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Les Jeudis de l'UMR

JEUDI 27 MARS 2025 / 11h30 **Fiz DA COSTA** IEO-CSIC Vigo, **Marina ALBENTOSA** IEO-CSIC, Murcia

The Mar Menor Oyster Initiative (MMOI): a Nature-based-Solution for nutrient bioextraction in coastal lagoons

The Mar Menor has gone from being an oligotrophic ecosystem of transparent waters to a highly eutrophic and unstable ecosystem as a result of human activities. The recovery of the functionality of the ecosystem involves a comprehensive plan of actions on land (elimination of dumping) and at sea (recovery of ecosystem services). Nature-based Solutions (NbS) are actions based on ecosystems and the services they provide. An example of NbS is the recovery of eutrophicated ecosystems through bivalves, which consume the proliferation of microalgae, which are transformed into growth. The maintenance and restoration of coastal ecosystems (the most sensitive to eutrophication) with bivalves is a common practice in the United States and in the countries of Northern Europe, where the NORA network (www.noraeurope.eu) has been set up for the recovery of native oyster (*Ostrea edulis*) populations. This species colonized the lagoon from the Mediterranean during the 80s and 90s when a population of around 135 million specimens was reached. At the moment, the population has disappeared and there are hardly any isolated individuals left around the islands of the lagoon.

The Mar Menor Oyster Initiative (MMOI, <https://noraeurope.eu/spain-the-mar-menor-oyster-initiative/>) emerged after the lagoon collapsed due to eutrophication in 2016. The Initiative is led by the Bivalve Eco-physiology Laboratory of the Oceanographic Center of Murcia (Spanish Institute of Oceanography, IEO-CSIC) and includes scientists, experts in different disciplines on bivalves, from the Oceanographic Centers of Murcia, Vigo and Cádiz, from the Institute of Marine Sciences of Barcelona (ICM-CSIC), the University of the Basque Country (UPV-EHU) and Dalhousie University in Canada.

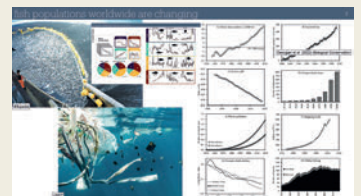
The general objective of the Initiative is to establish the physiological and technical bases for the use of the native oyster in bioremediation actions in coastal lagoons as the Mar Menor. Actions are envisaged for the restoration of oyster reefs and the bioextraction of nutrients through their aquaculture. The Initiative includes different projects whose activities are structured around 4 axes:

- i) Science. Generate the scientific and technical knowledge necessary for future restoration/bioextraction actions.
- ii) Transference of knowledge. Provide tools for the implementation of restoration/bioextraction actions.
- iii) Education. Communicate and involve society in restoration/bioextraction actions with bivalves, especially the sectors that live by and make use of the Mar Menor.
- iv) Blue Growth. Assess the economic potential of restoration/bioextraction actions in line with the global Blue Growth strategies and the United Nations Sustainable Development Goal 14.

> accès zoom

<https://umontpellier-fr.zoom.us/j/92045795456>
ID de réunion : 920 4579 5456

> prochainement



Jeudi 03 avril 2025 à 11h30 : Vasilis Dakos, CNRS, ISEM
"Detecting fisheries productivity trajectories at-risk to abrupt shifts"

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