



The Mar Menor
Oyster Initiative

*ThinkInAzul EN LA XI JORNADA SOBRE MEDIO AMBIENTE MARINO Y
LITORAL (Comunidad Valenciana y Región de Murcia)*

Alicante, 19 de abril de 2024

NORA: La Alianza europea para la restauración de la ostra nativa

<https://noraeurope.eu/spain-the-mar-menor-oyster-initiative/>



***The Mar Menor Oyster Initiative
(MMOI): 2016-2027***

<https://noraeurope.eu/spain-the-mar-menor-oyster-initiative/>



**Plan de Recuperación,
Transformación
y Resiliencia**



**Financiado por
la Unión Europea**
NextGenerationEU



Oyster reefs

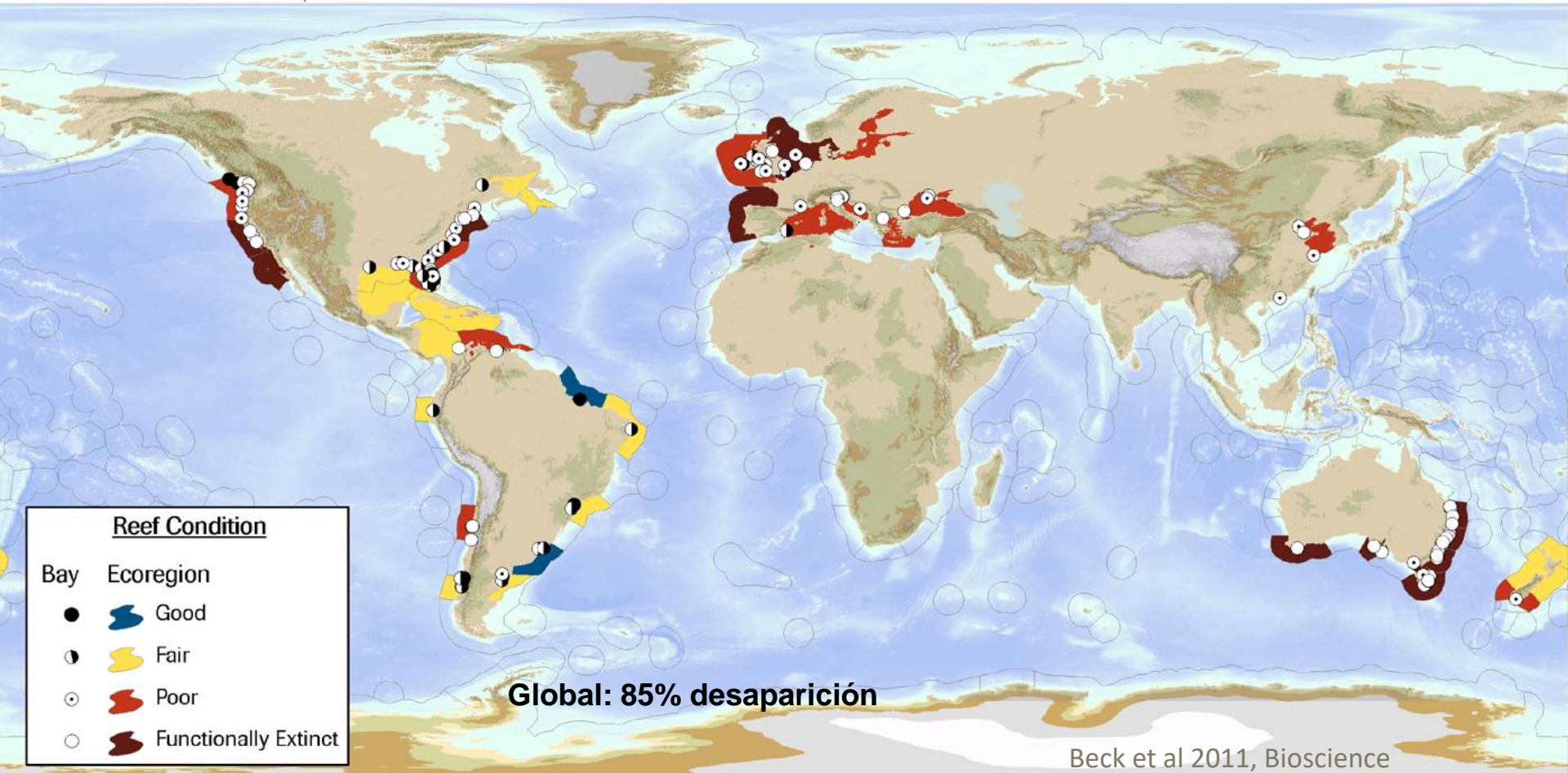


Chesapeake Bay
Foundation



Coral reefs







La Ostra europea

Ha desaparecido el 99% de las poblaciones de Europa



Native Range Map

ECOSYSTEM SERVICES PROVIDED BY NATIVE OYSTERS *OSTREA EDULIS*

INCREASED WATER CLARITY

Can benefit recovery of seagrass and other coastal aquatic plants



INCREASED FISH PRODUCTION

Provides a suitable feeding and nursery grounds for fish



INCREASED OYSTER POPULATIONS

Provides a spill over effect to local oyster fisheries



CULTURAL VALUE

Have previously formed the heart of coastal communities



IMPROVED WATER QUALITY

Removes pollutants from the water column



BIODIVERSITY ENHANCEMENT

Form a complex structure that provides shelter and food for a diversity of species



DENITRIFICATION

Removes excess nutrients

STABILISATION OF SEDIMENTS

Reduces the resuspension of fine sediment, improving water clarity



- Provisioning services
- Regulating services
- Cultural services





Desde los 90'



2016



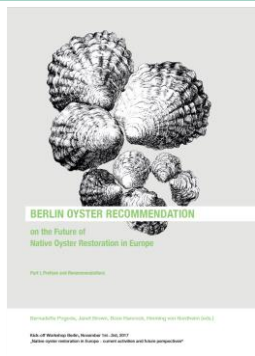
