From government leadership to community-based approaches

Case studies from Portugal for effective marine protection

Emanuel Gonçalves
egoncalves@oceanoazulfoundation.org

OCEANO AZUL foundation

From the ocean's point of view

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OUR VISION

A healthy ocean is essential for all life on Earth.

OUR MISSION

To restore and maintain the ocean’s health and productivity for the benefit of life on the planet.

OCEANO AZUL FOUNDATION APPROACHES

OCEANO AZUL foundation

OCEAN EDUCATION & CAPACITY BUILDING

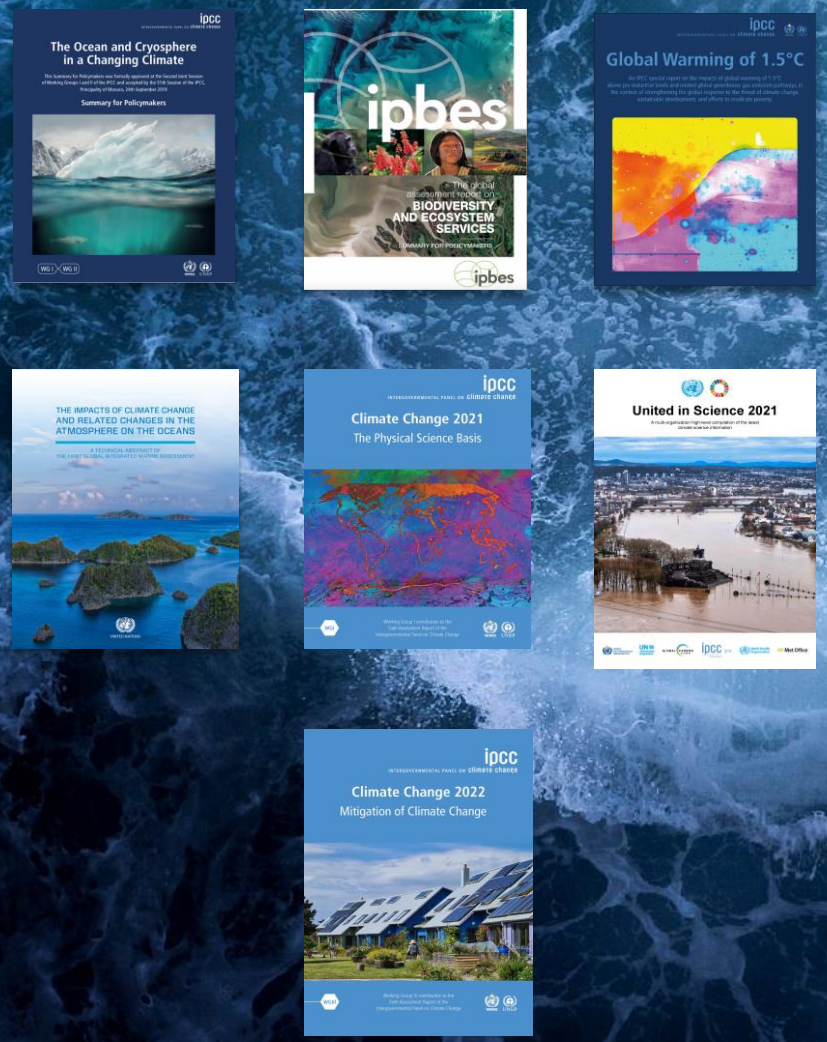
OCEAN COMMUNICATION

OCEANO AZUL
foundation

WHAT DO WE KNOW?

1. CLIMATE EMERGENCY

2. SPECIES EXTINCTION CRISIS



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SCIENTIFIC CONSENSUS

2018

| The Impacts of Climate Change and Related Changes in the Atmosphere on the Oceans

| IPCC Special Report on Global Warming of 1.5°C

2019

| IPCC Special Report on the Ocean and Cryosphere in a Changing Climate

| IPBES Global Assessment Report on Biodiversity and Ecosystem Services

2021

| IPCC Climate Change 2021 – The Physical Science Basis

2022

| IPCC Climate Change 2022 – Mitigation of Climate Change

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WE KNOW!

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PROTECT 30% OF THE OCEAN BY 2030

"Save what is left"

BLUE AZORES

Governo dos Açores

OCEANO AZUL foundation

WAITT INSTITUTE

Oceano Azul Cascais | Mafra | Sintra Expedition

CASCAIS

SINTRA CÂMARA MUNICIPAL

REPÚBLICA PORTUGUESA

OCEANO AZUL fundação

Selvagens Islands

Largest Fully Protected Marine Area in Europe

50 ilhas selvagens anos

Região Autónoma da Madeira

Secretaria Regional de Ambiente, Recursos Naturais e Alterações Climáticas

IFCN Instituto das Florestas e Conservação da Natureza IP/RAM

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NATIONAL GEOGRAPHIC PRISTINE SEAS

MARINE NATURAL PARK OF THE ALGARVE REEF

Selvagens Islands

Largest Fully Protected Marine Area in Europe

50 ilhas selvagens anos

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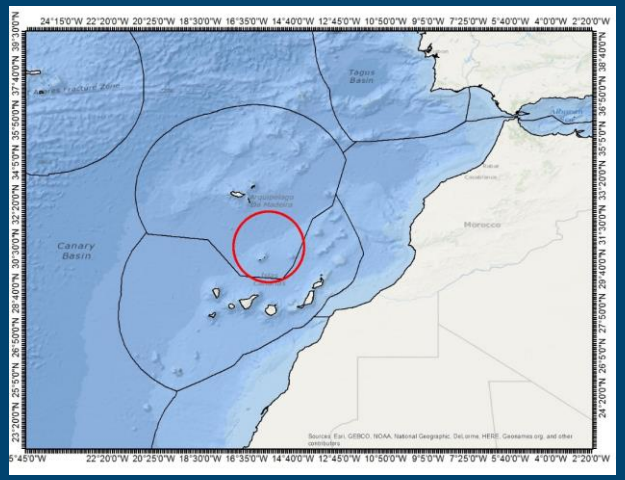
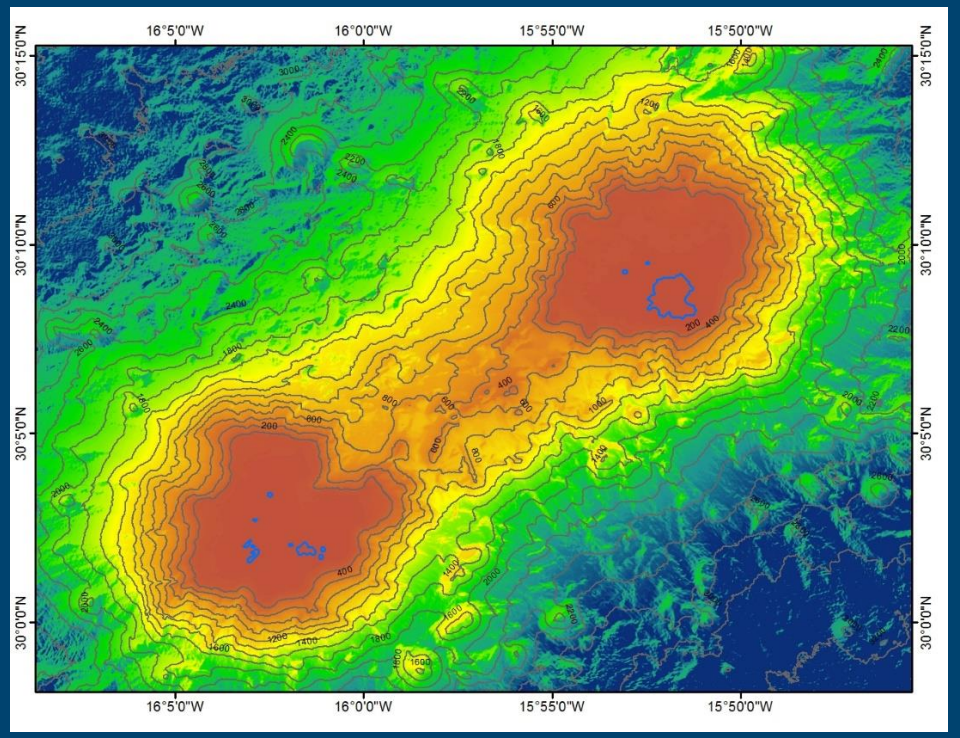
NATIONAL GEOGRAPHIC
PRISTINE SEAS

SELVAGENS ISLANDS

Science and exploration in support to the largest fully protected MPA in the North Atlantic

SELVAGENS ISLANDS NATURE RESERVE





50 ilhas selvagens anos

Região Autónoma da Madeira Governo Regional

Secretaria Regional de Ambiente, Recursos Naturais e Alterações Climáticas

IFCN Instituto das Florestas e Conservação da Natureza IP-RAM

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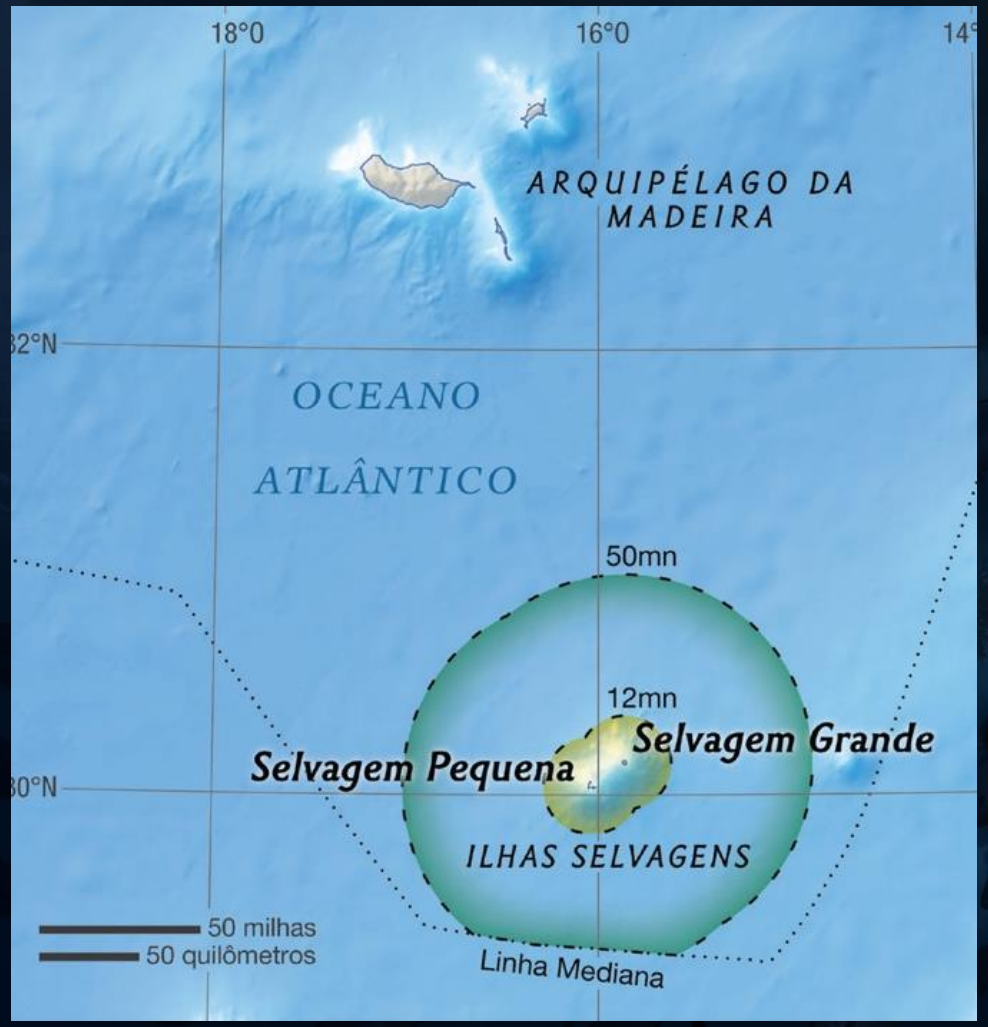
NATIONAL GEOGRAPHIC PRISTINE SEAS



