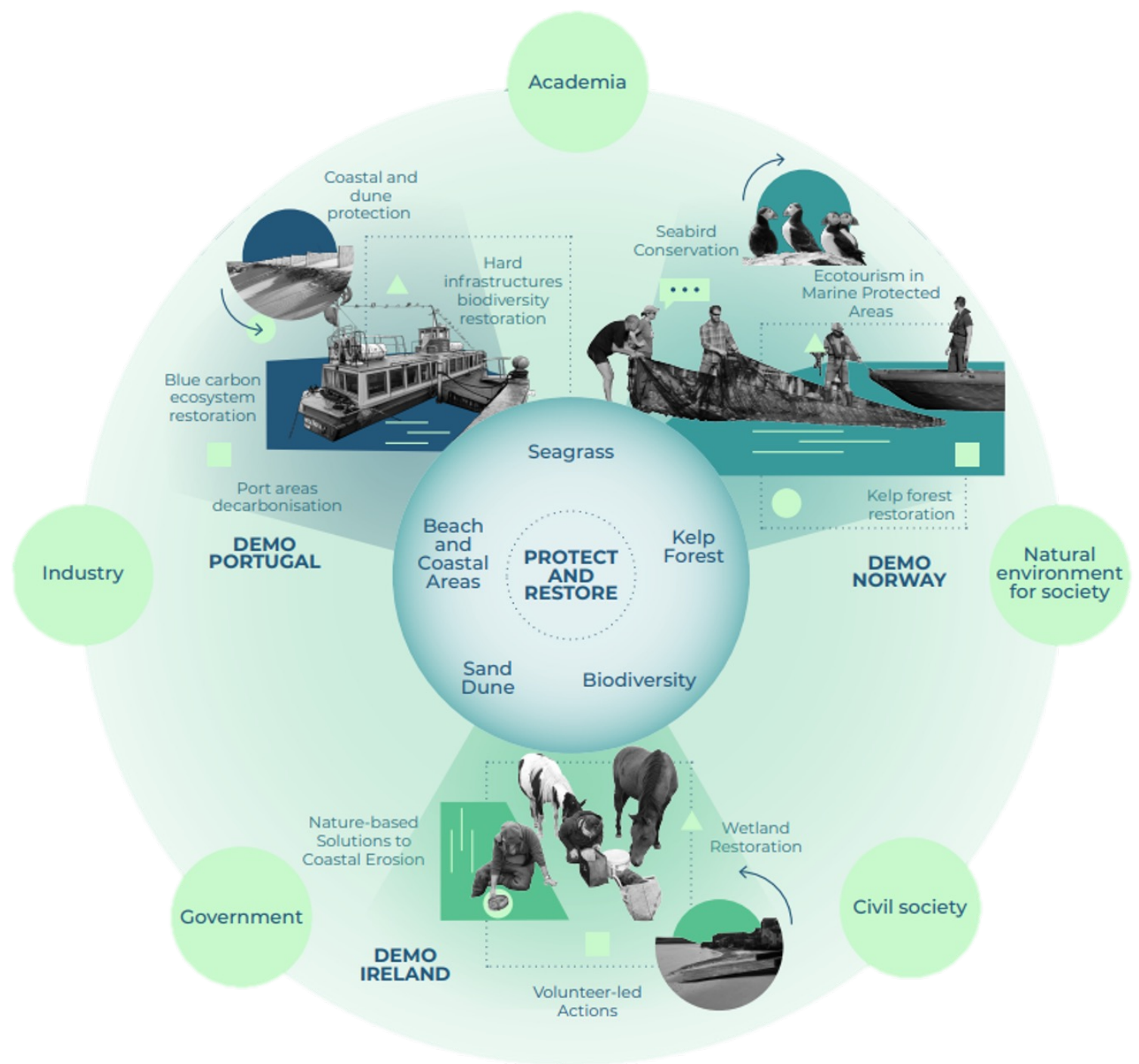


UK Research
and Innovation

the living Lab concept



the Quintuple helixes approach