Federal Agency for
Nature Conservation



ALFRED-WEGENER-INSTITUT
HELMHOLTZ-ZENTRUM FÜR POLAR-
UND MEERESFORSCHUNG



Origen de NORA



2017-nov



Conferencia de Berlin
(65 expertos de 10 países –no España)

RECOMENDACIONES DE BERLIN:

1. Promover la producción de **semillas** genéticamente diversas
2. Identificación de **áreas** adecuadas para la restauración
3. **Conservar** los bancos de ostras existentes
4. Identificar y blindar las zonas **libres de Bonamia**
5. Crear protocolos comunes de **monitorización**
6. Conservar la **variedad genética** de las poblaciones europeas



Intercambio de conocimiento a través de Grupos de Trabajo

(científicos, ONGs, administraciones, empresas)

Biosecurity	Genetics	Historical Ecology	Monitoring
Biosecurity Guidelines for Native Oyster Restoration	Meetings		Read the NORA Monitoring Working Group Strategy Meetings Resources
Outreach	Production	Site Selection	Student Group
Meetings	Meetings	Resources	Meetings
Videos			
Resources			
Links			

NORA Mission Statement

*The Native Oyster Restoration Alliance (NORA) supports the protection and ecological restoration of the native European oyster, *Ostrea edulis*, and its habitat in areas of its current or historical distribution. NORA works to overcome existing barriers to the conservation, restoration and recovery of the European oyster by providing a platform for the NORA community to collaborate and participate in knowledge exchange. NORA seeks to support responsible restoration practice, in compliance with biosecurity and sustainability.*

Making the most out of the NORA network.