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OPEN WATER COMMUNITIES

DEEP SEA
DROPCAMS

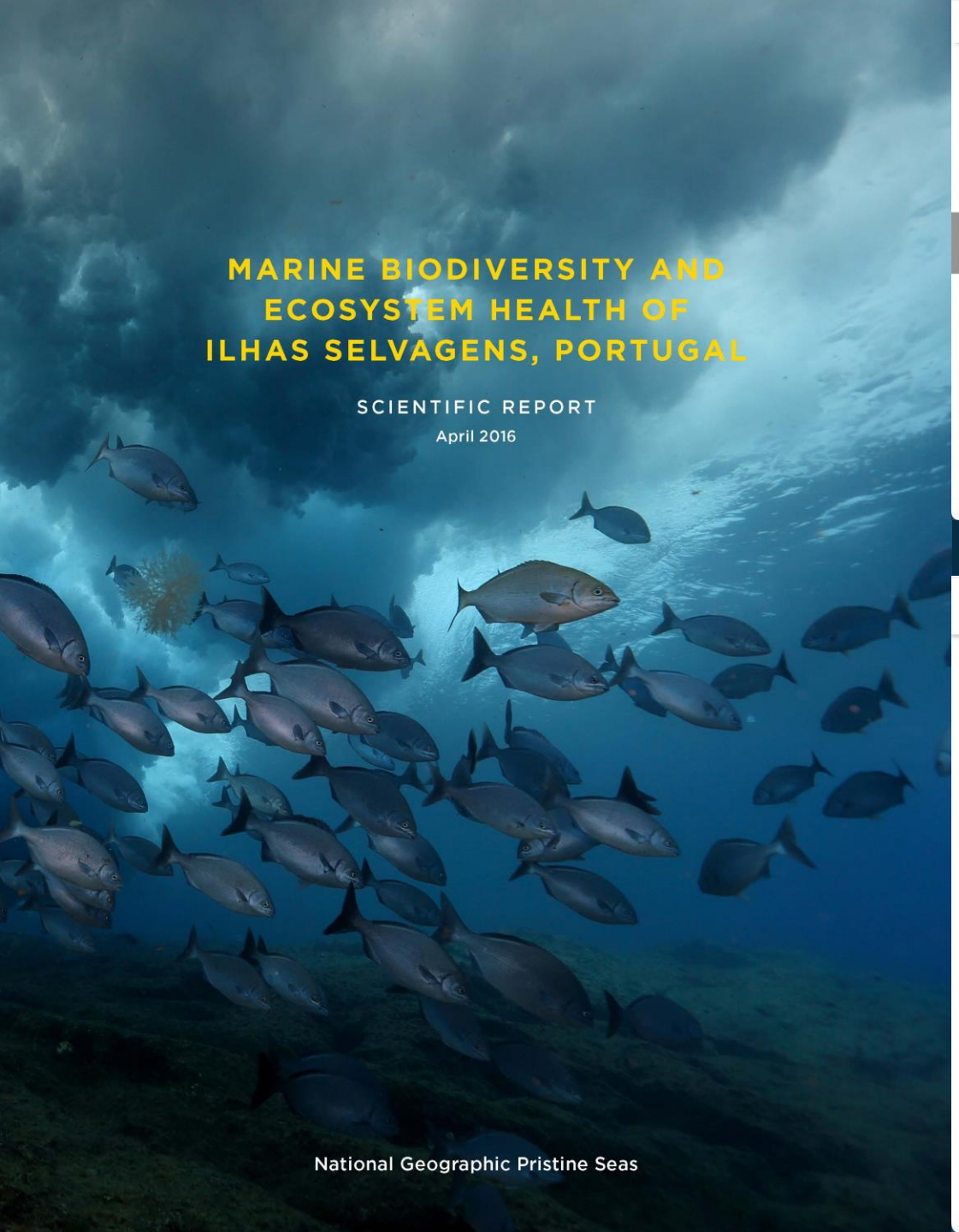
©Manu San Félix

Expedition Results

- > 200 dives
- 51 species of fishes from 28 families
- 72 benthic taxa
- Micropaleontology collections at 13 locations
- 22 water samples collected for microplastics
- 12 drop-cams between 164 and 2294 m.
- 57 mid-water baited cameras to assess the pelagic community


©Manu San Félix

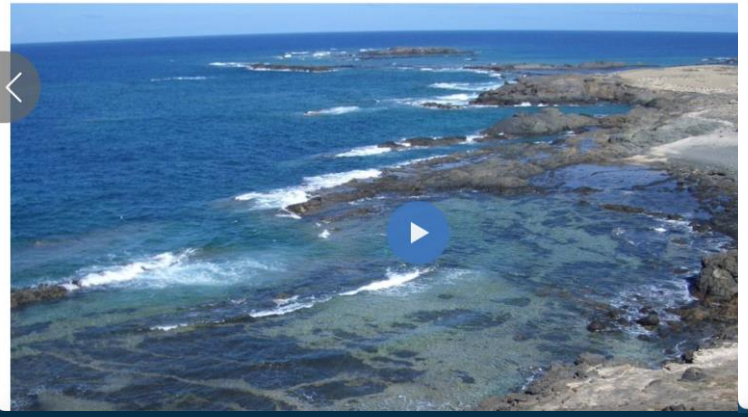

©Manu San Félix



euronews.green NEWS CLIMATE NATURE LIVING ECO-INNOVATION OPINION

NATURE

Portuguese islands create Europe's largest protected marine area



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CORRESPONDENCE | 18 January 2022

Portugal leads with Europe's largest marine reserve

Filipe Alves, João G. Monteiro, Paulo Oliveira & João Canning-Clode

Marine conservation is central to the United Nations' Sustainable Development Goals 13 (climate action) and 14 (life below water). Portugal has now created the largest marine reserve with full protection in Europe and the North Atlantic, an achievement that other nations could follow.

Access options

NATIONAL GEOGRAPHIC

DONATE Search

NATIONAL GEOGRAPHIC SOCIETY NEWSROOM | PRESS RELEASES

Portugal Establishes the Largest Fully Protected Marine Reserve in Europe & North Atlantic

Giant anemone (Telmatactis cricoides) with white-striped cleaner shrimp in newly expanded Selvagens marine reserve.
Photo Credit: Andy Mann, National Geographic Pristine Seas

November 29, 2021

CONTACT NGS COMMUNICATIONS TEAM

If you are a member of the media with an inquiry or interview request, please call during regular business hours or email
pressroom@ngs.org
(202) 857 7027

EMILY KELLY

Communications Manager
ekelly@ngs.org

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MARINE NATURAL PARK OF THE ALGARVE REEF

COMANAGEMENT WITH THE COMMUNITY

Marine Protected Area of Community Initiative - AMPIC

- Process to create comanaged marine protected areas
- Lead by the local community and municipalities
- Based on a structured participatory process
- Science based

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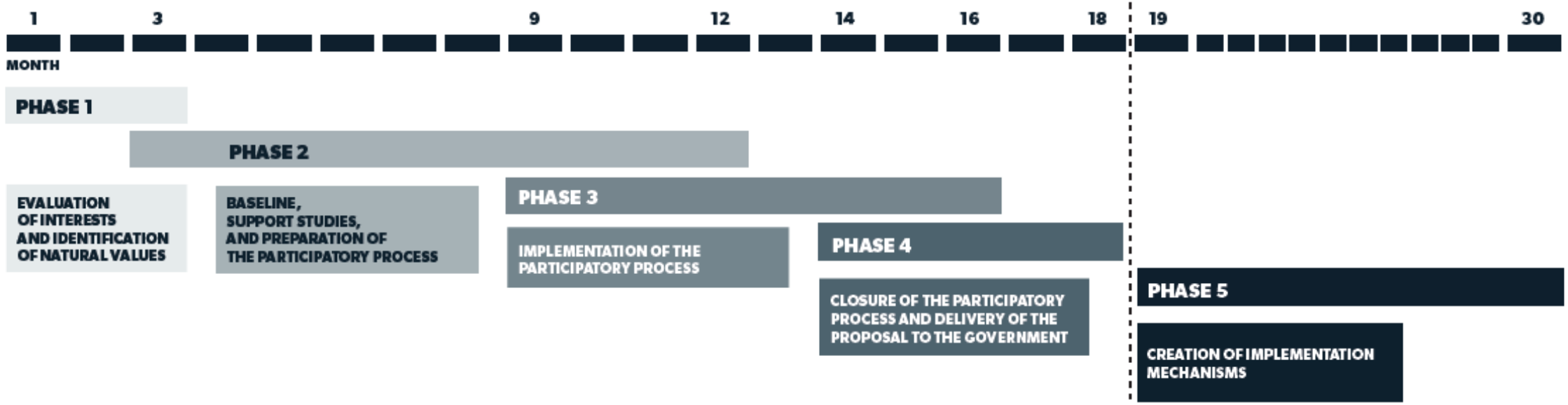
METHODOLOGY | PROCESS ROADMAP




PROCESSO PARTICIPATIVO
ATIVIDADES SOCIOECONÓMICAS
VALORES NATURAIS
ENQUADRAMENTO LEGAL E REGULAMENTAR
PARQUE NATURAL MARINHO DO RECIFE DO ALGARVE
PEDRA DO VALADO
MEDIDAS DE COMPENSAÇÃO


PARQUE NATURAL MARINHO
DO RECIFE DO ALGARVE
PEDRA DO VALADO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PARQUE NATURAL MARINHO
DO RECIFE DO ALGARVE
PEDRA DO VALADO

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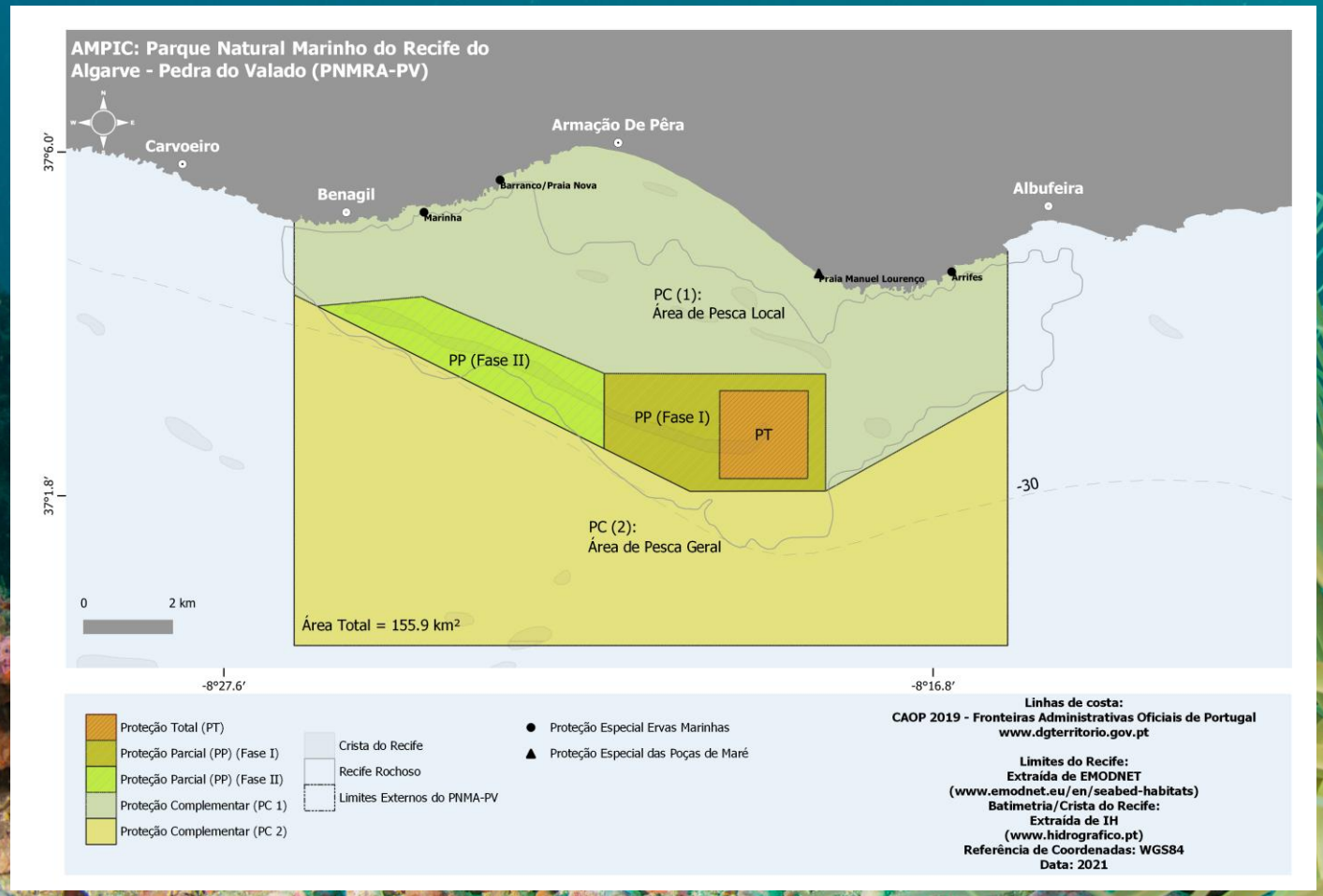
APPROVED AREA AND ZONING



