


# Living Labs for biodiversity monitoring:
## scaling citizen science through MINKA observatory

embimos · Institut de Ciències del Mar · Excelencia Severo Ochoa · CSIC

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# ICM-CSIC, Barcelona





# What is MINKA?

MINKA is a **citizen science observatory** that connects communities, researchers, organizations and administrations to generate useful knowledge on **biodiversity and environment.**

## MINKA in numbers (2026)

- 818.163 observations
- 13.900 especies
- 2.900 profiles registered

Recognised as a **key platform** for participation in science, sustainability and biodiversity management.

unesco Intergovernmental Oceanographic Commission

2021 2030 United Nations Decade of Ocean Science for Sustainable Development

SDG Actions Platform

EU MISSIONS RESTORE OUR OCEAN & WATERS



## Facilitatory community
**Government**



Ajuntament de Barcelona

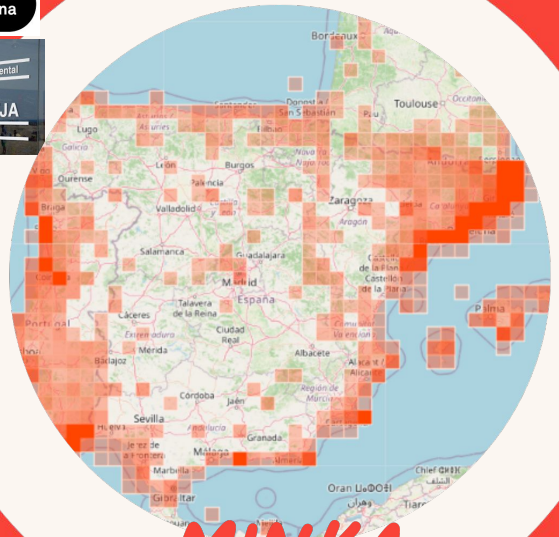
Espai d'educació ambiental
EL CENTRE DE LA PLATJA
Ajuntament de Barcelona

## Participatory community
**Society**










MINKA

## Mobilizatory community
**SMEs and NGOs**



FECDAS

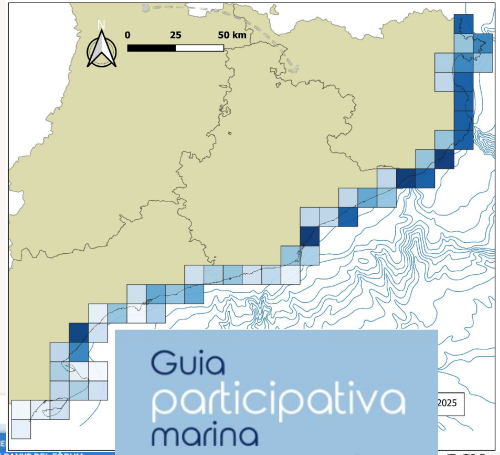
## Scientific community
**Academia**



Institut de Ciències del Mar
EXCELENCIA SEVERO OCHOA
CSIC

# Results from MINKA LL framework

Seasonal species occurrence maps
First local records.
Monitoring of threatened and sensitive species.
Detection/monitoring of NI and IA species.
Scientific papers.
Sharing results with volunteers.
Integration of data into public





DE GRUYTER Botanica Marina 2025; 68(4): 319–328

Research Article

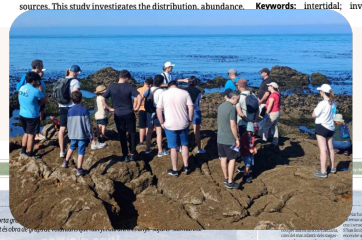
Mar Humet, Joana Pereira, João Nunes, Rocío Nieto-Vilela, Ana Sinde-Mano, Fernando P. Lima and Cátia Monteiro*

**Proliferation of *Undaria pinnatifida* along the Atlantic coast of the Iberian Peninsula**

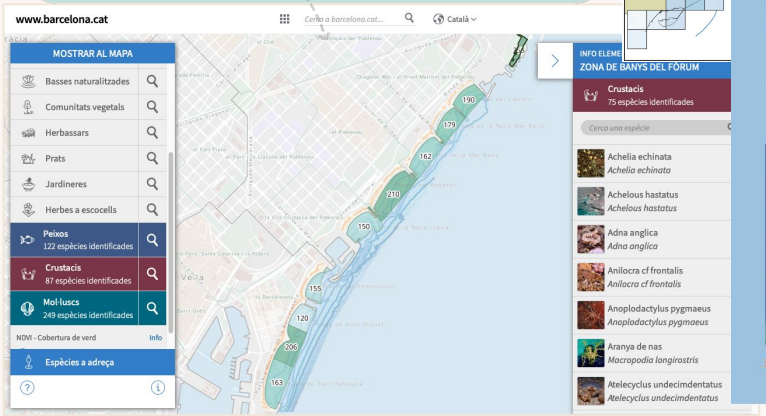
https://doi.org/10.1515/bot-2025-0013
Received February 18, 2025; accepted May 15, 2025; published online June 10, 2025

**Abstract:** The spread of non-indigenous species is a critical concern for marine ecosystems, particularly in regions with high biodiversity and economic reliance on coastal resources. This study investigates the distribution, abundance, which warrants further investigation. Given the ongoing environmental changes and human-mediated dispersal, continuous monitoring is essential to track future range shifts. This study also showcases how integrating citizen science data can enhance the spatial and temporal resolution of non-indigenous species monitoring.