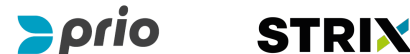
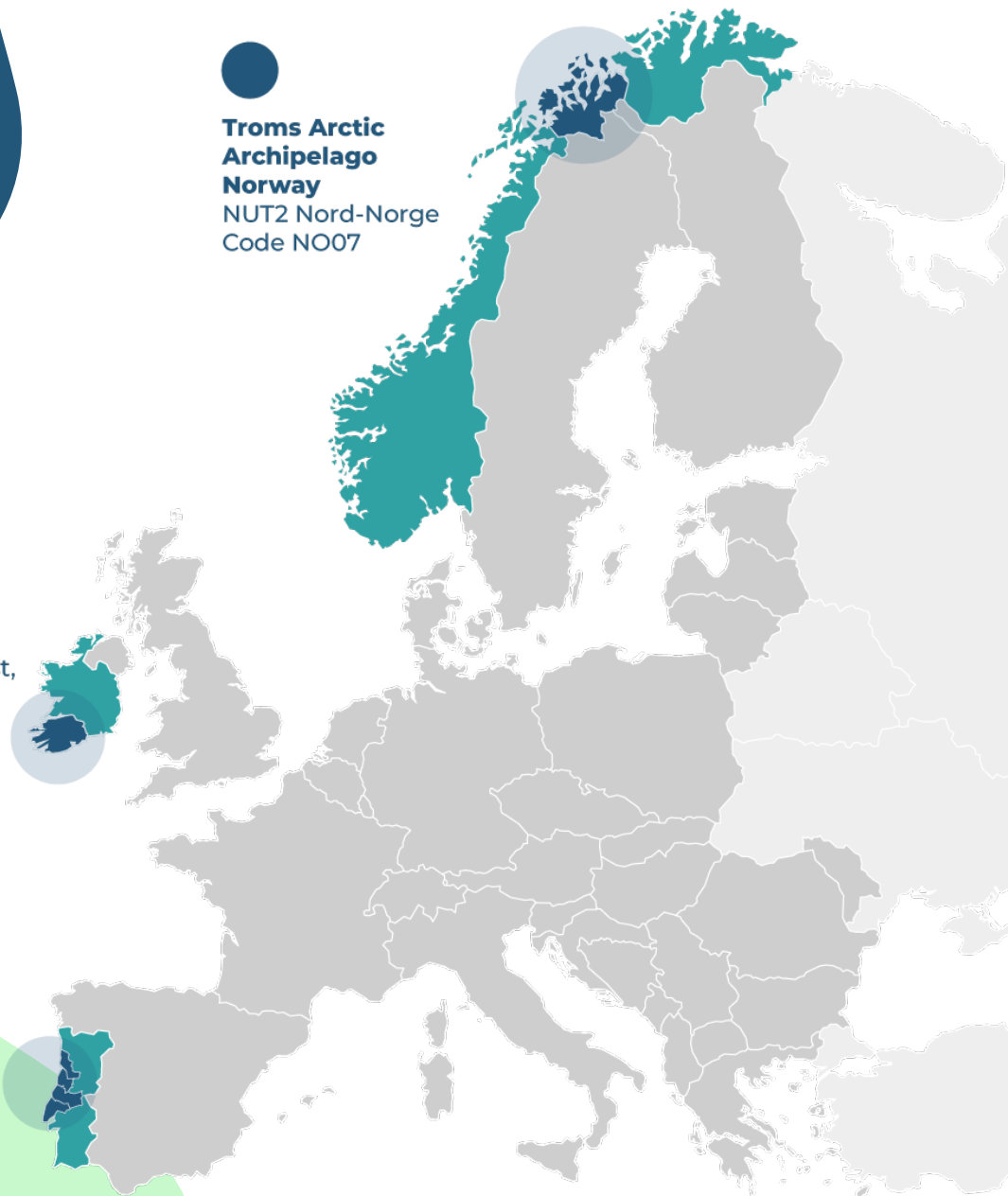
Troms Arctic Archipelago Norway
NUT2 Nord-Norge
Code NO07