Expedição Oceano Azul Cascais|Mafra|Sintra

CASCAIS

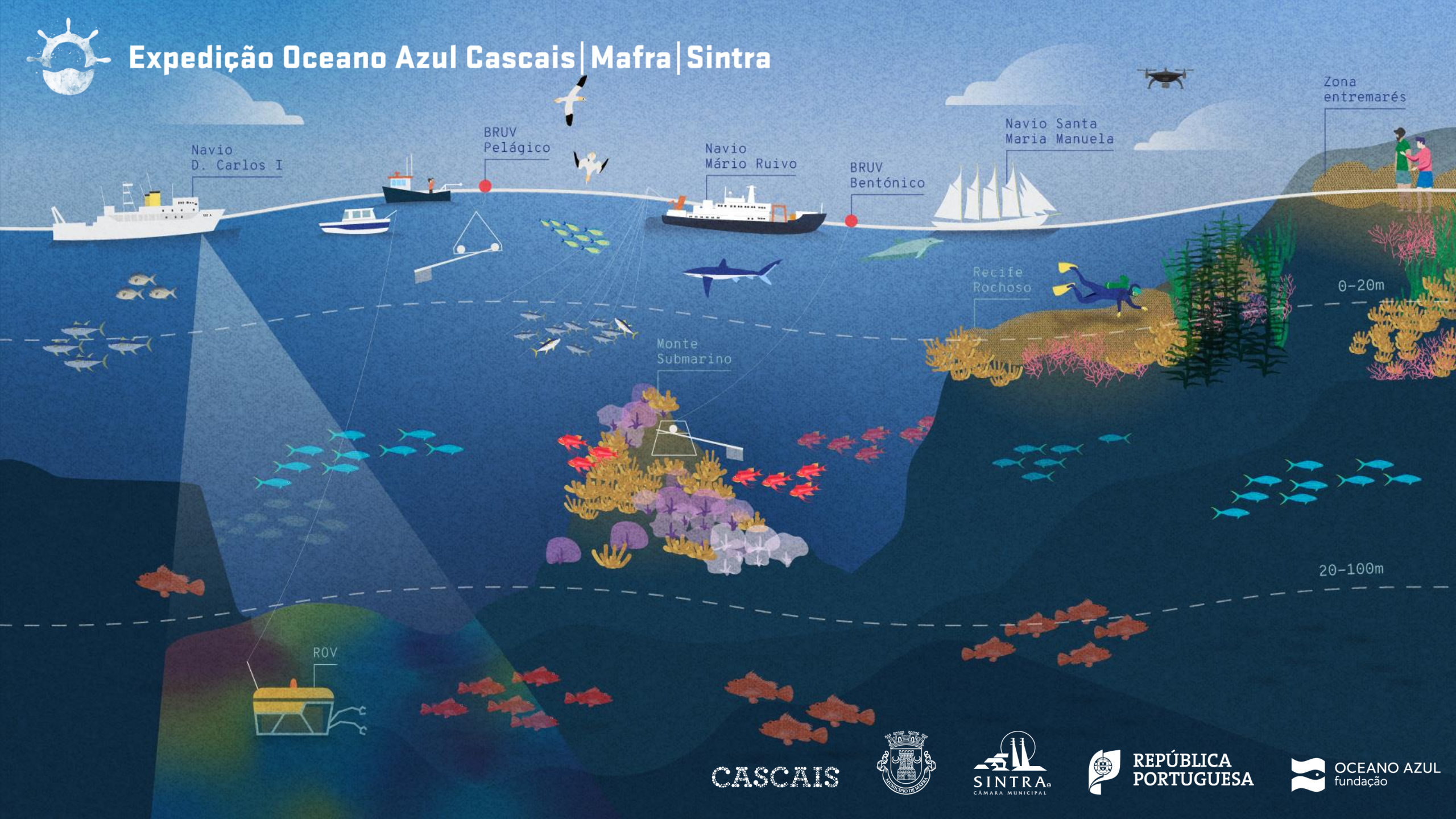
MUNICÍPIO DE MAFRA

SINTRA
CÂMARA MUNICIPAL

REPÚBLICA PORTUGUESA

OCEANO AZUL
fundação

Expedição Oceano Azul Cascais | Mafra | Sintra

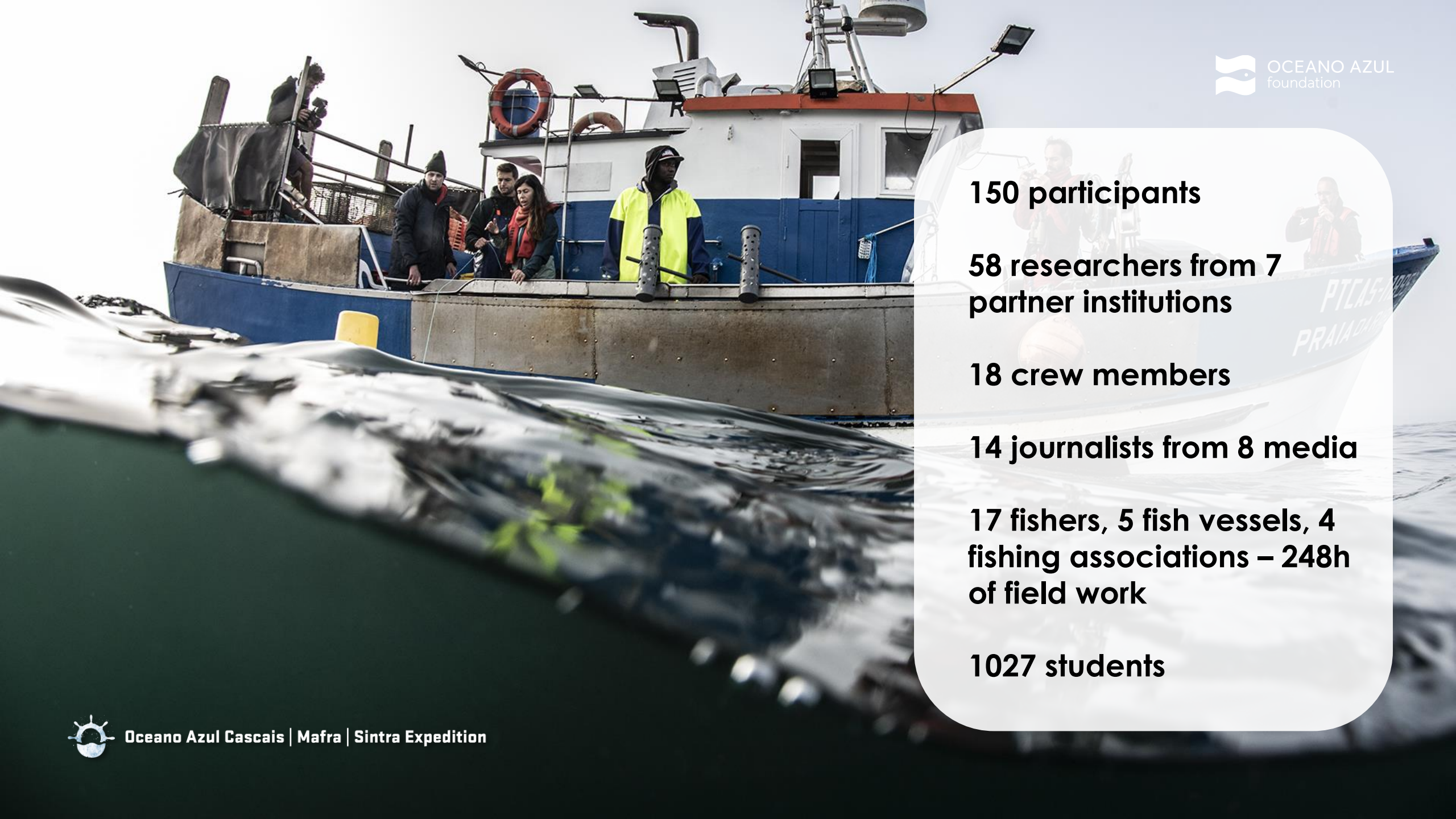


CASCAIS

SINTRA
CÂMARA MUNICIPAL

REPÚBLICA
PORTUGUESA

OCEANO AZUL
fundação



OCEANO AZUL
foundation

150 participants

58 researchers from 7 partner institutions

18 crew members

14 journalists from 8 media

17 fishers, 5 fish vessels, 4 fishing associations – 248h of field work

1027 students

Oceano Azul Cascais | Mafra | Sintra Expedition

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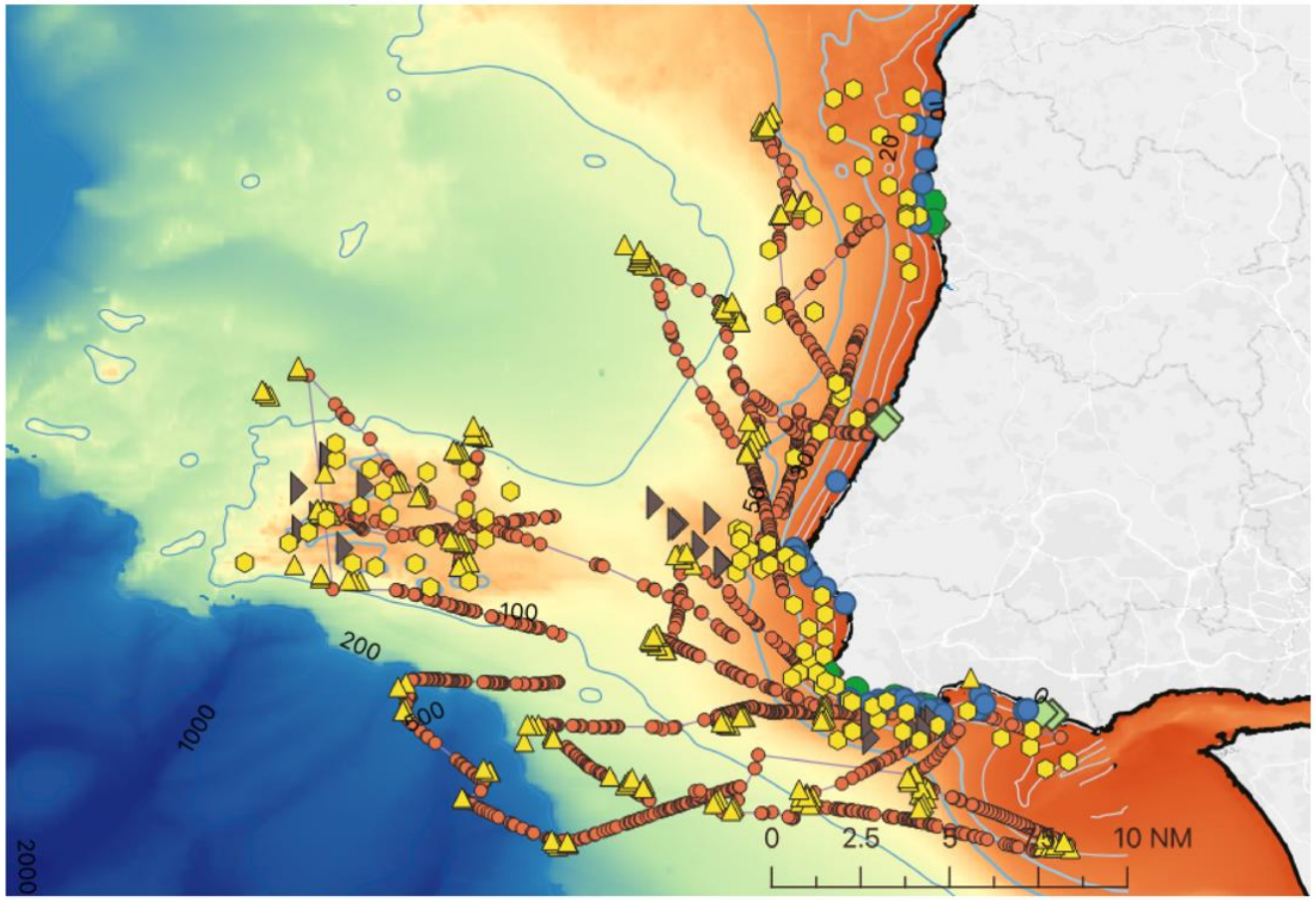
SAMPLING EFFORT