**Keywords:** intertidal; invasion; seaweed; macroalgae;




*Undaria pinnatifida* © Juliana Eunice Jesus Ferreira, some rights reserved (CC-BY) MINKA







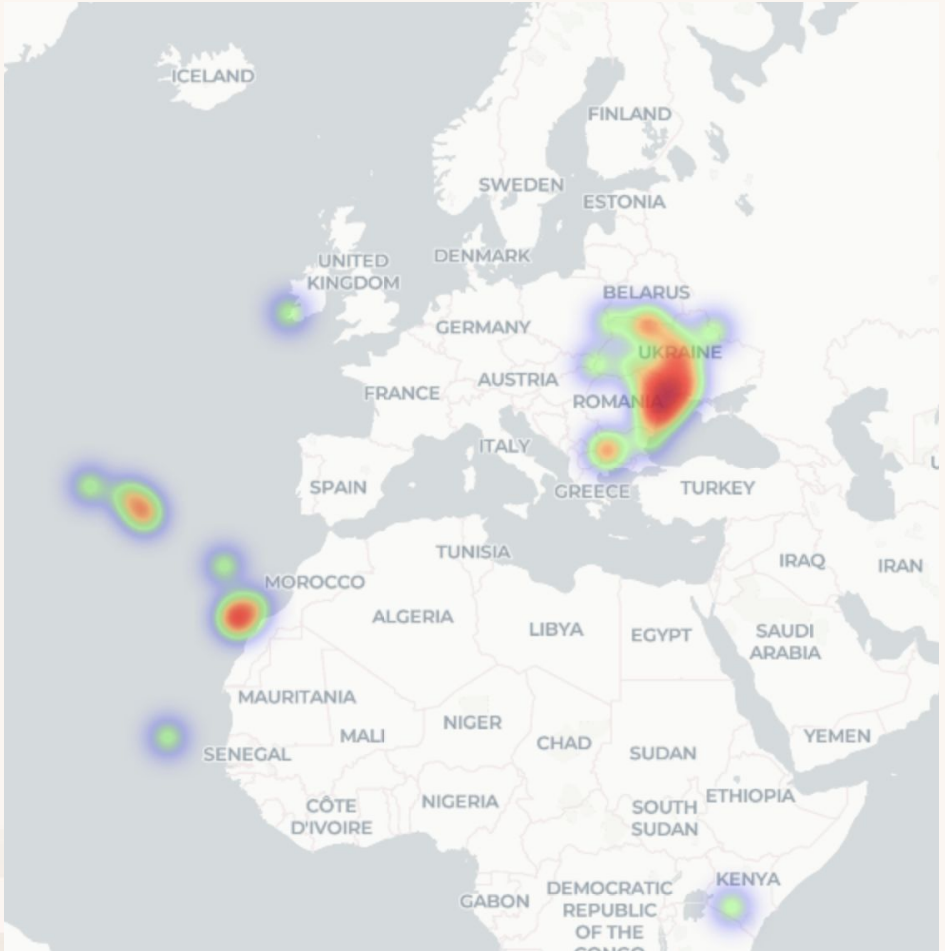

diversitat de les platges de
BCN sorprèn: 103 espècies de peixos

## MINKA around Europe

Nowadays we are developing a network of Living Labs to address local challenges in different bassins. MINKA team provides technological infrastructure, engagement methodology, data governance, on-the-ground support and connections with global stakeholders.

Some of these communities are starting in...

