INTEGRATED LIFE PROJECT

INTEMARES

European Maritime Day

How life addresses marine pollution_Avoiding Cetacean Collisions

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Ministry for Ecological Transition and Demographic Challenge

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Spain is one of the countries with the greatest marine biodiversity in Europe.

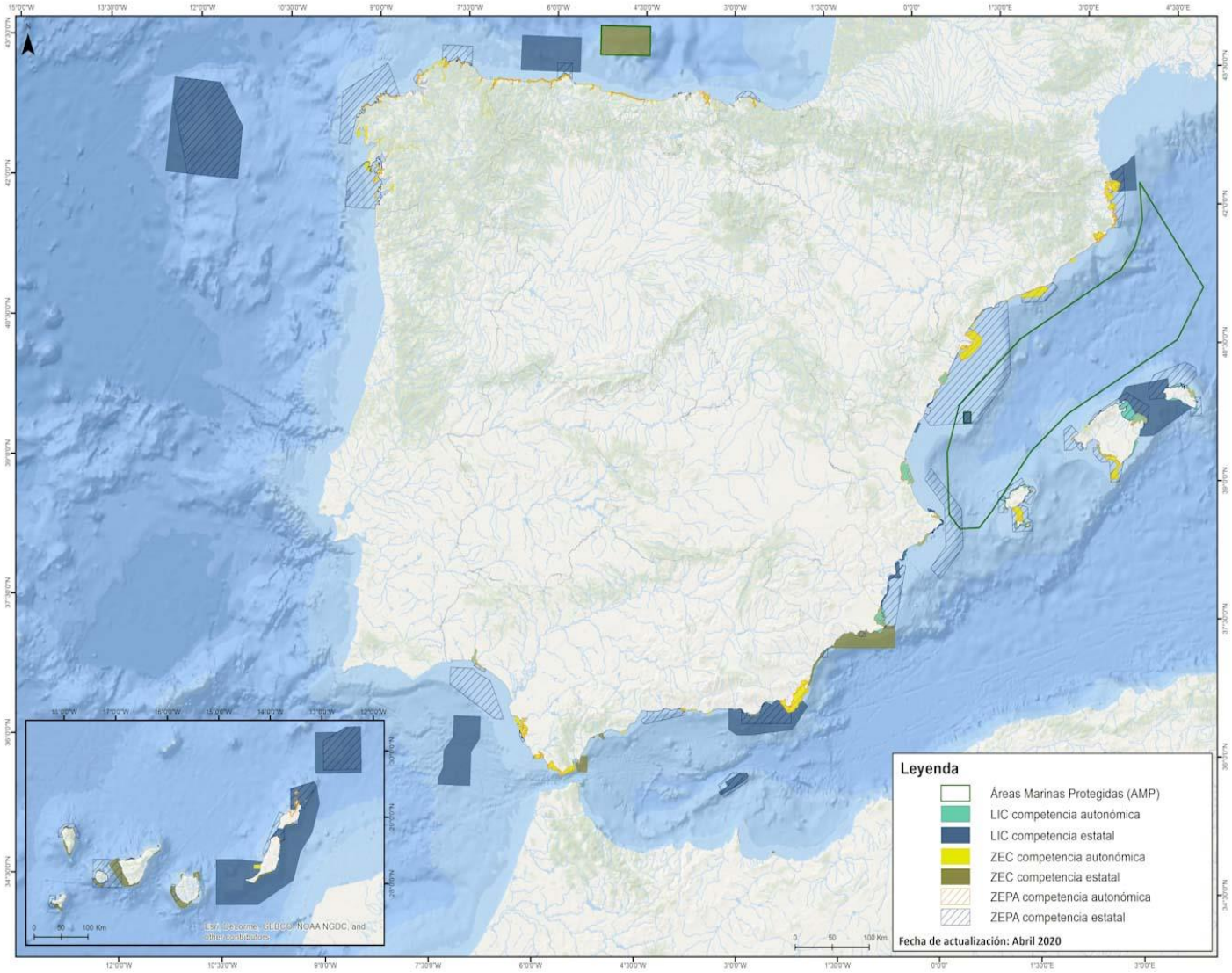
Its oceanographic and biogeographic conditions determine a great variety of marine ecosystems that host thousands of species, many of them threatened species

The Marine National Inventory (2020) includes **886 habitats and more than 14,000 species**.

LIFE IP INTEMARES project:

Integrated, innovative and participatory management of the Natura 2000 network in the Spanish marine environment.