Legenda

- Transetos para quantificação de aves e mamíferos marinhos
- Amostragens com veículo remotamente operado (ROV)
- Câmaras com isco junto ao fundo
- Câmaras com isco flutuantes
- Censos visuais em mergulho
- Cartografia por drone na zona entremarés
- Amostragens biológicas na zona entremarés

BLUE AZORES

Governo dos Açores

OCEANO AZUL foundation

WAITT INSTITUTE

BLUE AZORES

THREE PARTNERS, ONE VISION

Protect, Promote and Value the Blue Natural Capital of the Azores

Governo dos Açores

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Objectives

1. PROTECT 30% OF THE AZOREAN SEA
2. MANAGEMENT PLANS FOR ALL MPAS
3. MARITIME SPATIAL PLAN
4. IMPROVE FISHERIES MANAGEMENT

Protect, promote and value the natural capital of the Azores

Actions

MAIN ACTIONS

SUPPORT ACTIONS

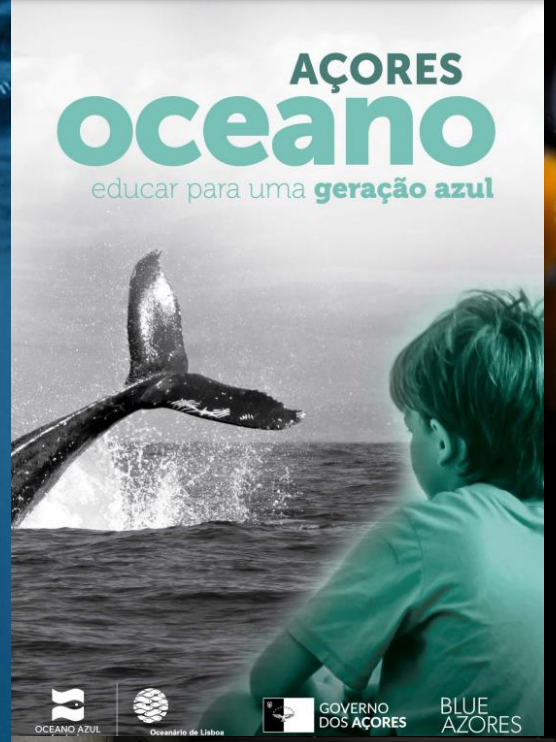
BLUE AZORES

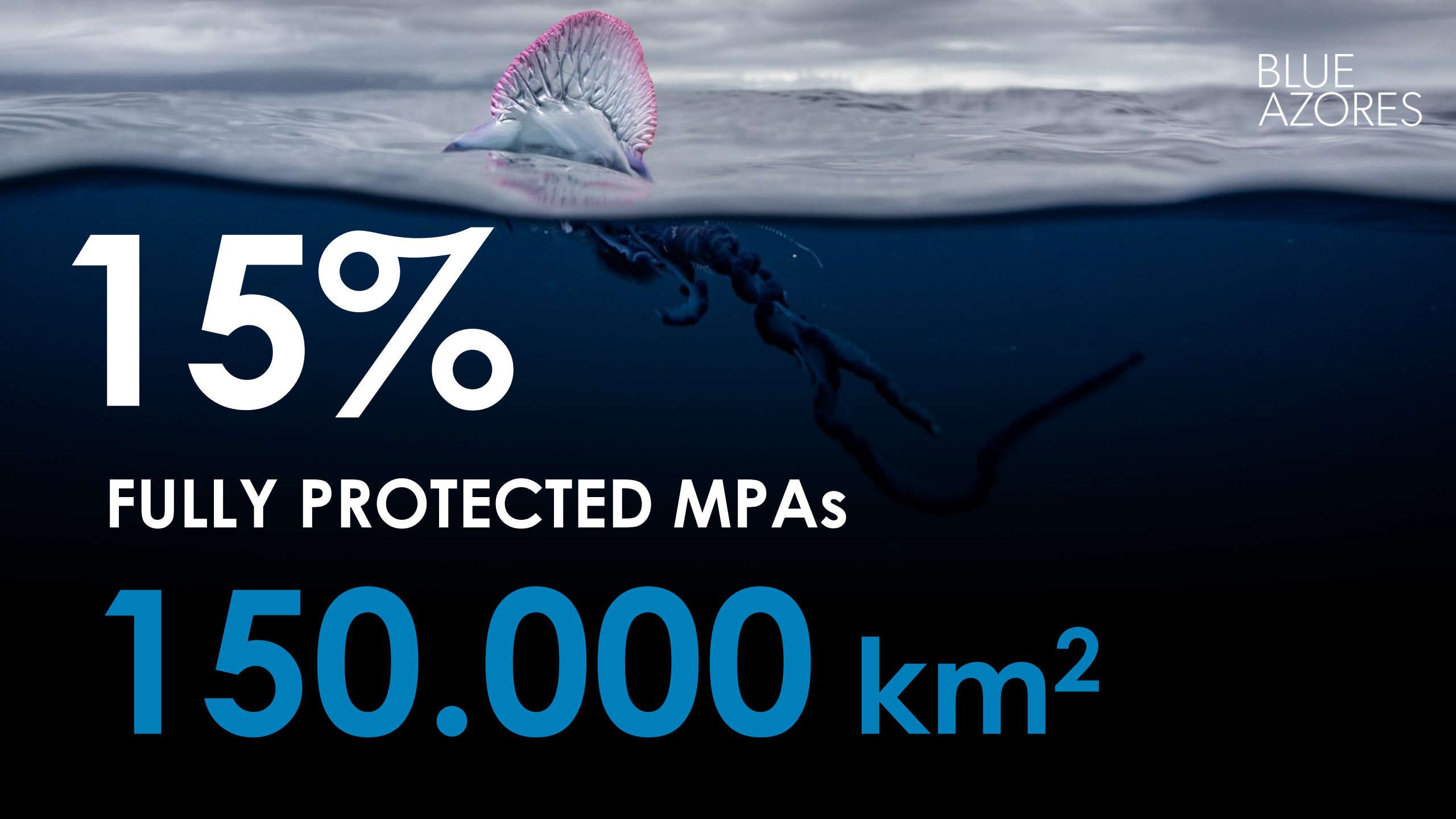
Support Actions

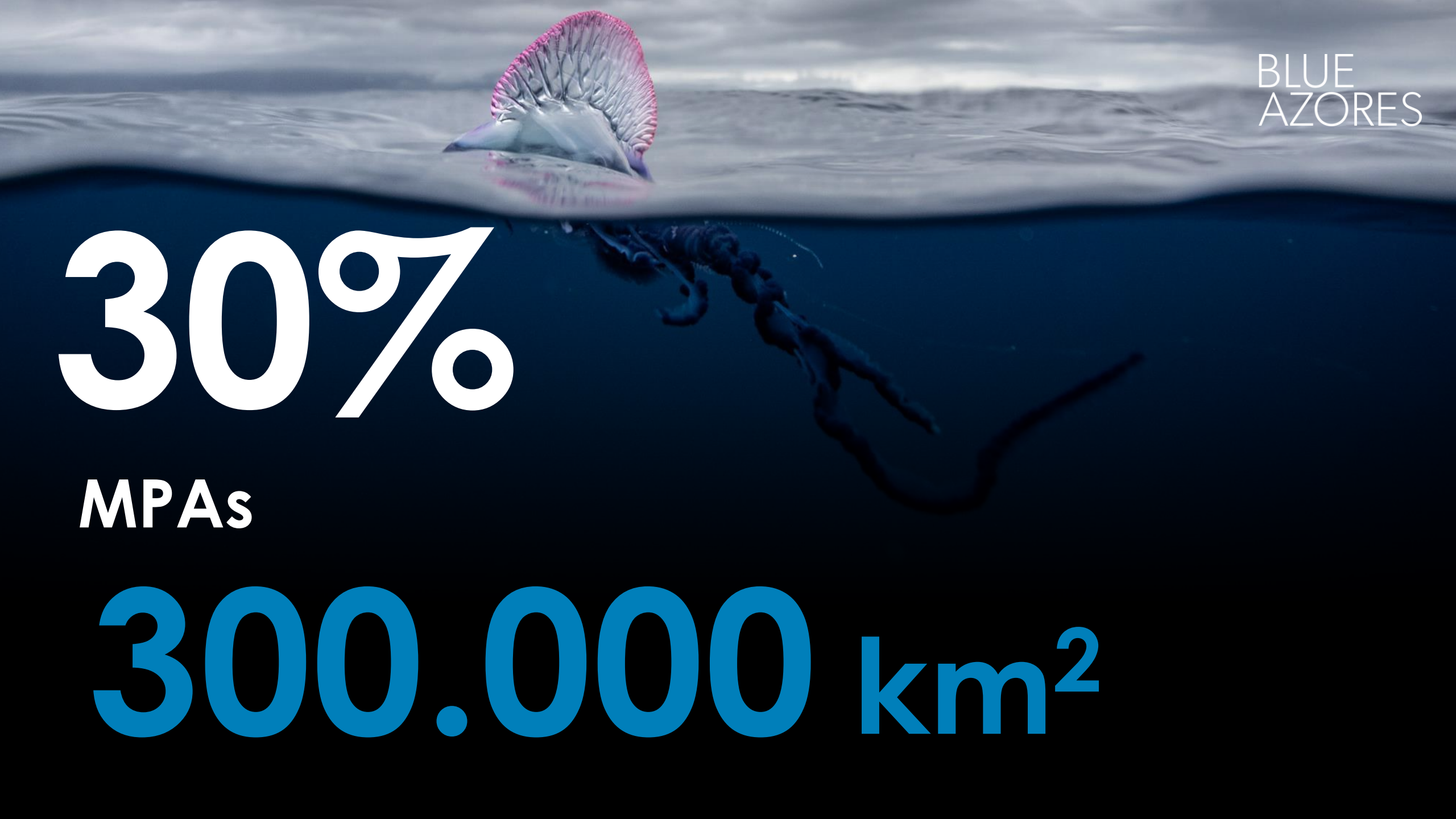
EGA Program: 6585 students, 439 teachers, 109 schools

