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Integrating marine biodiversity conservation with a resilient blue economy.



Key Research Sites

Demonstrating and testing of our simple socio-ecological system framework will be done in three key European regions.

About the Project

Marine SABRES is an EU-funded research project that brings together 21 research partners to restore marine biodiversity and support a sustainable blue economy by making **Ecosystem-based Management** more achievable and implementable.

To do so, Marine SABRES is comprehensively studying and analysing marine **social-ecological systems** to design a new, simpler framework for managing the many activities and pressures on the marine environment. This simple socio-ecological system framework is being co-designed in collaboration with local people in three European marine regions, where we are developing and testing ways to balance varying combinations of conservation priorities and economic activities.



MARINE SABRES

Marine Systems Approaches for Biodiversity Resilience and Ecosystem Sustainability

2022 - 2026

www.marinesabres.eu

@MarineSABRES



Tuscan Archipelago

Capraia

Focusing on seagrass bed conservation, sustainable boating practices and tourism.



Arctic Northeast Atlantic

Iceland, Greenland, Faroes

Examining the effects of climate change and changing oceanographic conditions on fisheries.



Macaronesia

Azores, Madeira, Canarias

Focusing on the conservation and restoration of biodiversity and the benefits of ecotourism.



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The Ocean is not just a beautiful thing – there is a real connection between it, our health and our livelihoods.

Emma Verling

Marine SABRES Project Coordinator

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What is a socio-ecological system?

Socio-Ecological Systems (SES) are analytical models that describe the components of, and interactions between, human systems and ecological systems. SES are used by managers and decision makers to support ecosystem-based management, which looks at all biological, social, and economic factors holistically, and aims to balance human well-being and economic activity with environmental protection and conservation. By considering the system as a whole (rather than focusing on the management of different sectors, needs, and pressures in isolation), targeted conservation and protection measures can be directed more effectively.



The Problem

Ecosystem-Based Management (EbM) recognises that our economies and societies crucially depend on the environment and what it provides us, including fresh air, clean water, food, energy, recreation, inspiration, and enjoyment. Managing the complex human-environmental system, however, is no easy task. Coastal and marine management requires balancing multiple human activities and the pressures they exert on the environment, all of which combine to produce cumulative impacts on ocean ecosystems. In some cases, the overwhelming complexity of the system has distracted from our capacity to effectively deal with the most important combinations of activities and pressures.

Current socio-ecological system frameworks that support EbM are complex – so much so that managers may not be inclined to use them. To encourage widespread uptake of ecosystem-based management, a simpler system is needed to support managers in making decisions, particularly regarding the allocation of resources amongst competing priorities (e.g. renewable energy, fishing, development, conservation).



The Solution

We're creating and testing a simpler socio-ecological system, which will:

- * Merge different systems used across sectors (science, policy, socio-economic) to reach holistic management solutions.
- * Understand complex systems and identify the main drivers of biodiversity loss in areas with different levels of complexity.
- * Integrate data and knowledge to understand the direct drivers of biodiversity decline and their interrelations.
- * Develop and implement marine conservation interventions and policies.
- * Set conservation management objectives and goals, identifying barriers and developing holistic solutions.

Partners

Marine SABRES brings together an interdisciplinary team of experts from 21 partner organisations across 11 European countries. The project is coordinated by University College Cork at MaREI, the SFI Centre for Energy, Climate, and Marine.



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