Spain **achieved the protection of over 12%** of our marine surface, **fulfilling** international commitments (**Aichi Target 11**)



MISSION

Towards a **new model for the management** of the sea.

MAIN OBJECTIVE

Effective, **innovative and integrated management** of the Natura 2000 network, with the active **participation** of the sectors involved and **research** as basic tools for decision-making.

THROUGH

The generation of **new opportunities** for the future (Blue Economy).

The **compatibilization** of the biodiversity conservation with the use of natural resources.

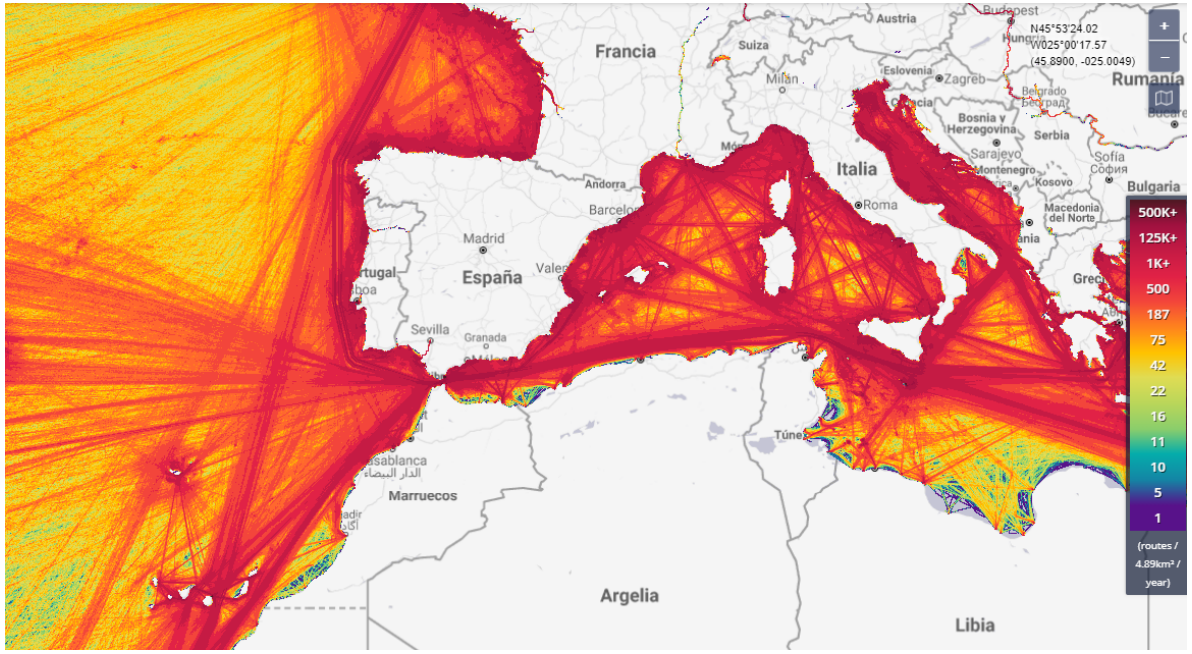
AVOIDING COLLISIONS

- The **Canary Islands and the Spanish Mediterranean waters present** one of the highest maritime traffic densities on the planet.
- At the same time, those are areas of high biological richness for cetaceans:
  - Canarian waters: presence of **more than 30 species of cetaceans**.
  - Balearic waters: identified as an **area of special relevance as a migratory corridor** for cetaceans to their breeding and feeding grounds.
- In recent years, **increase in the number of collisions** between cetaceans and large vessels (especially passenger ferries, fast ferries, etc.)
- Spain will invest **nearly 1M€** to mitigate this threat, especially, in sperm whale populations.

AVOIDING COLLISIONS

Actions: Maritime traffic analysis model CEDEX (Centro de Estudios y Experimentación)

- Fast ferries, passengers (regular, cruises), merchant ships, oil tanker
- Routes from main West Med harbours, processing over 60.000 AIS messages,
- Routes within islands in Canary Islands (mainly fast ferries)
- Elaboration of spatial density maps
- Evaluation of spatial risk indicator (Veas &Druon, 2013)