NGOs and civil movements: capacity-building and activation

BBV Program: Blue Bio Value / Roadshow to Blue Biotech




BLUE
AZORES
15%
FULLY PROTECTED MPAs
150.000 km²

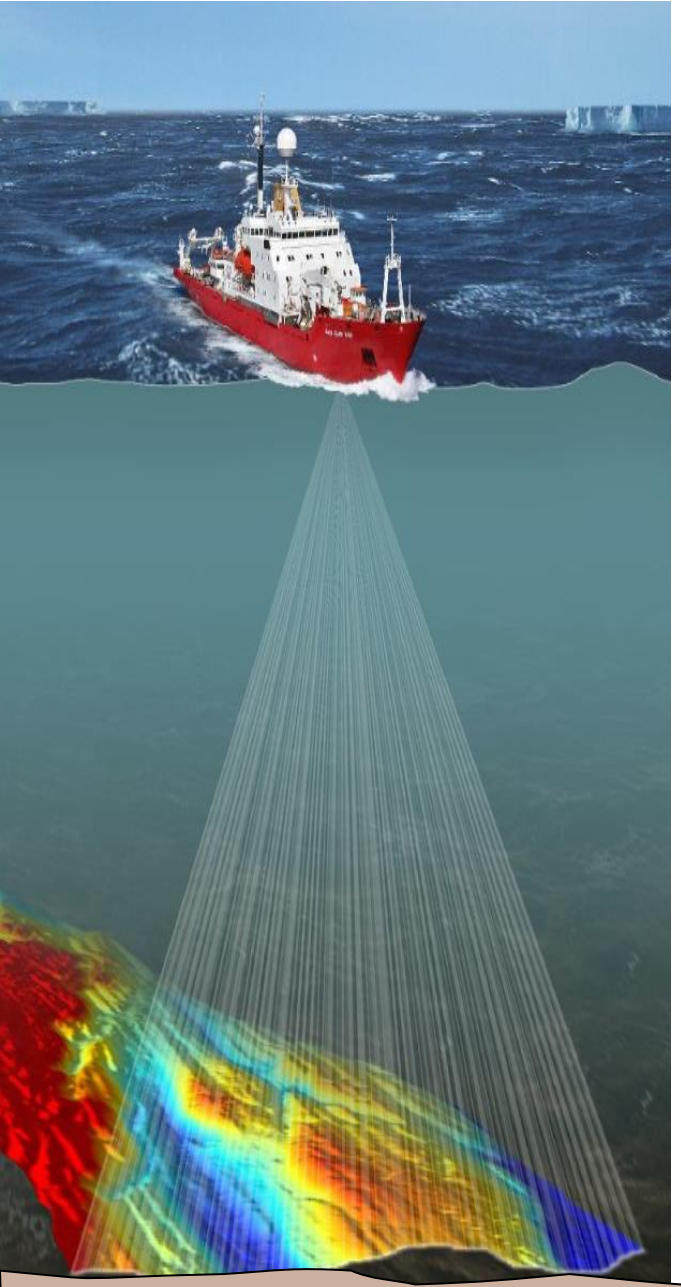

BLUE
AZORES
30%
MPAs
300.000 km²

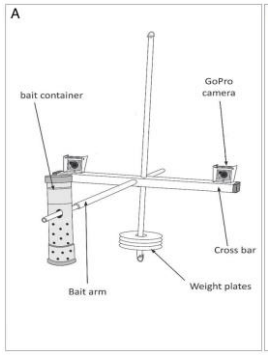

2016
Plan B


2018
Santa Maria Manuela

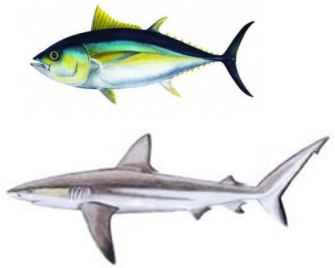

2018
NRP Almirante Gago Coutinho
A 523


2018
RV L'Atalante
L'ATALANTE
Ifremer





Open water cameras



Manta sat tags

SCUBA

Remote Cameras

ROV

Deep-water drop cameras

0 - 30 m

50-100 m

100 – 1500+ m

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737 students

enrolled in the

Open Explorer Classroom

from eight countries

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Local schools invited onboard


BLUE
AZORES
OCEANO AZUL
foundation
Local schools invited
onboard

BLUE AZORES

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SCIENTIFIC EXPEDITIONS

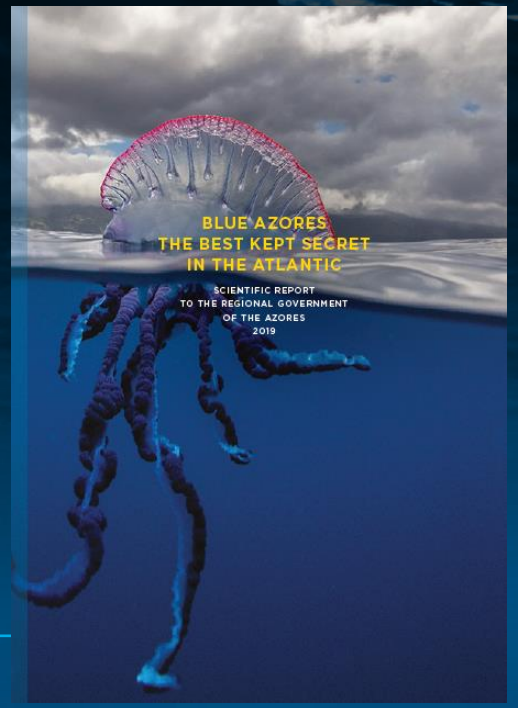
48 researchers

> 950 dives, 182 sampling points, 60 hours exploration with LUSO ROV in 13 dives

Discovery of a **new hydrothermal field** - LUSO

21.469 km^2 seabed mapped, 1.481 km sailed

737 students from 8 countries participated in the Open Explorer Classroom



Main Actions: Participatory process

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OFFSHORE PROCESS

COASTAL PROCESS

Participatory process - Offshore

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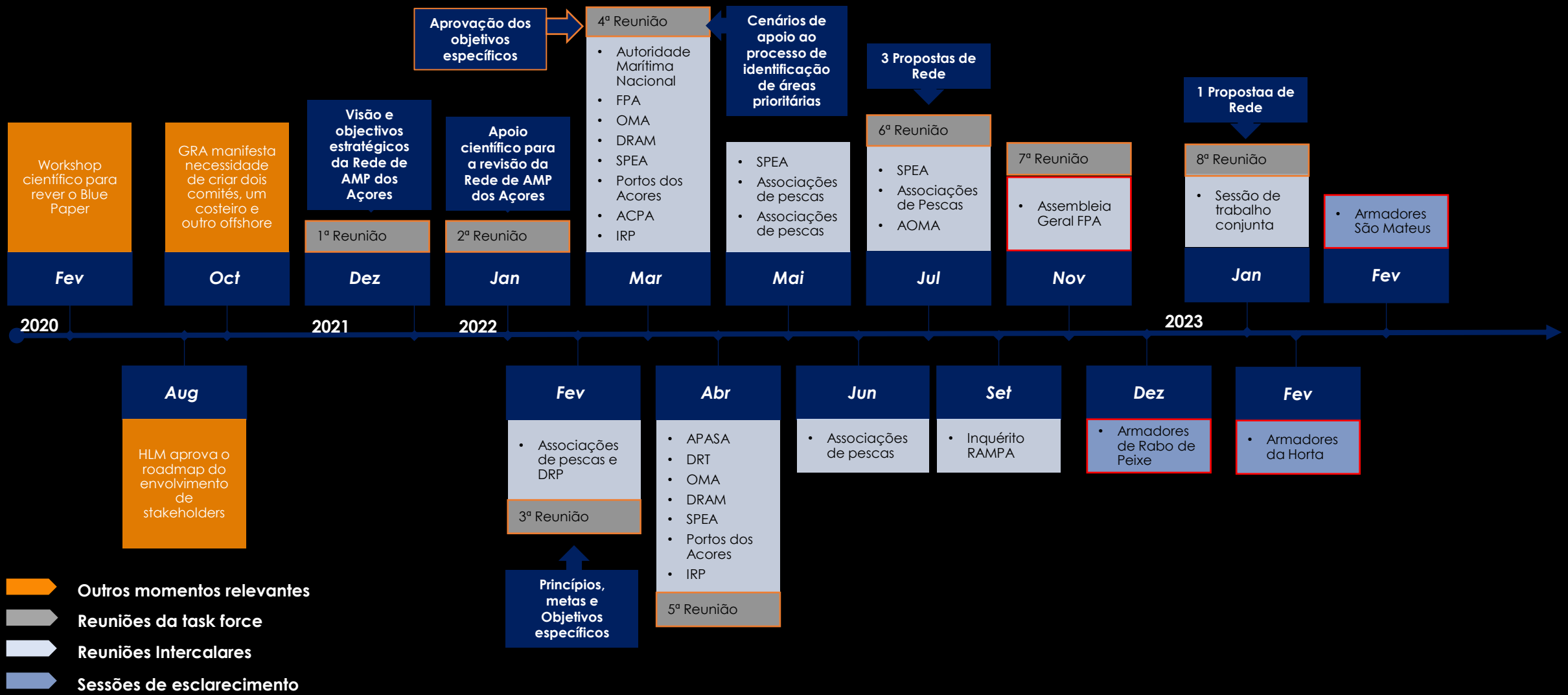

OFFSHORE IMPLEMENTATION TIMELINE

NOW

AZORES MARINE PARK
(30% offshore MPAs)

Regional Decree Law n.º 13/2016/A, 19 July propose revision

Until the date of the decree approving the system for executing and financing the RAMPA comes into effect, the DLR that approves the region budget for each economic year, provides the necessary funding for the payment of support intended to compensate for the decrease in fishing uses and activities in offshore MPA.

DLR
LAW PUBLICATION BY PARLIAMENT

3 MONTHS

LAW ENFORCEMENT

RESOLUTION
APPROVAL OF THE RAMPA STRATEGY

MATERIAL CONTENT

- General Framework
- ToR of the PGAM/POAMP
- Information structure and typology proposals PGAM/POAMP
- Co-management system
- General basis of the implementation and financing system

12 MONTHS

DOCUMENTAL CONTENTS

- Strategic reference framework
  - International, national and regional maritime policy instruments and legislation
  - Strategic guidelines

VOLUME i

- Identification of changes needed in the legal Framework
- Articulation with the national MPA network objectives
- Scientific knowledge gaps' identification
- Conservation actions priorization (short, medium and long-term)
- Identification of financing and resources needs
- Change accomodation mechanisms (e.g., climate change, socioeconomic conditions, legal framework)
- Financial and implementation model framing support mechanisms in response to uses and activities restrictions

VOLUME II

- Enforcement and financial action plan

VOLUME III

ORDINANCE
MANAGEMENT AND SPATIAL PLANS
DRR

- Characterization and diagnosis reports
- Spatial planning and management action plan
- Stakeholder engagement and participation program
- Monitoring program
- Enforcement and finance program — **DLR**
- Spatial planning model