Boze Hancock



Federal Agency for
Nature Conservation



2019-may

2021-jun

❑ **SECRETARÍA**
(trasladar la experiencia USA
a Europa)

❑ **ADVISORY BOARD**
(asesoramiento y búsqueda
de financiación)

❑ **GRUPOS DE TRABAJO**
(publicaciones)

- ❑ Monitorización
- ❑ Selección Lugar
- ❑ Producción
- ❑ Bioseguridad
- ❑ Divulgación





REMEDIOS
The Marine Oyster System Institute

Advisory Board

Steering Board

2022-24

Cambio organizativo y de estrategia para afrontar el futuro FUNDACIÓN

Steering Board



Marina Albertosa
Spanish Institute of Oceanography (IEO-CSIC) Spain, Research



Kruno Bonačić
University of Dubrovnik



Alison Debney
Marine Centre (IMC), Sardinia, Italy



Alison Debney
Zoological Society London (UK-Ireland Native Oyster Network)



Boze Hancock
Co-ordinator for TNC's Global Oceans Team



Tristan Hugh-Jones
Atlantic Shellfish Ltd. Cork



Bernadette Pogoda
Vifred Wegener Institut



Jo Preston
University of Portsmouth (UK- Ireland Native Oyster Network)

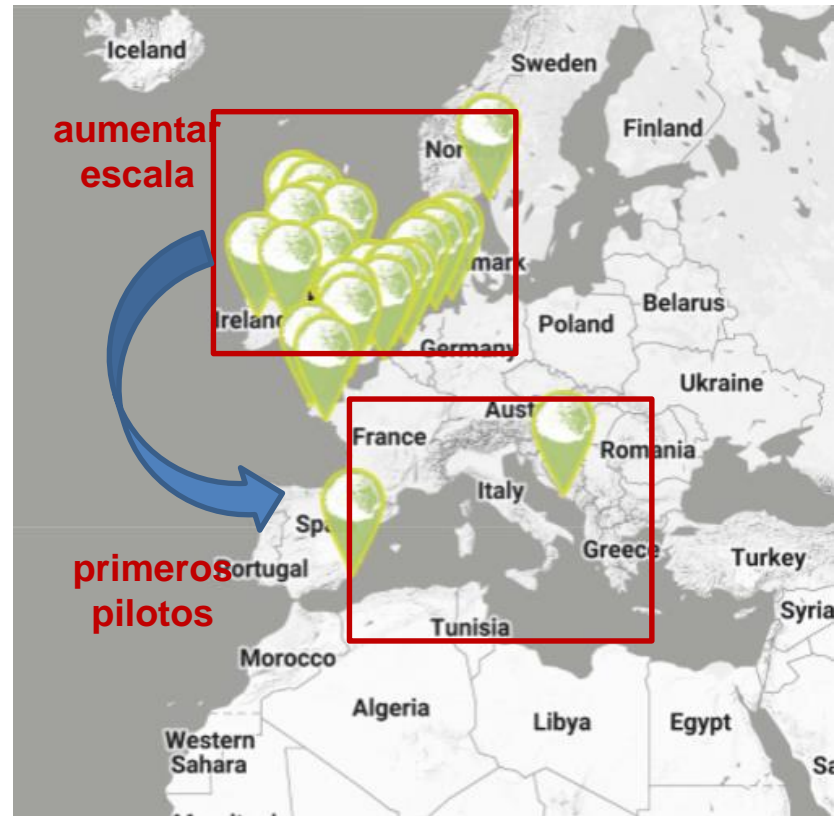


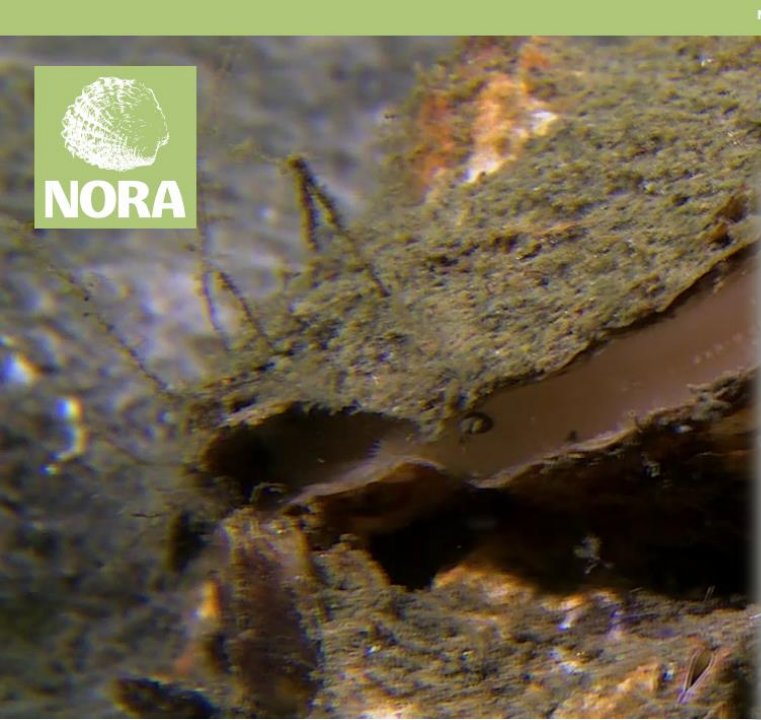
Bill Sanderson
Heriot Watt University, Scotland