Cork County Ireland
NUT2 South-West,
Code IE05



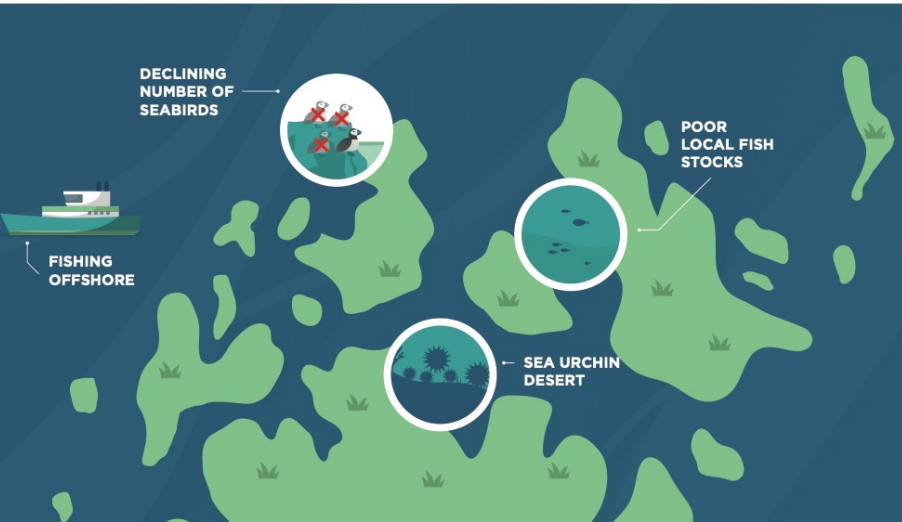
Centro Region Portugal
NUT2 Centro
Code PT16)



FUTURE



PRESENT



FUTURE

PRESENT



CAMERA SYSTEM
For coastal monitoring

DGPS SURVEY



Restored healthy Sand dune with vegetation



✓ WETLAND RESTORED

⬆ BIODIVERSITY

NATURE-BASED SOLUTIONS
Analysing the effectiveness of NbS for sustainable coastal management



ECO-TRAIL

Beach nourishment



Underwater vegetation

Offshore sandbar for wave breaking



Beach boardwalk



Sand dune management and restoration

COLLABORATION | CITIZEN SCIENCE | COMMUNITIES

BEACH EROSION

DUNE EROSION
Loss of vegetation



OVER WASH = FLOODING

EMERGENCY HARD STRUCTURES - FAILING
Sea walls
Rock armours



✗ DAMAGE WETLAND
✗ LOW BIODIVERSITY

DEMO-IE – develop community focussed coastal climate adaptation and resilience to embed ecosystem-based management practices and nature-based solutions

