OCEAN CITIZEN

Marine forest restoration: an underwater gardening socio-ecological plan

LORENZO BRAMANTI
LECOB-CNRS-SORBONNE

Internacional Consortium OCEAN CITIZEN

Universities, Research Centers, SME and NGOs

CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE

CSIC Consejo Superior de Investigaciones Científicas — ICM Institut de Ciències del Mar

UNIVERSITÀ DEL SALENTO

UBICA s.r.l.

UNIVERSITY OF EXETER

PLOCAN consorcio — Plataforma Oceánica de Canarias

UNIVERSITAT DE BARCELONA

Israel Oceanographic & Limnological Research

UNIVERSIDAD DE LAS PALMAS DE GRAN CANARIA

AWI Alfred-Wegener-Institut für Polar- und Meeresforschung in der Helmholtz-Gemeinschaft

OÉ Gaillimh NUI Galway

Leibniz Institute for Baltic Sea Research Warnemünde — IOW

SORBONNE UNIVERSITÉ

submen building a sustainable marine future

DTU Technical University of Denmark

CORALS

CoNISMa Consorzio Nazionale Interuniversitario per le Scienze del Mare

Institute of Marine Research

KIEL MARINE SCIENCE CONNECTED RESEAR

d-shape

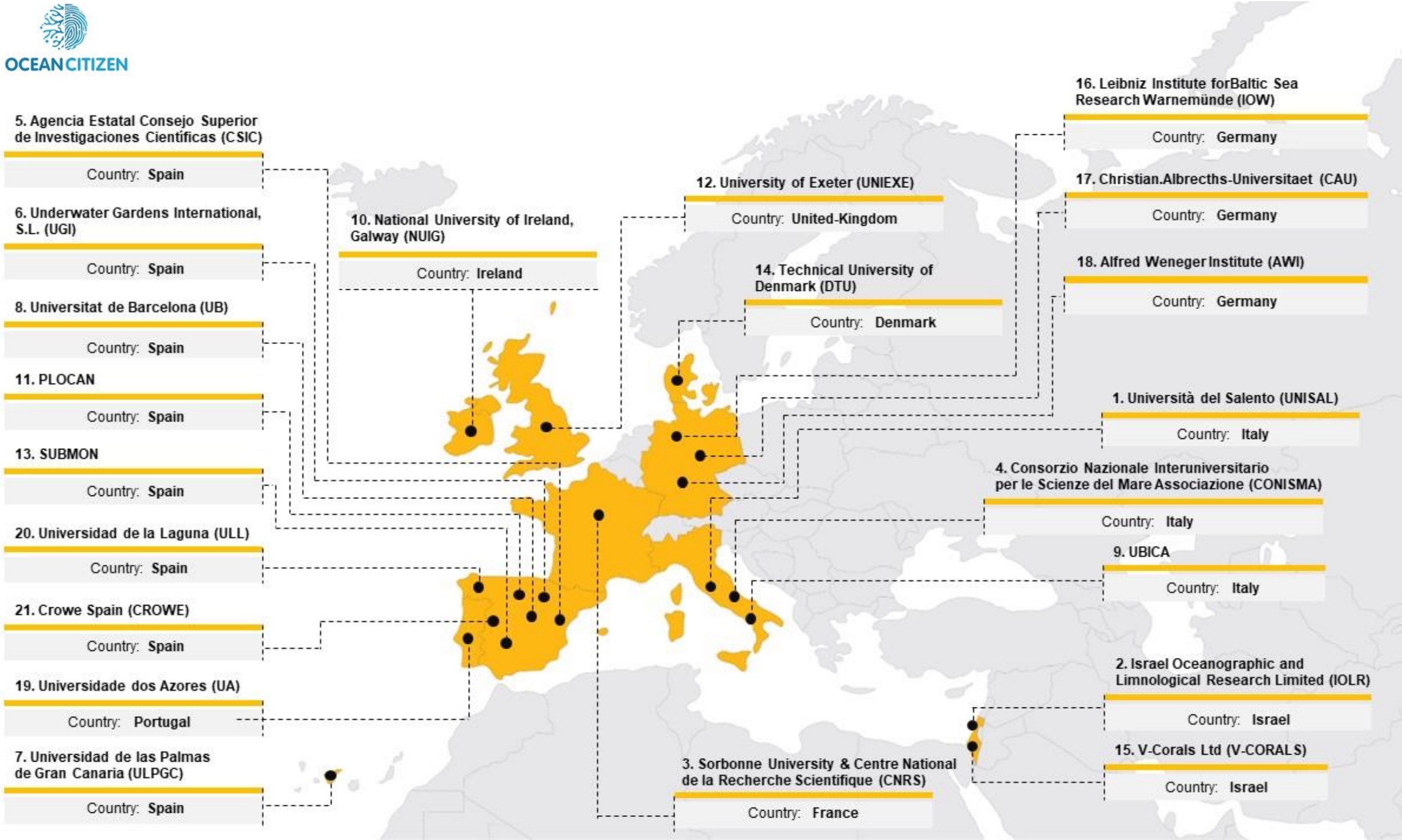
OCEAN CITIZEN has the support of:

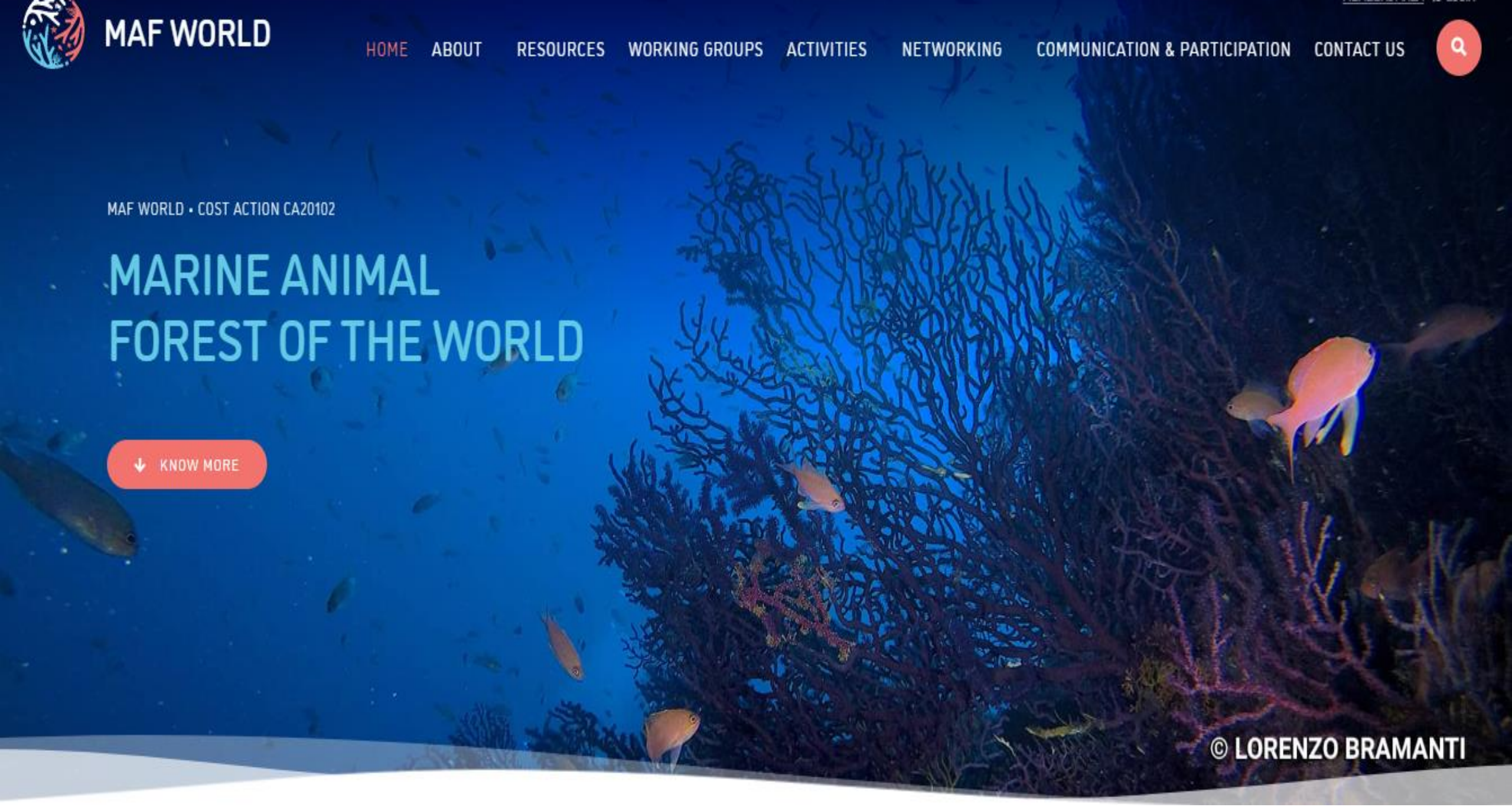
2021 2030 United Nations Decade of Ocean Science for Sustainable Development