Hein Sas
Sas Consultancy

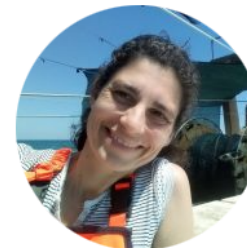
El difícil presente





NORA website

<https://nora-europe.eu/>



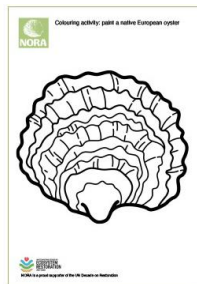
NORA Expert Database

[+ Join the Expert Database](#)



Coloring Page
Download

[Colour in this European oyster habitat...](#)



Coloring Page
Download

[Paint a native European oyster...](#)

	Disease
	Historical Ecology
	Oyster Habitat Restoration
	Site Selection

Native Oyster Network / NORA Infographics



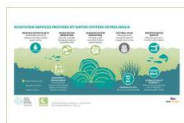
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Download
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[Measurable-Metrics.jpg](#)



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[Potential-Stakeholders.jpg](#)

Dr. Ewè Galimany

Postdoctoral Researcher, Institute of Marine Sciences (ICM-CSIC), Spain

EXPERTISE

***Ostrea edulis*, Other Bivalve Species**

Aquaculture, Disease, Ecosystem Service Quantification

PROJECT AFFILIATION

The Mar Menor oyster project (OstraMM)

I have a PhD from the University of Barcelona obtained in 2010. My research background is in the ecology, biology, and pathology of benthic invertebrates, with a particular focus on the ecological role that filter-feeders, such as bivalves, play in the ecosystem. I have studied the role of bivalves in shaping coastal environments, e.g. mitigating the symptoms of eutrophication, reducing the occurrence of harmful and nuisance algal blooms, and restoring ecosystem functions. Also, I have investigated how the environment can affect the health and physiology of the invertebrates themselves including both immune and pathological studies. My research has provided valuable information for the management of aquaculture species, fisheries and natural resources, as well as for conservation and restoration purposes.

E-Mail: galimany@icm.csic.es


**NORA 5
5th Conference 2023
Middelburg, The Netherlands**

NORA 5

Programme & Talks

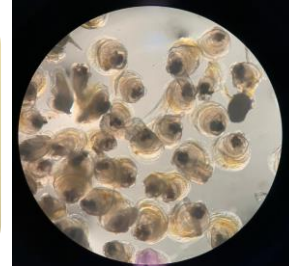
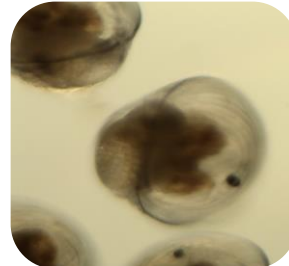
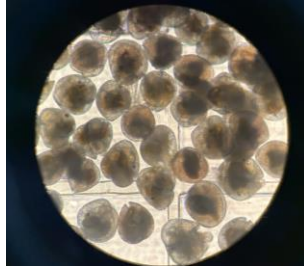
Poster Session