Coastal protection

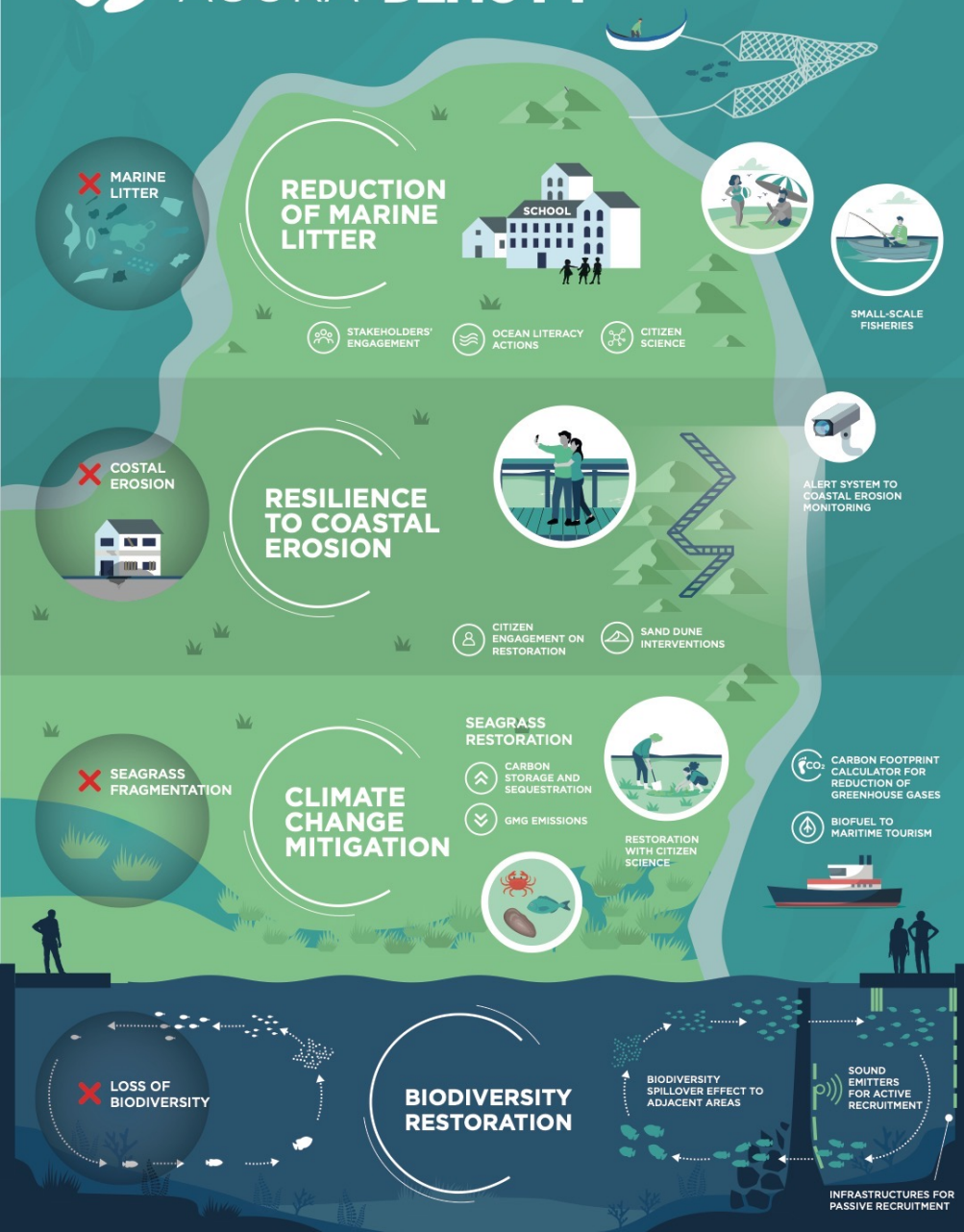


biodiversity protection



Sand dune restoration

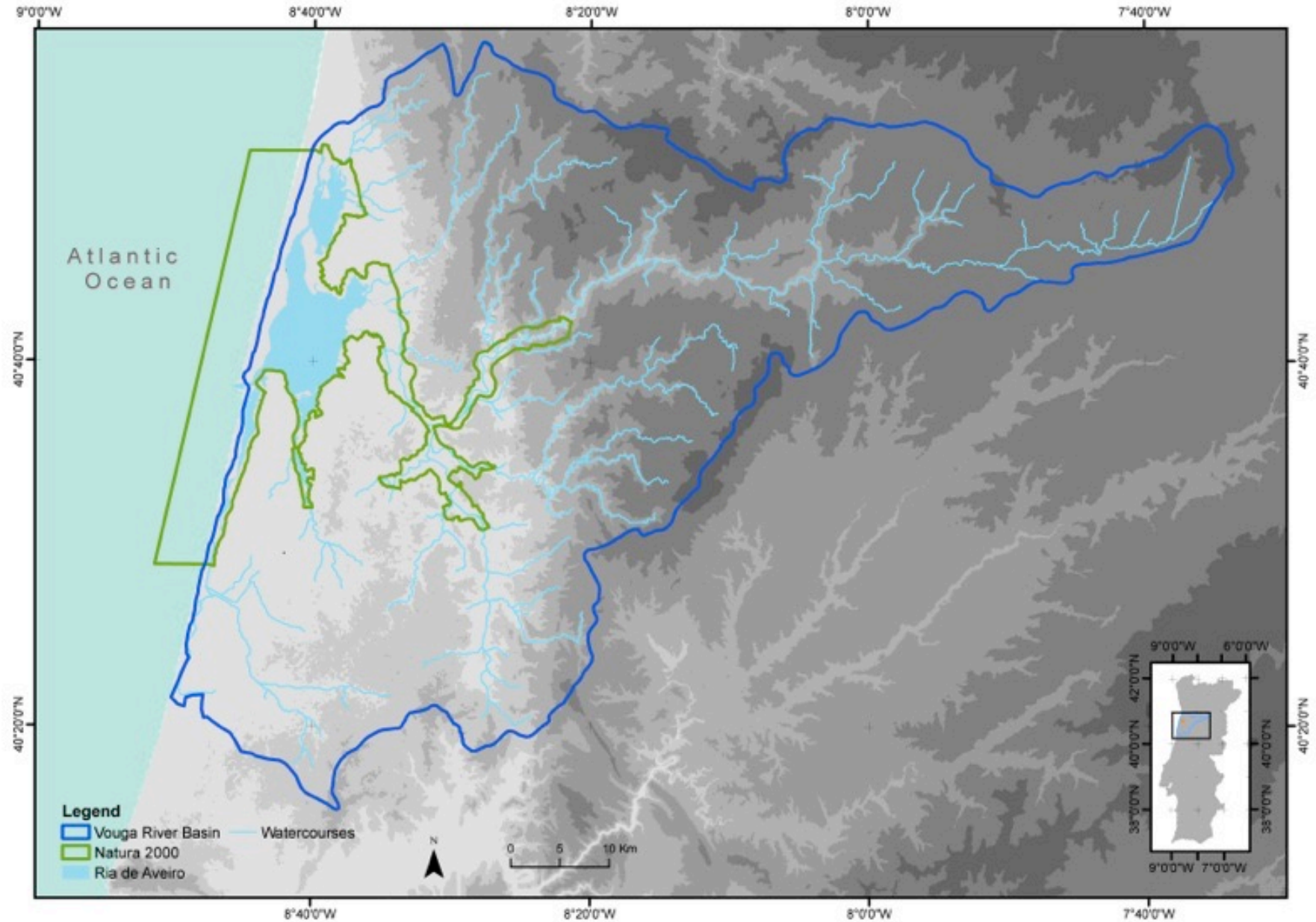




DEM0-PT – apply ecosystem-based management as a principle for managing and building climate resilience and the wealth of biodiversity, and to mitigate anthropogenic pressures