- Ireland
- France: Occitanie
- Iceland
- Mainland Portugal
- Açores
- Sweden



## Building a biodiversity monitoring network

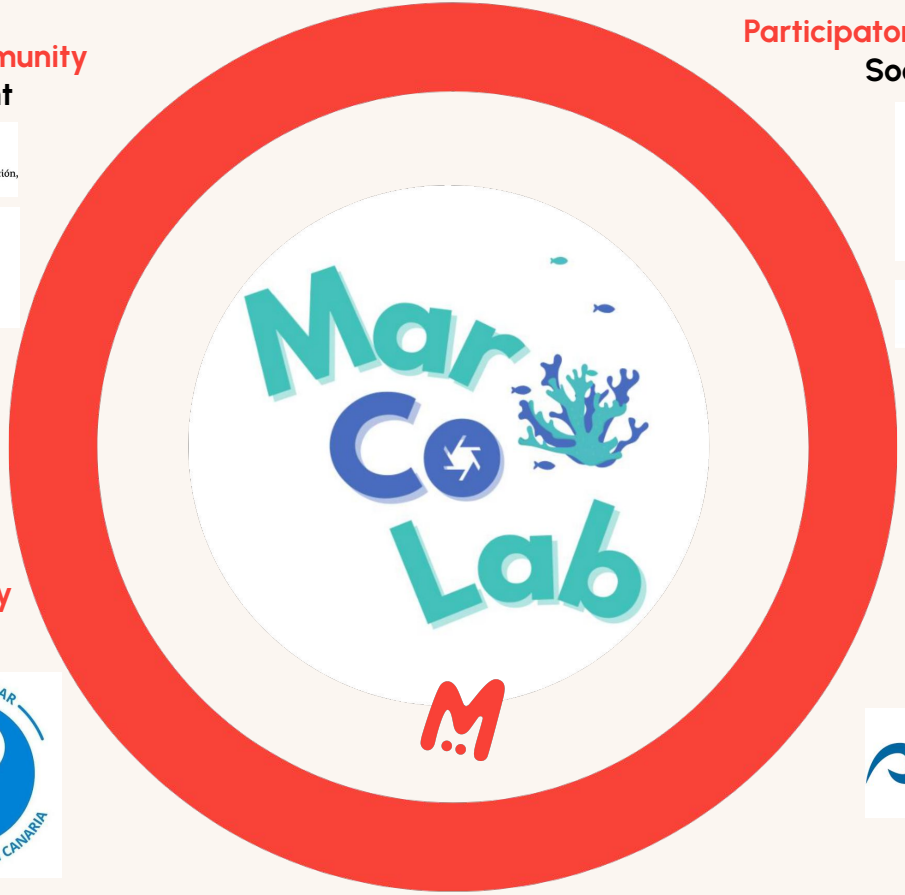
**Biodiversity challenge:** lack of continuous, georeferenced biodiversity records to establish baselines and detect changes, including the arrival of non-indigenous species.

So far, we have recorded around 800 observations with FEDECAS, and involved 22 schools in co-creation.

**Main challenge:** turning one-off events into regular monitoring and sustaining volunteer motivation.

**Next step:** promoting MINKA at the *Fotosub* competition organised by *Ciudad de Mar* on 14-15 November.






## Facilitatory community
**Government**

Gobierno de Canarias
Consejería de Economía, Conocimiento y Empleo
Agencia Canaria de Investigación, Innovación y Sociedad de la Información

CMC
CLÚSTER MARÍTIMO DE CANARIAS

## Participatory community
**Society**

RUBICON DIVING LANZAROTE

TURCÓN - Ecologistas en Acción

ESCUELAS AZULES DE CANARIAS

## Mobilizatory community
**SMEs and NGOs**

FEDECAS
FEDERACIÓN CANARIA DE ACTIVIDADES SUBACUÁTICAS

CIUDAD DE MAR
LAS PALMAS DE GRAN CANARIA

## Scientific community
**Academia**

PLOCAN

ULPGC · UNIVERSIDAD DE LAS PALMAS DE GRAN CANARIA

## MONITORING INVASIVE SPECIES

**Biodiversity challenge:** presence and coming of new invasive species and their relationships with native biota, impact on local ecosystems.

So far, we have 30k+ records from the region, among them 10k+ verified records of 1400 species.

**Main challenge:** safety risk which pushes us to be more cautious and modest in our plans. Safety first!

**Next step:** expanding our experience to Romania, networking between existing local citizen science platforms to increase participation.



## Facilitatory community
**Government**

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE

GREENPEACE

RNO UA Ukrainian Reproducibility Network

## Participatory community
**Society**

NATIONAL ACADEMY OF SCIENCES OF UKRAINE
THE DANUBE BIOSPHERE RESERVE

Rewilding Danube Delta

"КУЯЛЬНИЦЬКИЙ"

## Mobilizatory community
**SMEs and NGOs**

TERRARIUM CENTER

UNCG Ukrainian Nature Conservation Group

Real People

## Scientific community
**Academia**

NATIONAL ACADEMY OF SCIENCES OF UKRAINE
I. I. SCHMALHAUSEN INSTITUTE OF ZOOLOGY

UkrSCES

ІНСТИТУТ МОРСЬКОЇ БІОЛОГІЇ НАН УКРАЇНИ

LVIV POLYTECHNIC NATIONAL UNIVERSITY

## Take home messages

**Connect all four communities** to bring complementary contributions.

**Speak the local language.** Translating MINKA and adapting materials helps make participation accessible.

**Start with a shared local challenge**. Build activities around questions that matter to the community!

**Share results and recognise contributions.** Show participants what they have helped discover.

**Invest in continuity.** Local coordination, regular feedback and ongoing support promotes sustained monitoring.



# MINKA

minka-sdg.org

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