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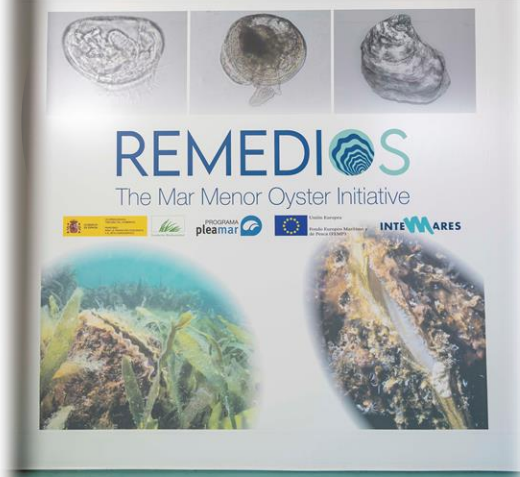


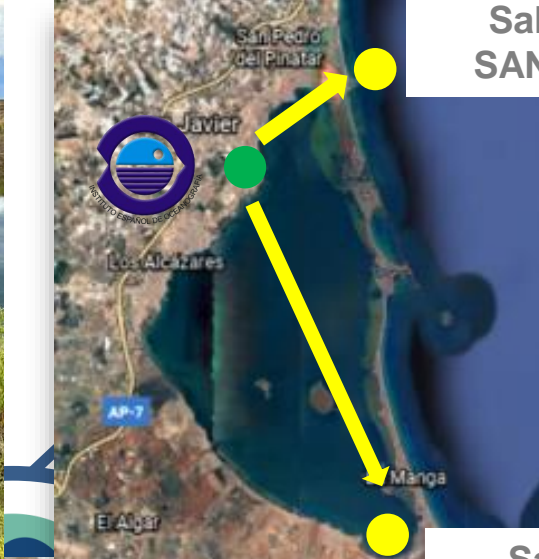
2022

RemediOS

Producción semilla
de ostras Mar Menor

PROGRAMA
pleamar





**Salt-ponds
SAN PEDRO**



**Salt-ponds
MARCHAMALO**



L2

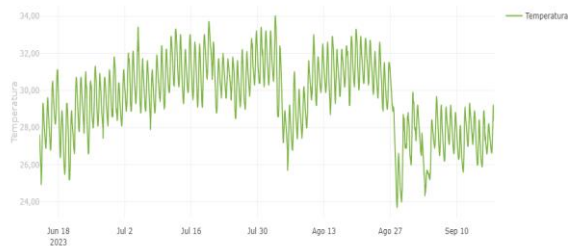
Criadero
RemediOS

L3

Servicios
ecosistémicos
Transferencia
NORA

L1

Bio-
monitorización



ThinkInAzul

Planes Complementarios
UNIVERSIDAD DE MURCIA
CCMM
2023-25



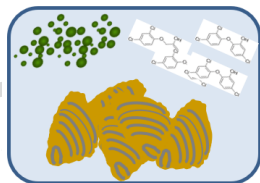
OSTRAS PARA LIMPIAR EL MAR MENOR

MIÉRCOLES 17 MAY

laSexta Noticias

15:06





POLLUTION

BIOLOGICAL STATUS

NUTRIENT
EXTRACTION

**EUTROPHIZED
ECOSYSTEM**
*the Mar Menor
as a case study*



Rem
Produc
de ostra

larvae, spat

juveniles, adults



The Mar Menor
Oyster Initiative

2023-27

MIToYSTER

Efecto contaminantes
sobre bioextracción
nutrientes





L2

Criadero
RemediOS

L3

Servicios
ecosistémicos
Transferencia
NORA

L1

Bio-
monitorización

BlueAI

Biosensores

UNIVERSIDAD DE
MURCIA



ThinkInAzul

Planes Complementarios
CCMM

RESALAR

Cuantificación
servicios
ecosistémicos en un
canal salinero

RemediOS

Producción semilla
de ostras Mar Menor



The Mar Menor
Oyster Initiative

MIToYSTER

Efecto contaminantes
sobre bioextracción
nutrientes



RemediOS²

Primeros pilotos:
Arrecife & Columna

PROGRAMA
pleamar





The Mar Menor
Oyster Initiative



**for the recovery of the ecosystem services
of the Mar Menor oysters**