cost EUROPEAN COOPERATION IN SCIENCE & TECHNOLOGY

horizon europe

OCEANCITIZEN





https://maf-world.eu/

OBJECTIVES

Objective A: Define blueprints of a replicable protocol for underwater coastal restoration.

- A.1. Understand the ecosystem services (ES) provided by marine forests (MF) and their responses to anthropogenic impacts.
- A.2. Design and implement OCEAN CITIZEN's technologies (SER®, FRs and IMTA).
- A.3. Identify the different characteristics of 5 different coastal ecozones for the design of custom restoration plans.
- A.4.Interact with other EU projects and consortia to expand the concepts and promote active restoration

Objective B: Consolidate and evaluate an ecosystem-based business model for marine preservation

- B.1. Design a multi-stakeholder monitoring programme for continuous and participative improvement activities of the restoration and conservation plan, making protocols available to public-private actions
- B.2. Define standard factors to evaluate the impact of the design of the business model (BM)
- B.3. Identify and quantify the socio-economic impacts of ES (*emergy* and economic)

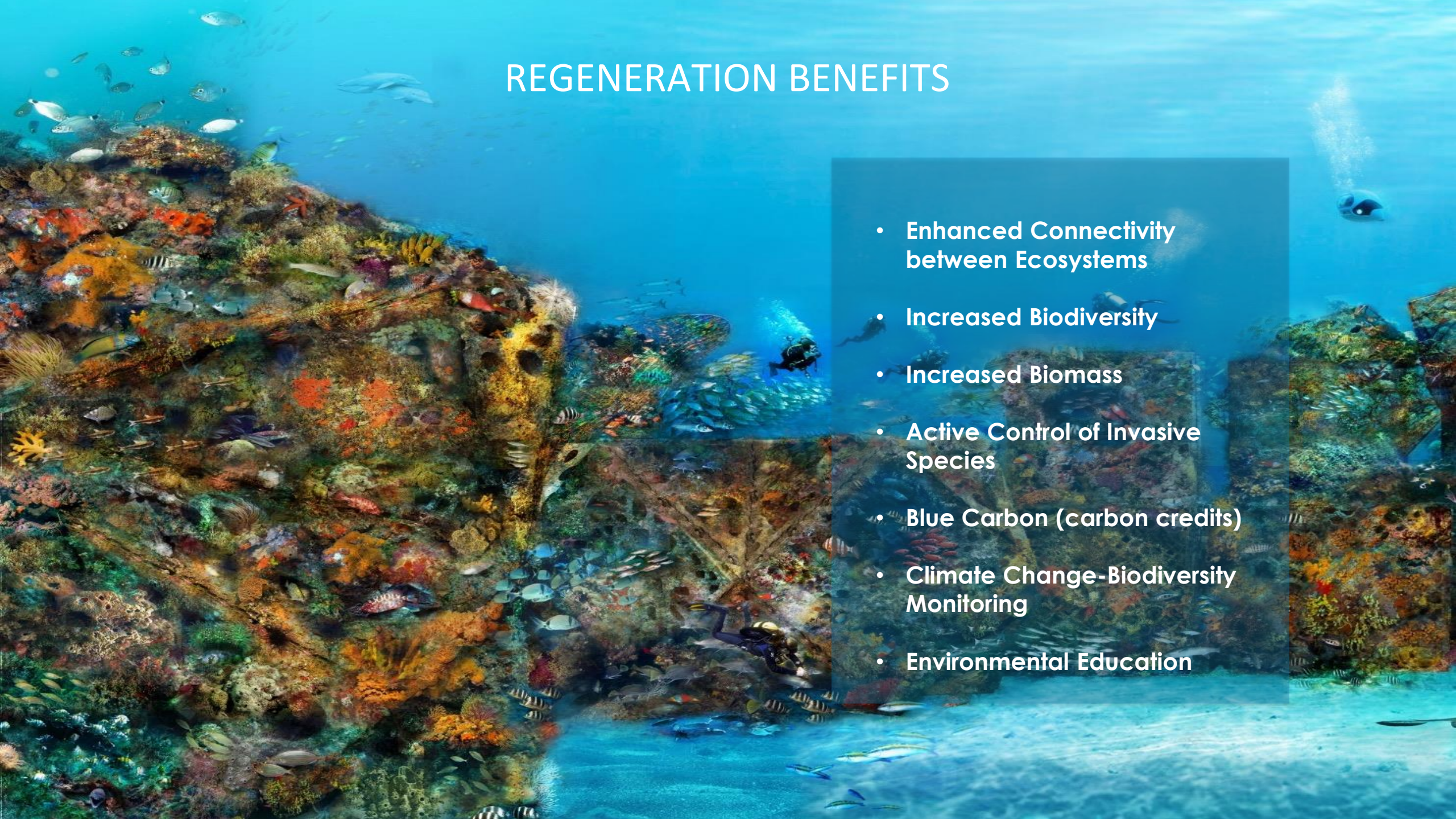
THIS IS A LONG TERM PROJECT…BEYOND THE FOUR YEARS OF ACTIVITY

DIFFERENT MARINE FORESTS

OCEANCITIZEN

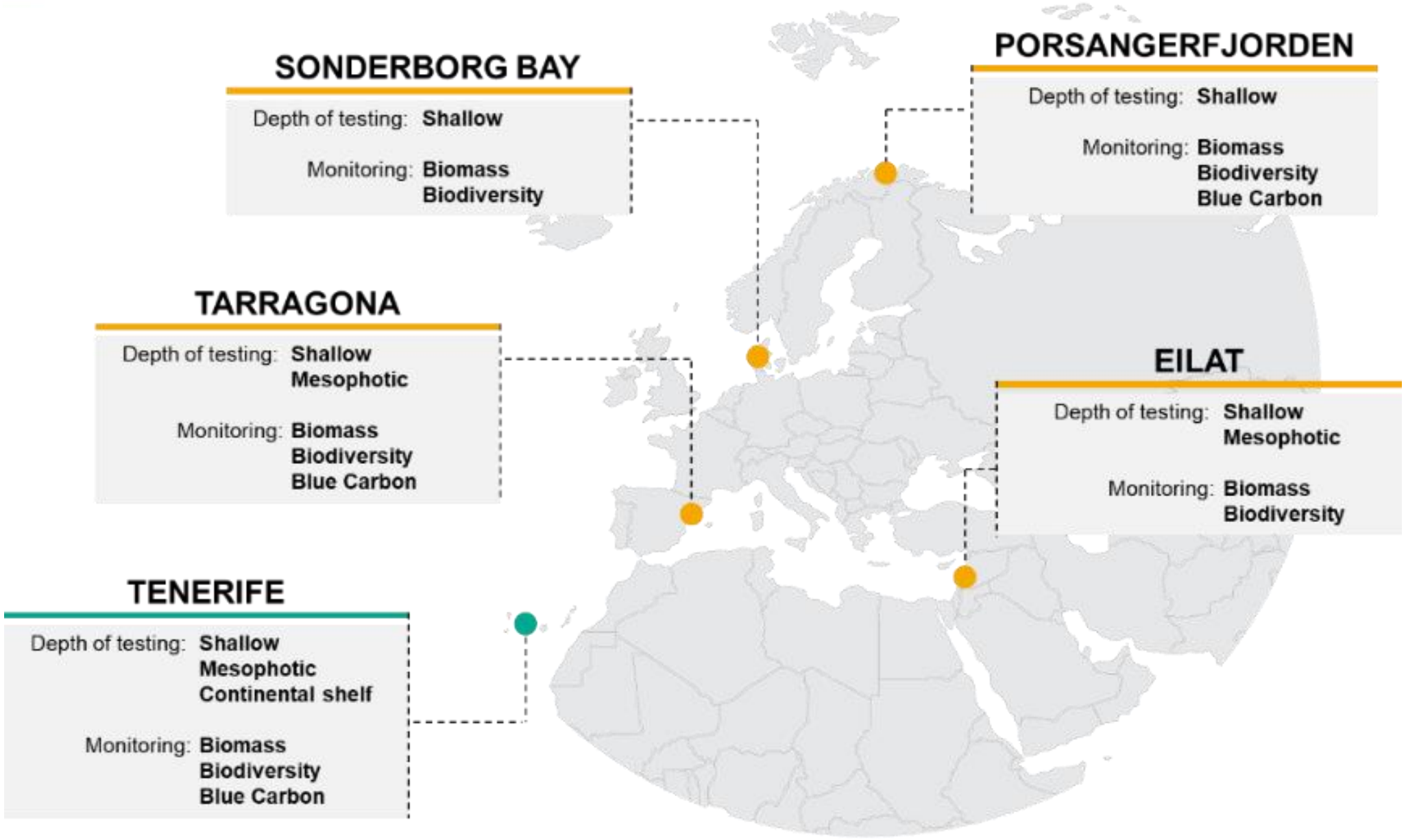
Define a standardized action protocol. Also looking for a consensus-based and testable ecosystem credits prococol, based on carbon, biodiversity and associate biomass credits.