AVOIDING COLLISIONS

Actions: **Cetacean Surveys** (2021 – 2024) Balearic islands

i. Hydrophone detection campaigns to **photo-identify** sperm whales in vulnerable areas of the archipelago (2 years)

ii. Biopsy of **20** sperm whales for **genetic analysis**

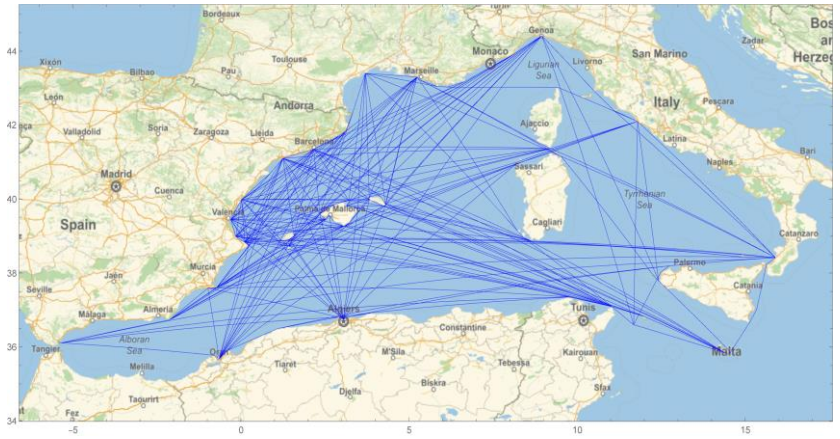
iii.Tagging 10 sperm whales with satellite tracking transmitters

iv. **Acoustic-passive monitoring campaigns** of sperm whales (2 years, 3 hydrophones installed)

v. Monitoring whales population from **ferries** among islands and the peninsula.

vi.Design a **program of measures** to minimize collision.

vii.Testing pilot project the measures to minimize collisions (to be defined).



AVOIDING COLLISIONS

Actions: Cetacean Surveys (2021 – 2024) Canary islands

i. Hydrophone detection campaigns to **photo-identify** sperm whales in the Mallorca Channel and other vulnerable areas of the archipelago (3 years)

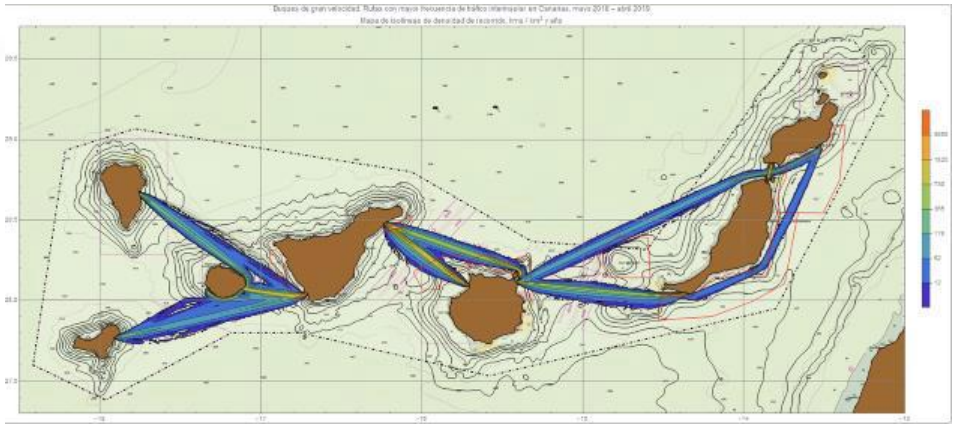
ii. Biopsy of **20** sperm whales for **genetic analysis** (population origin)

iii. **Tagging** 10 sperm whales with satellite tracking transmitters

iv. Cetacean survey (replication of the Fais et. al. study, 2016)

v. Design a program of measures to minimize collision.

vi. Testing infrared thermal detection cameras installed in ferries (1 year)



AVOIDING COLLISIONS

Actions

- Most of collisions with lethal consequences: caused by vessels 80 m or more in length, and by vessels traveling at 14 knots or more

- A majority of collisions occur on or near the continental shelf

- The behavior of whales who approaching a ship is uncertain: in some cases, avoidance occur at the last moment, but sperm whales are one of the slowest cetaceans: 3.5-4.5 knots

- In some areas a significant percentage of the strandings are due to these collisions

IMO PSSA PROPOSAL

LIFE IP PAF INTEMARES

INTEGRATED, INNOVATIVE AND PARTICIPATORY MANAGEMENT OF THE NATURA 2000 NETWORK IN THE SPANISH MARINE ENVIRONMENT

WITH THE FINANCIAL SUPPORT OF THE LIFE PROGRAMME OF THE EUROPEAN UNION

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