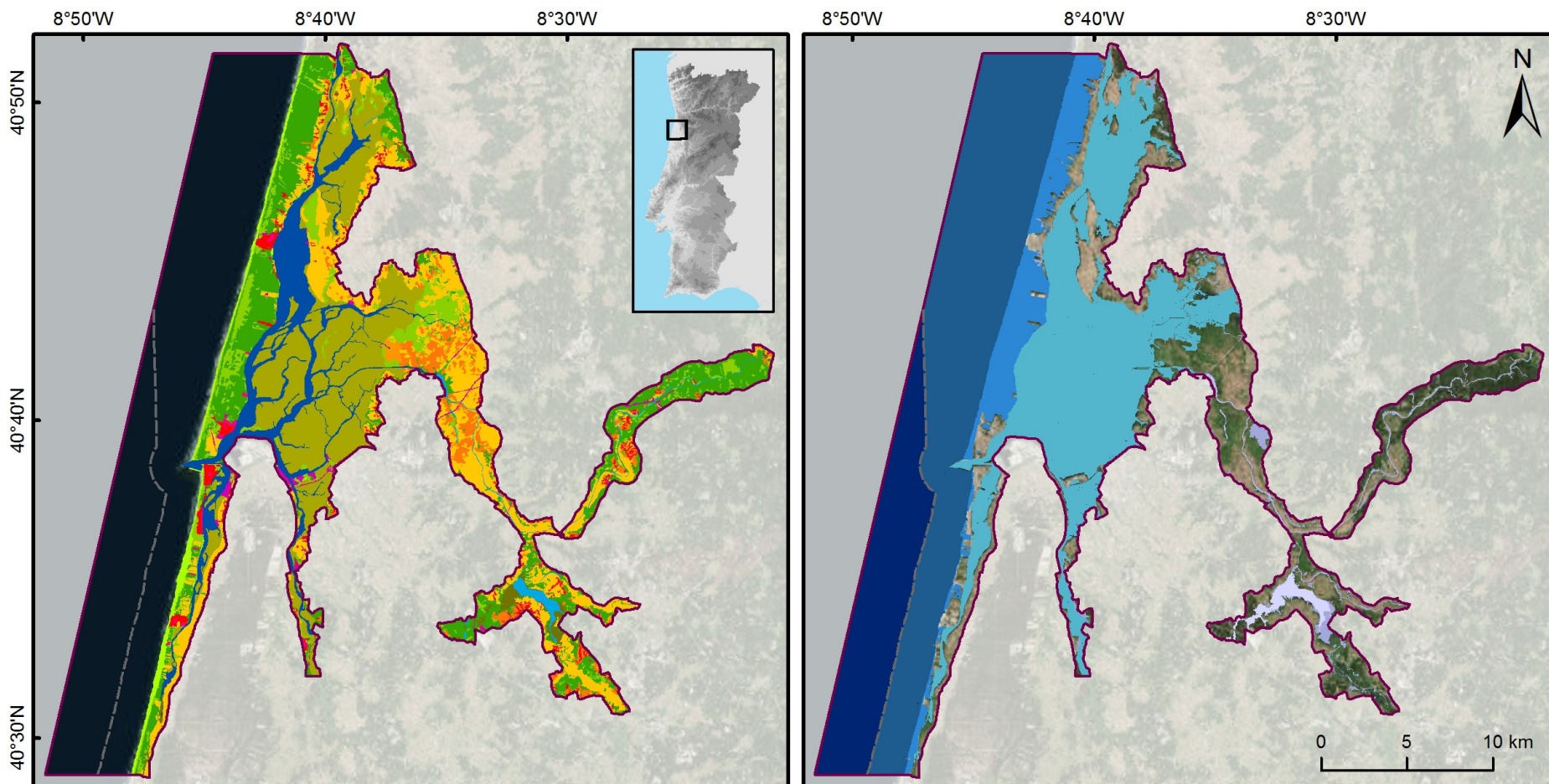


the Vouga River, from catchment to coast | the Natura 2000



The basin area covers approximately 3362 km², and the river crosses 31 municipalities along 141 km

the Vouga River | Natura 2000



Land Use

- | | |
|--|---|
| ■ 1.1 Urban fabric | ■ 3.1 Forests |
| ■ 1.2 Industrial, commercial and transport units | ■ 3.2 Scrub and/or herbaceous vegetation associations |
| ■ 1.3 Mine, dump and construction sites | ■ 3.3 Open spaces with little or no vegetation |
| ■ 1.4 Artificial, non-agricultural vegetated areas | ■ 4.1 Inland wetlands |
| ■ 2.1 Arable land | ■ 4.2 Maritime wetlands |
| ■ 2.2 Permanent crops | ■ 5.1 Inland waters |
| ■ 2.3 Pastures | ■ 5.2 Marine waters |
| ■ 2.4 Heterogeneous agricultural areas | |