12 MONTHS

DLR
INTEGRATION OF NEW COASTAL MPA

Participatory process - Coastal

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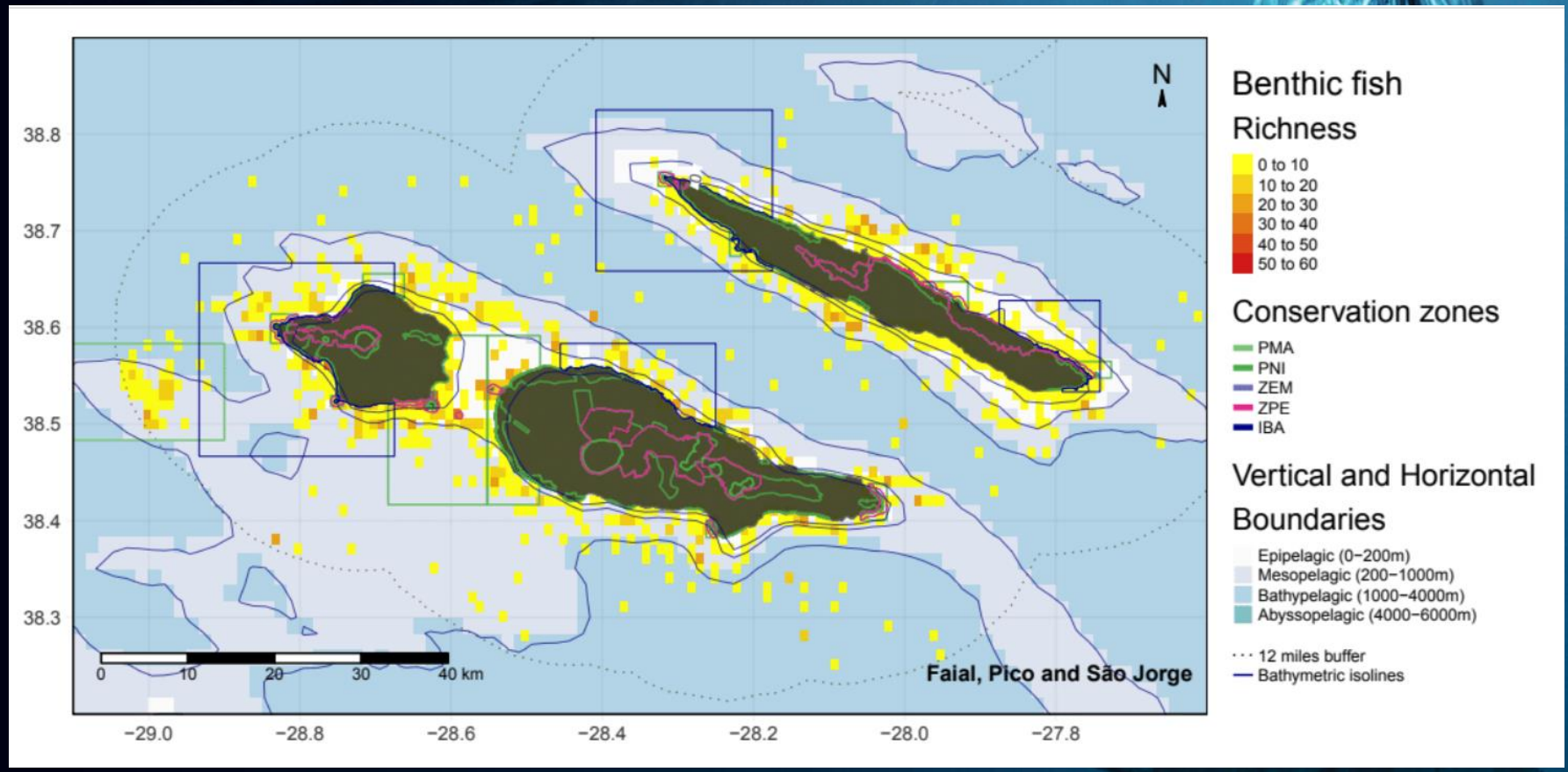
Participatory process - Coastal

Scientific support



WORK IN PROGRESS

Participatory process - Coastal

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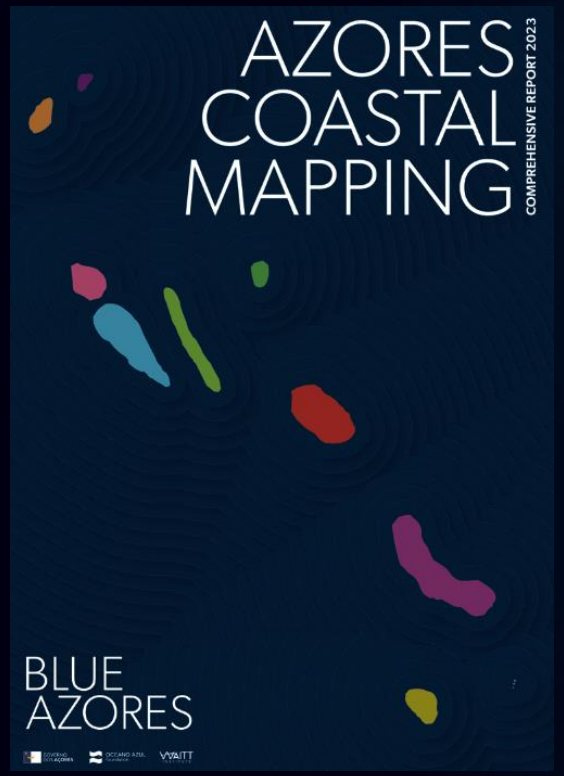
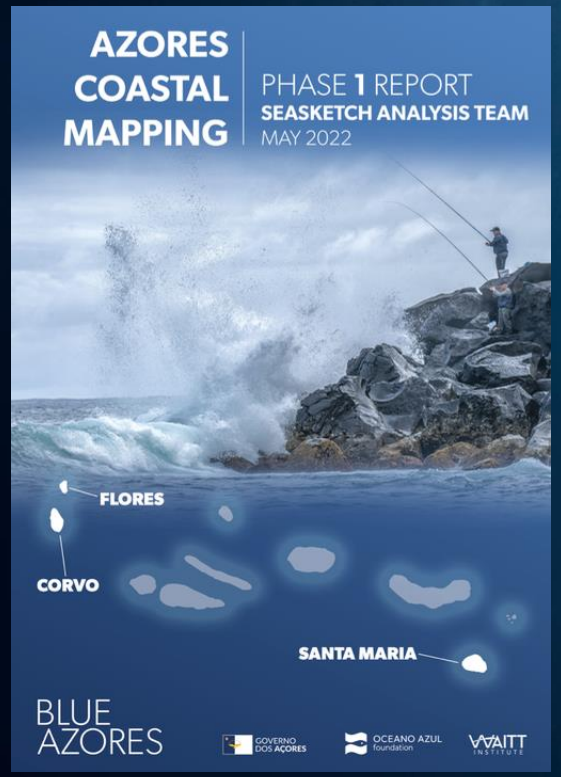
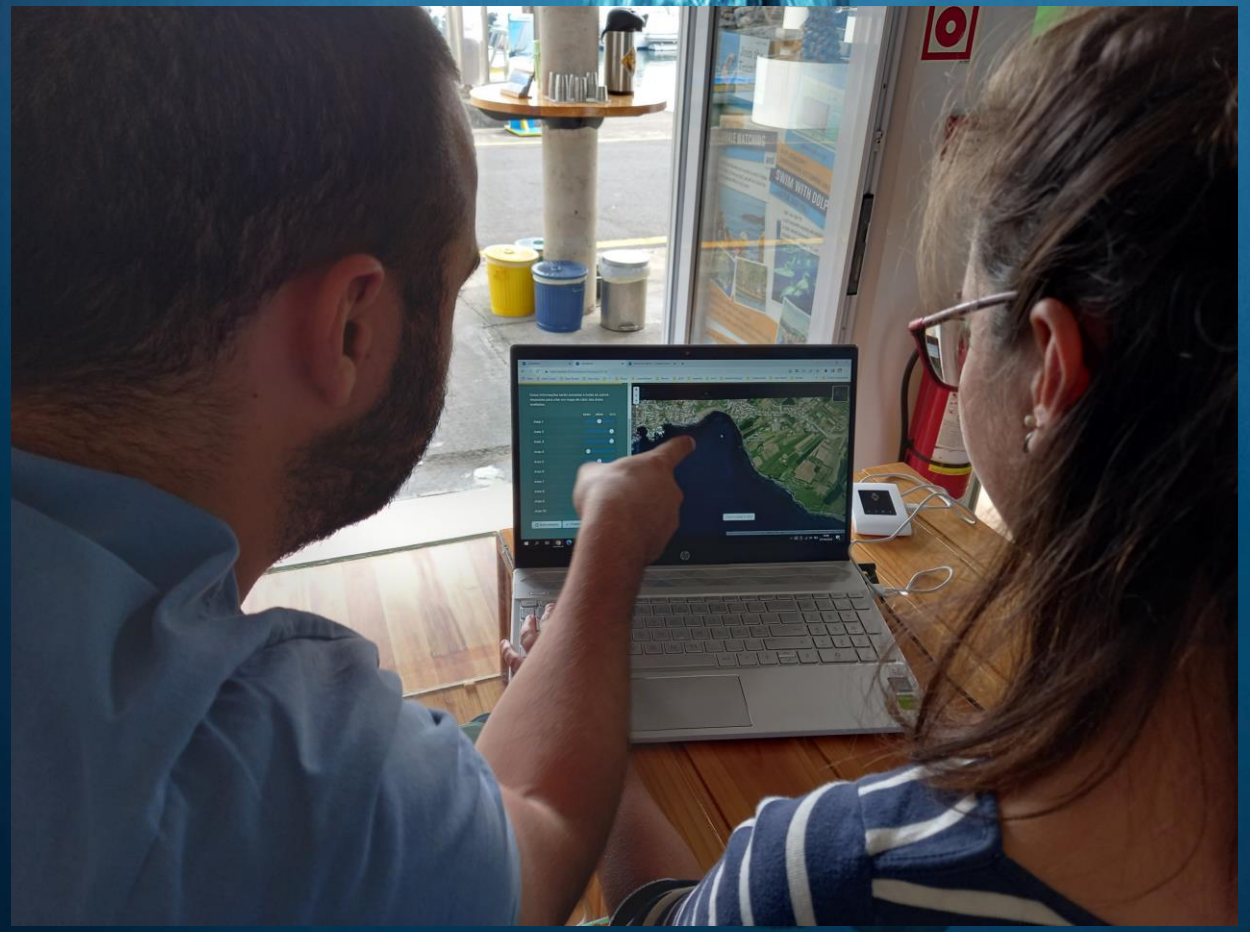
Ocean use survey

Participatory process - Coastal







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BLUE AZORES

Governo dos Açores

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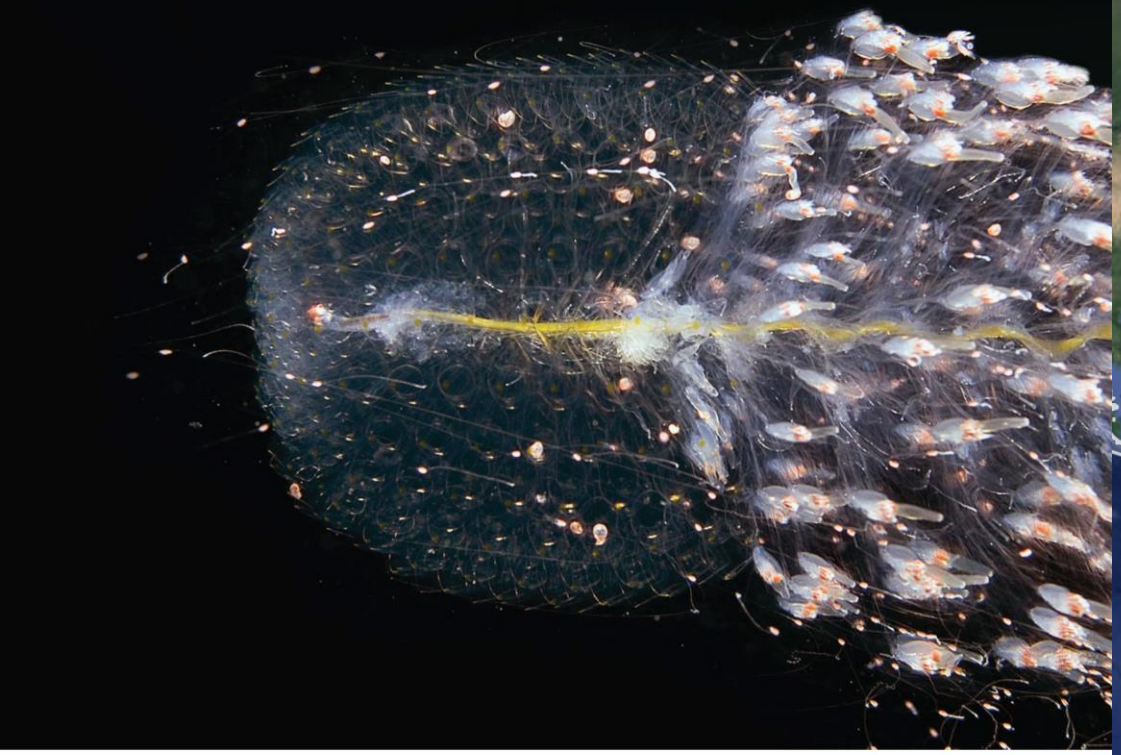
AZORES SCIENTIFIC CRITERIA AND GUIDANCE

for identifying ecologically or biologically significant marine areas and designing representative networks of marine protected areas in open ocean waters and deep sea habitats



