



OSCAR

Open Science Clusters' Action
for Research & Society

Funded Project

FAME - A new open science Framework for spatio-temporal Analysis of Marine Ecosystems

Presenter: Maria Grazia Pennino, Institut de Ciències del Mar (ICM-CSIC),  0000-0002-7577-2617

Implemented by



Funded by
the European Union

What problem(s) are you going to solve?

- Species Distribution Models (SDMs) link species to environmental drivers and support forecast, conservation, and management.
 - But SDM workflows require expertise in **ecology, statistics, and programming**, and are still too complex, fragmented, and often non-reproducible.
 - Marine SDMs face issues such as **sampling bias, spatio-temporal autocorrelation, limited transferability**.
 - There's growing demand to go beyond presence/absence data to support underused data types such as **presence-only/citizen science, abundance or continuous responses, or compositional data (relative values)**.
-

What are you planning to do to solve the problem?

- FAME will deliver **GLOSSA v2**, a modular R Shiny framework for marine species distribution modelling.
- **Data acquisition** from open sources (GBIF, OBIS, ISIMIP)
- **Preprocessing**: cleaning, data harmonization, bias correction, pseudo-absence generation
- **Modelling and reporting**: parametric and non-parametric models, spatio-temporal modelling.



What will be the results and how do you plan to make them available to the broader community?

- **Public MVP release of GLOSSA v2** (3 interoperable modules) with documentation and tutorials.
 - **Two case studies:** invasive species using **citizen science data** and fish **diet composition SDM**.
 - **Availability:** open-source and versioned releases developed in GitHub and deposited in trusted repositories and catalogues (e.g. Zenodo).
 - **Community uptake:** conferences, training sessions, web tutorials.
-

Who is doing it?

Project coordinators

- Maria Grazia Pennino (ICM-CSIC)
- Jorge Mestre Tomás (ICM-CSIC)

Project team members

- Marta Coll (ICM-CSIC)
- Francisco Ramírez (ICM-CSIC)
- Maria Bas (ICM-CSIC)
- Isabel Afán (ICM-CSIC)
- Alba Fuster Alonso (ICM-CSIC)
- Angela Olvera (ICM-CSIC)
- Francisco Izquierdo (ICM-CSIC)
- Joaquín Martínez Minaya (UPV)
- Jeroen Steenbeek (EII)



Ecopath
International
Initiative



UNIVERSITAT
POLITÈCNICA
DE VALÈNCIA