Realms

- | | |
|--|--|
| ■ Lakes | ■ Agricultural |
| ■ Rivers | ■ Terrestrial Natural |
| ■ Wetlands | ■ Urban |
| ■ Riparian | |
| ■ Inlets & Transitional | |
| ■ Coastal Terrestrial | |
| ■ Coastal | |
| ■ Shelf | |

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Natura 2000 Study Area
 WFD coastal boundary



Pateira de Fermentelos | Bridging Local and European Initiatives | Alien invasive species



Baixo Vouga Lagunar | Bridging Local and European Initiatives | Saltwater intrusion



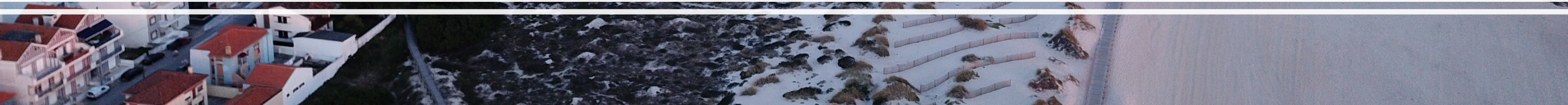


Ria de Aveiro | Bridging Local and European Initiatives | Citizen science | Blue Carbon



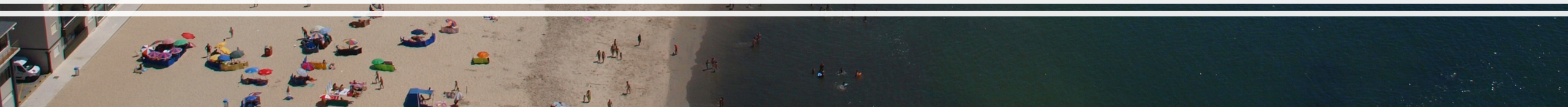