UNEP

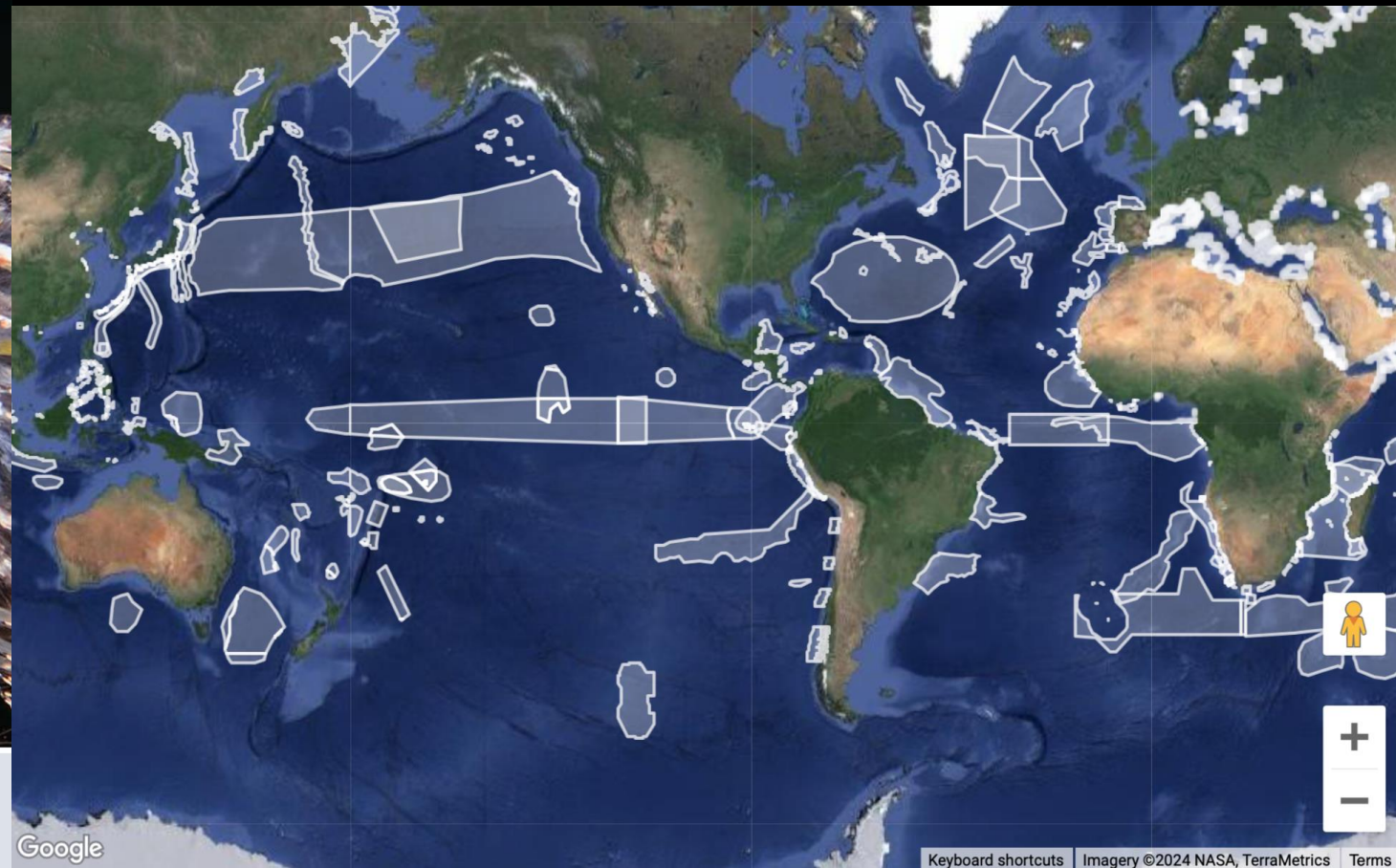
Convention on Biological Diversity

MINISTÉRIO DO AMBIENTE, DO ORDENAMENTO DO TERRITÓRIO E DO DESENVOLVIMENTO REGIONAL

Governo dos Açores

IUCN

ECOLOGICAL AND BIOLOGICAL SIGNIFICANT AREAS – EBSAs



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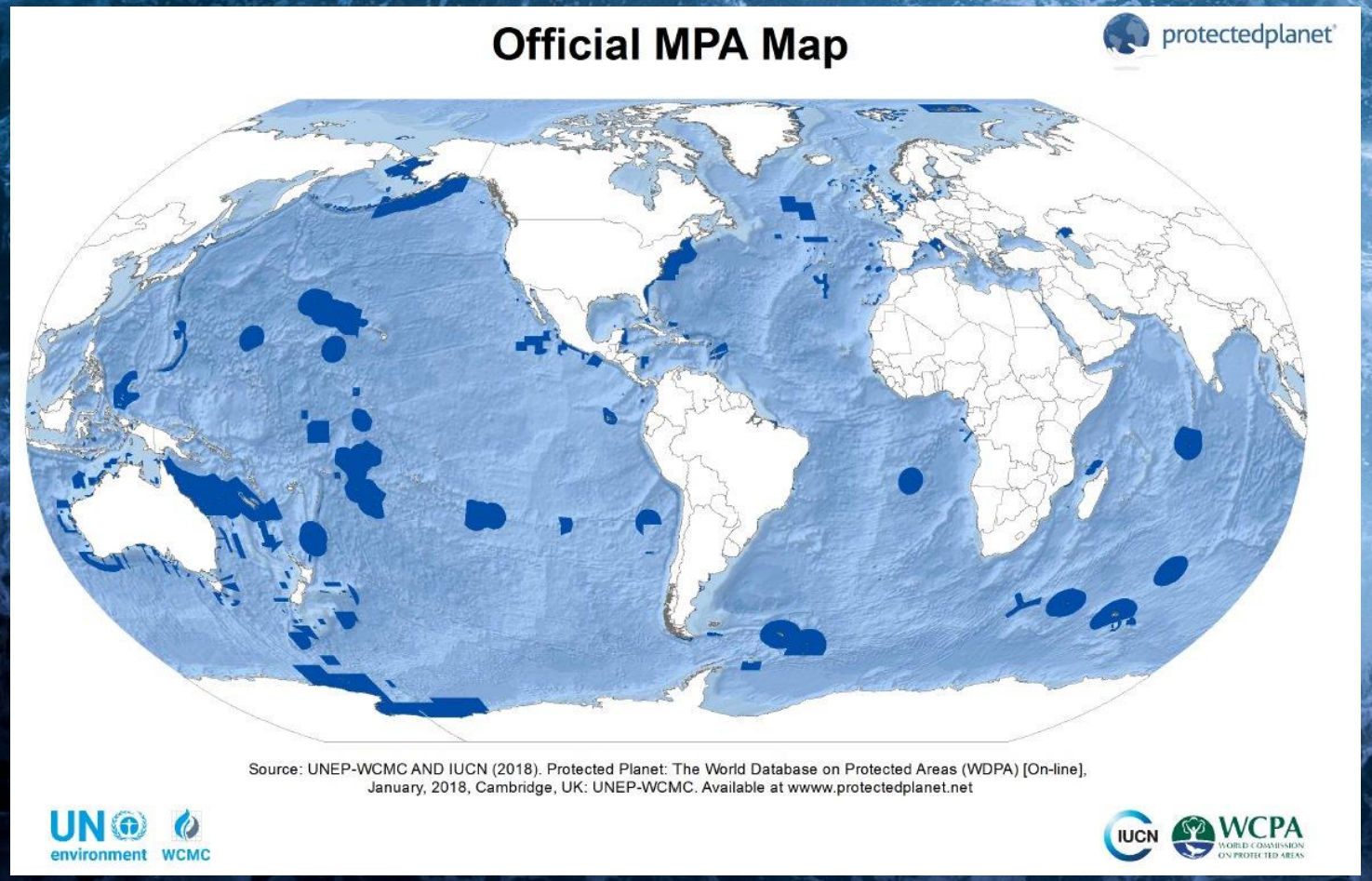

REBUILD NATURE

8%

Marine Protected Areas in the ocean

3%

Highly or fully protected

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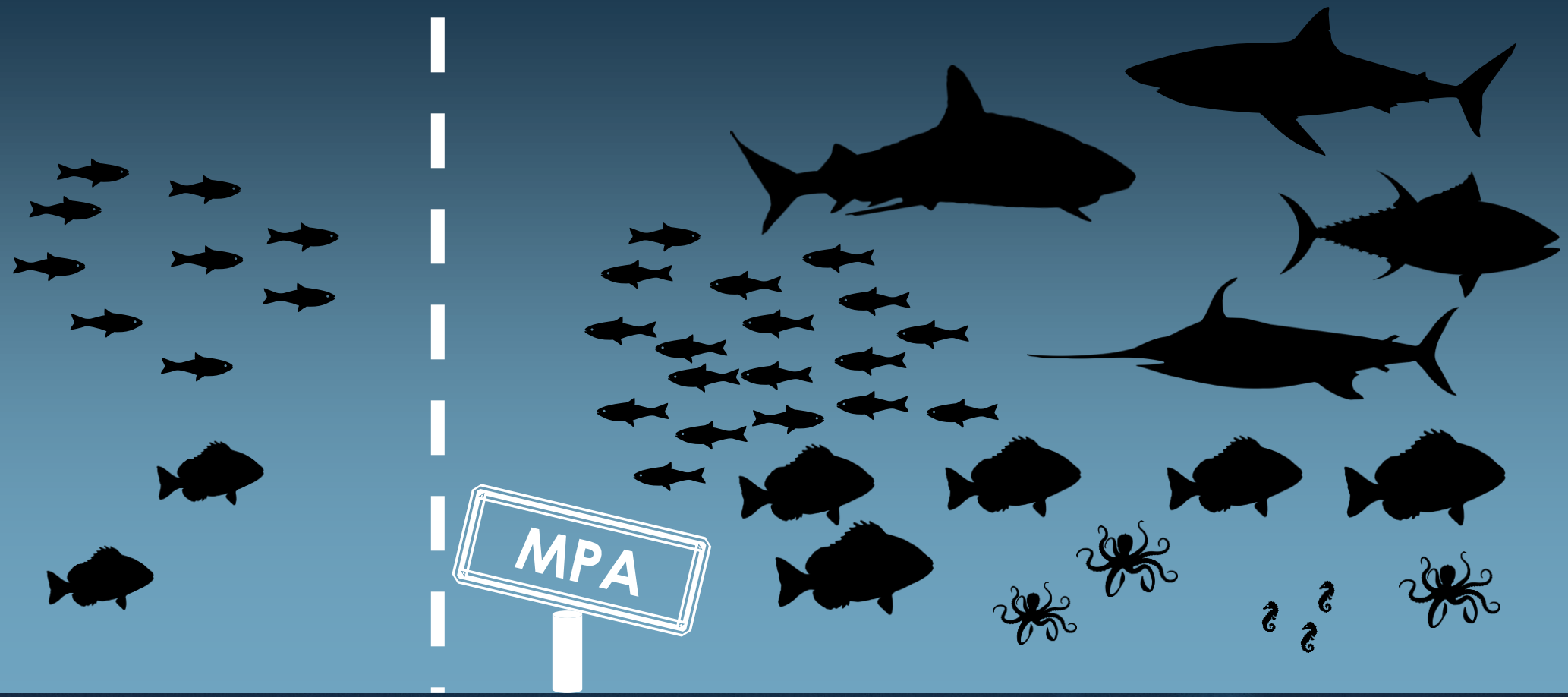
MARINE PROTECTION WORK