REGENERATION BENEFITS

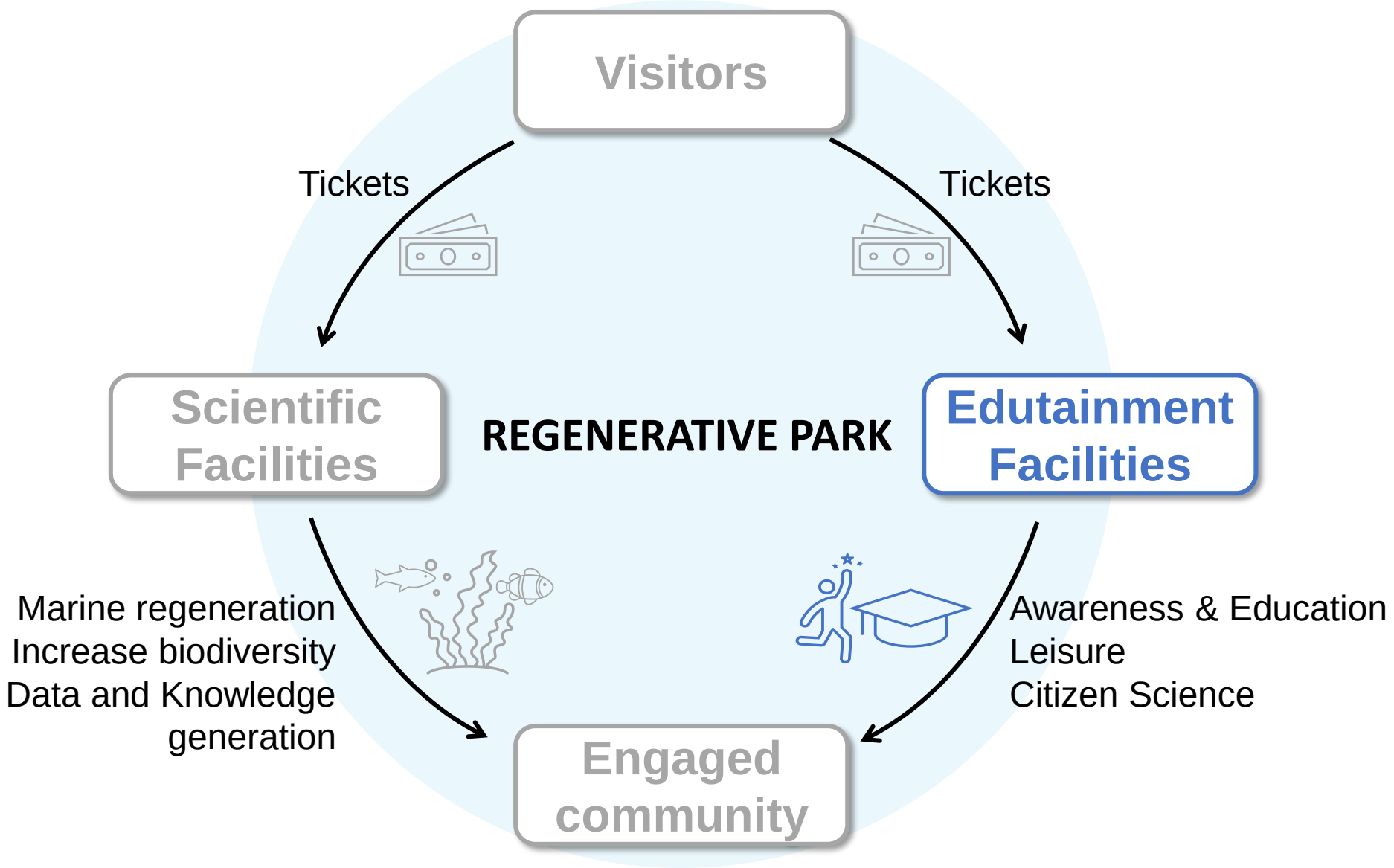


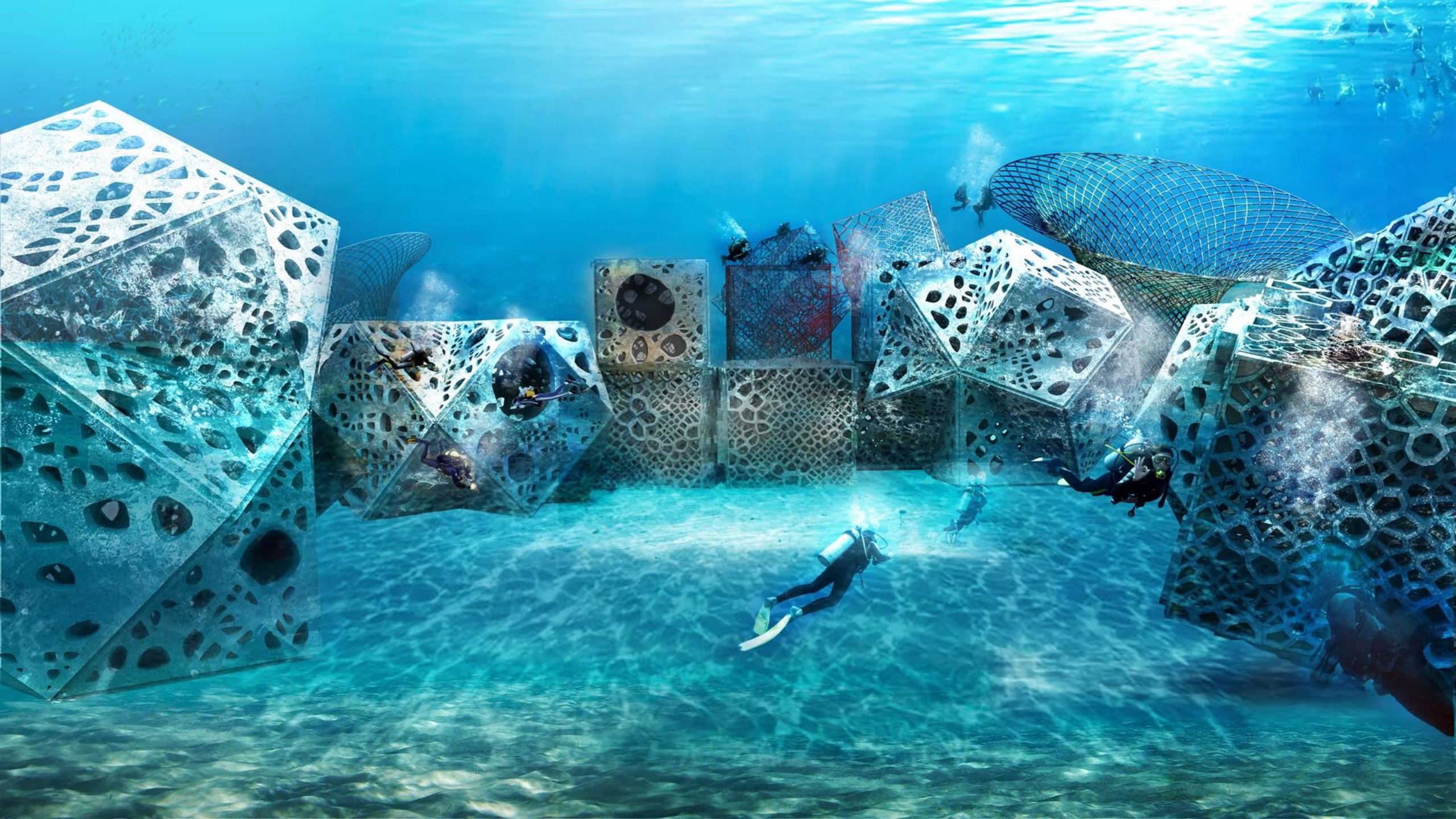
- Enhanced Connectivity between Ecosystems
- Increased Biodiversity
- Increased Biomass
- Active Control of Invasive Species
- Blue Carbon (carbon credits)
- Climate Change-Biodiversity Monitoring
- Environmental Education

LOCATIONS


SONDERBORG BAY
Depth of testing: Shallow
Monitoring: Biomass
Biodiversity
PORSANGERFJORDEN
Depth of testing: Shallow
Monitoring: Biomass
Biodiversity
Blue Carbon
TARRAGONA
Depth of testing: Shallow
Mesophotic
Monitoring: Biomass
Biodiversity
Blue Carbon
EILAT
Depth of testing: Shallow
Mesophotic
Monitoring: Biomass
Biodiversity
TENERIFE
Depth of testing: Shallow
Mesophotic
Continental shelf
Monitoring: Biomass
Biodiversity
Blue Carbon

BUSINESS MODEL AND THE EU GOAL





REGENERATING COMPLEXITY: A HIGHLY COORDINATED PROJECT

National Geographic

THANK YOU FOR YOUR ATTENTION

LORENZO BRAMANTI
bramanti@obs-banyuls.fr

OCEANCITIZEN