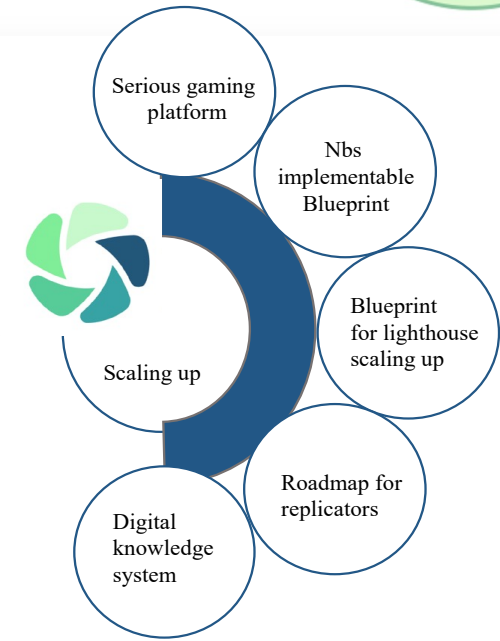
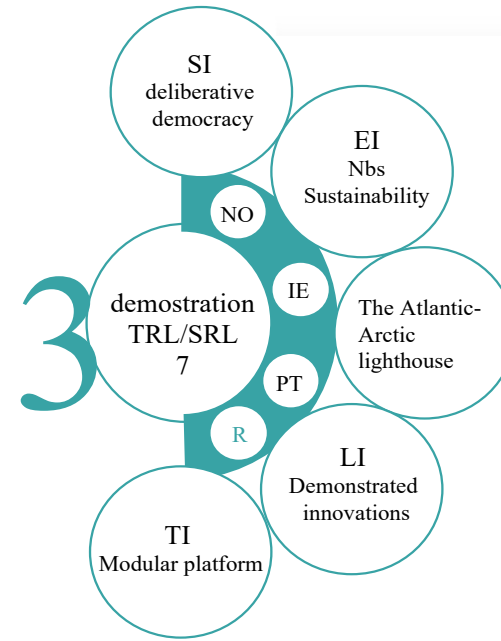
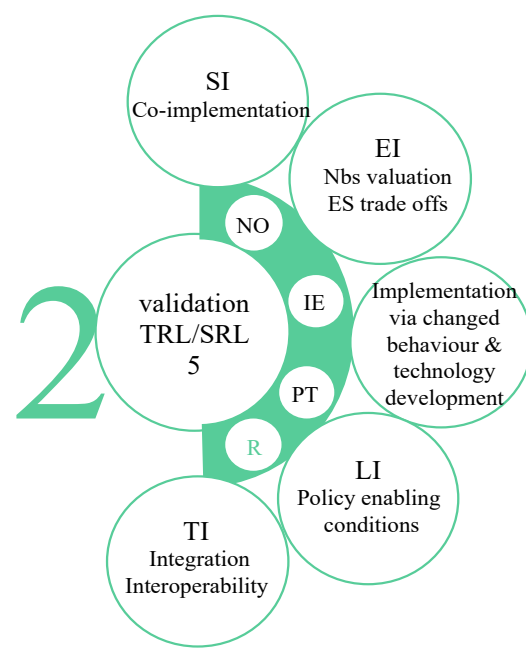
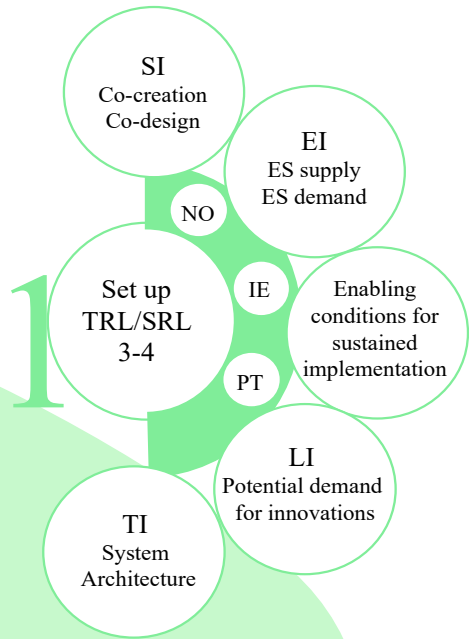
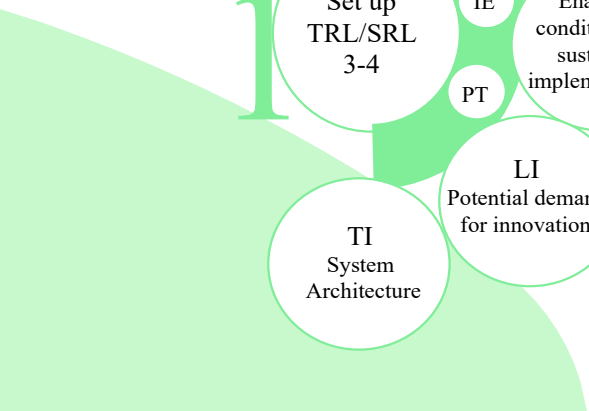
Ria de Aveiro | Bridging Local and European Initiatives | Marine litter





Praia da Barra & Costa Nova | Bridging Local and European Initiatives | Nature literacy







Thank you!

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Funded by the European Union. Views and opinions expressed are however those of the authors only and do not necessarily reflect those of the European Union or UK Research and Innovation. Neither the European Union nor the granting authority can be held responsible for them.