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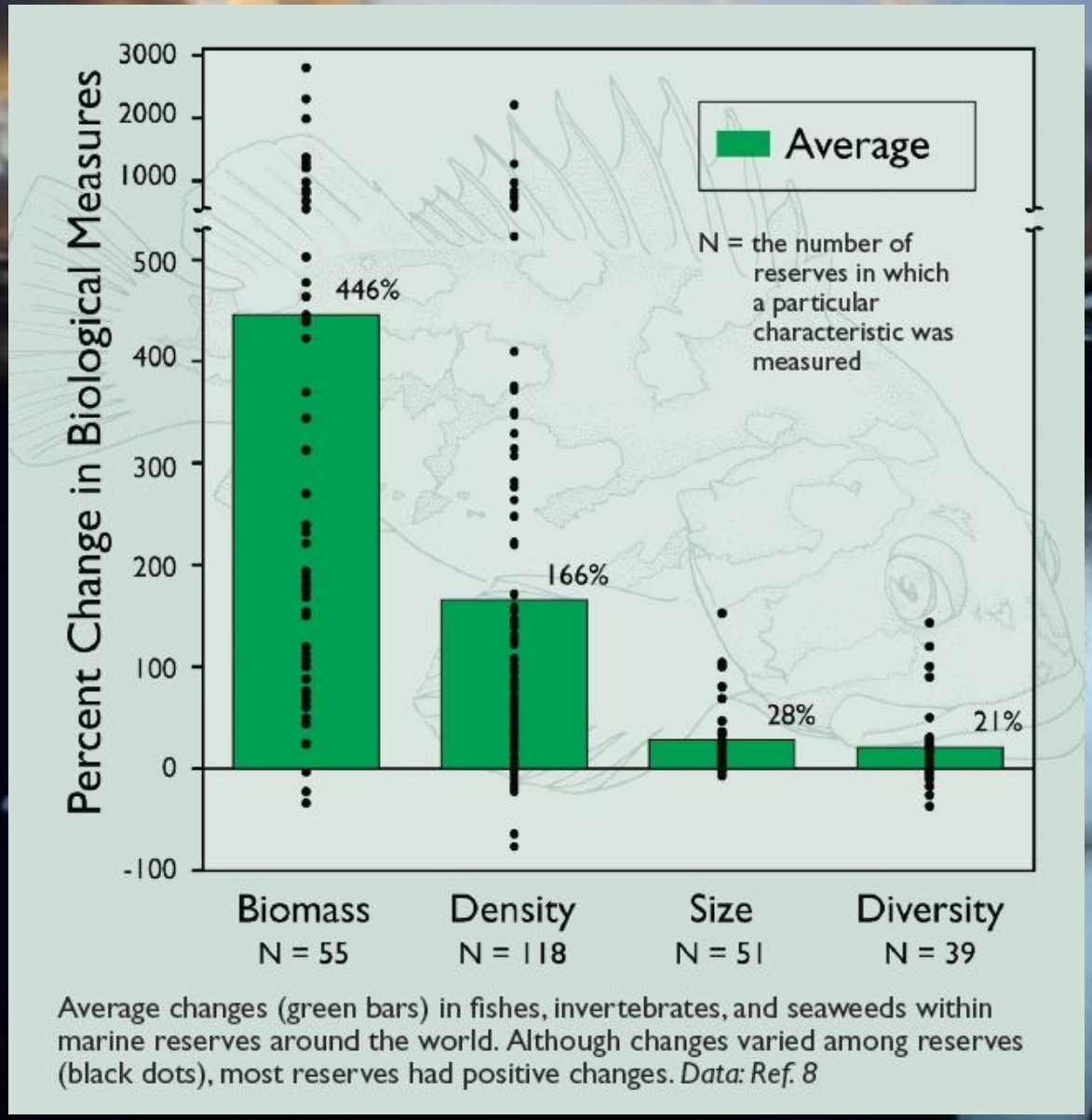
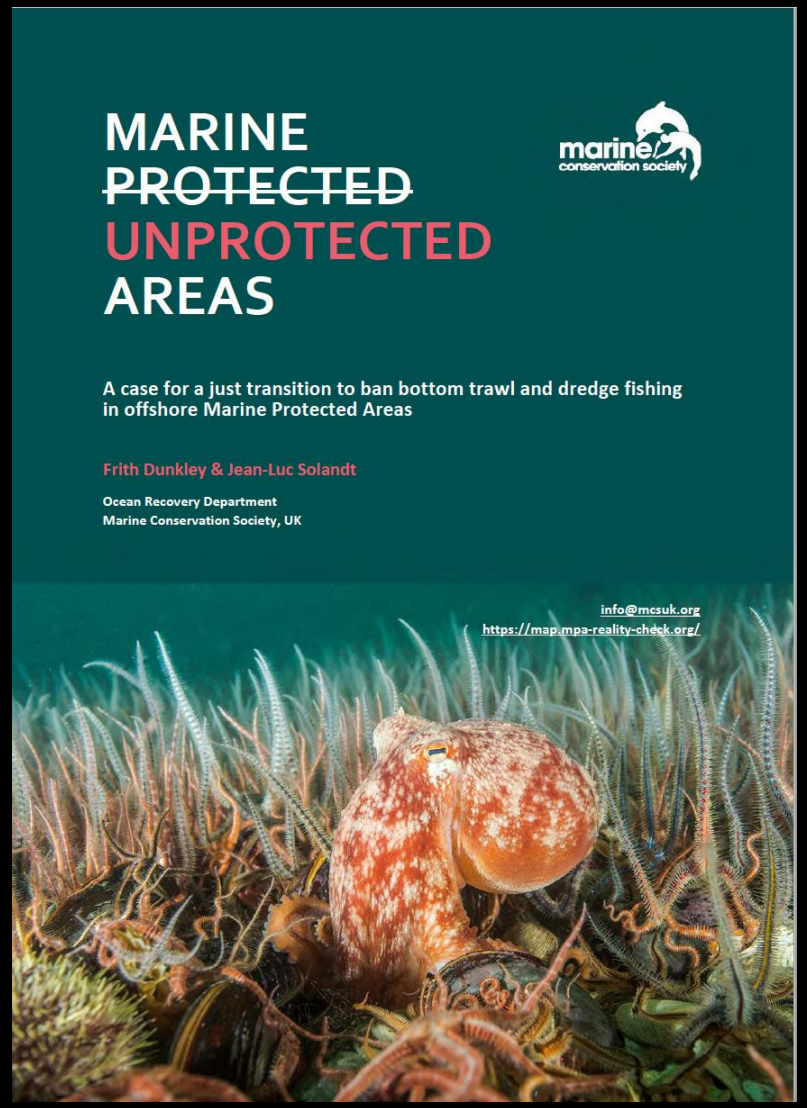


Average changes (green bars) in fishes, invertebrates, and seaweeds within marine reserves around the world. Although changes varied among reserves (black dots), most reserves had positive changes. *Data: Ref. 8*

MARINE PROTECTION WORKS

@PISCO - www.piscoweb.org



MARINE PROTECTED AREAS

Elevated trawling inside protected areas undermines conservation outcomes in a global fishing hot spot

Manuel Dureuil[1,2*], Kristina Boerder[1], Kirsti A. Burnett[2], Rainer Froese[3], Boris Worm[1]

Marine protected areas (MPAs) are increasingly used as a primary tool to conserve biodiversity. This is particularly relevant in heavily exploited fisheries hot spots such as Europe, where MPAs now cover 29% of territorial waters, with unknown effects on fishing pressure and conservation outcomes. We investigated industrial trawl fishing and sensitive indicator species in and around 727 MPAs designated by the European Union. We found that 59% of MPAs are commercially trawled, and average trawling intensity across MPAs is at least 1.4-fold higher as compared with nonprotected areas. Abundance of sensitive species (sharks, rays, and skates) decreased by 69% in heavily trawled areas. The widespread industrial exploitation of MPAs undermines global biodiversity conservation targets, elevating recent concerns about growing human pressures on protected areas worldwide.

In light of mounting anthropogenic pressures, spatial protection of sensitive habitats and are often regulated under the EU Common Fisheries Policy (table S2).

trawling in 2017, with more than 225,000 hours occurring inside MPAs (Table 1). Trawling intensity (hours per square kilometer) across the entire MPA network was 38% higher inside MPAs compared with unprotected areas (Fig. 1A and Table 1) and 46% higher inside MPAs when comparing trawling intensity per trawled area (Table 1). This suggests that MPAs do not reduce fishing pressure under current management.

Elevated trawling intensity inside MPAs was especially pronounced in large-scale EU-wide MPA types, whereas untrawled MPAs were often small and designated by individual countries (Fig. 1, C and D, and fig. S2). Of all 727 MPAs, 489 were located in territorial waters (inside 12 nautical miles, 67%).

The MPAs with highest commercial trawling effort were typically located along the continental coastline (fig. S3), were recently designated, and in IUCN categories II or V (fig. S4). No trawling effort was detected in 295 of the 727 MPAs considered in this study, implying that at least 59% of MPAs experienced commercial trawling. Of these 295 MPAs, 171 were located in territorial waters. MPAs with no commercial trawling were generally smaller and older and had some IUCN category assigned, yet only 40% had manage-

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MANY MPAs DON'T WORK – why?

- Conflicts with fisheries
- Absence of management plans and funding
- Lack of staff and resources
- Regulation and/or implementation failures

EN 2020

26

Special Report

Marine environment: EU protection is wide but not deep

EUROPEAN COURT OF AUDITORS

REVIEW SUMMARY

MARINE CONSERVATION

The MPA Guide: A framework to achieve global goals for the ocean

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BACKGROUND: Marine Protected Areas (MPAs) are places in the ocean that receive protection to safeguard biodiversity from abatable threats. Confusion exists about the definition of "protection" and likely MPA outcomes. This is because not all MPAs are the same. They range from full to minimal protection; some exist only on paper, not in practice. The resulting, understandably divergent outcomes can lead to controversies about effectiveness, undermine confidence in MPAs, and jeopardize conservation goals, including those of the Convention on Biological Diversity and the United Nations (UN) Sustainable Development Agenda. We integrated decades of research to clarify these issues.

ADVANCES: We propose a science-based, policy-relevant framework—The MPA Guide—to categorize, evaluate, and plan MPAs. It complements the well-known International Union for Conservation of Nature (IUCN) Protected Area Categories for management objectives and governance types. Together, these tools enable a comprehensive picture of any MPA.

The guide consists of four elements that define types of MPAs and activities, conditions for success, and likely outcomes. First, the four STAGES of establishment of an MPA are (i) Proposed/Committed, by a governing or other organizing body; (ii) Designated, by law or other authoritative rulemaking; (iii) Implemented, with activated regulations; and (iv) Actively Managed, with ongoing monitoring and adaptive management.

Second, the four LEVELS of protection from abatable activities within an MPA (or MPA zone), based on allowed activities, are (i) Fully Protected—no impact from extractive or destructive activities; (ii) Highly Protected—minimal impact; (iii) Lightly Protected—moderate impact; and (iv) Minimally Protected—high total impact, although still an MPA by IUCN criteria.

Third, to succeed, an MPA should be established and sustained through the enabling CONDITIONS for effective and equitable MPA planning, design, governance, and management.

Fourth, the likely OUTCOMES of an MPA depend directly on STAGE, LEVEL, and CONDITIONS to succeed.

OUTLOOK: The MPA Guide enables smart planning, design, and evaluation of new or existing MPAs by informing decisions about scientific, societal, and policy priorities and facilitates evaluating progress on international conservation targets. The guide draws attention to quality, not just quantity, of MPAs. It points to fully or highly protected areas as having the greatest likelihood of achieving biodiverse and healthy ecosystems, once the MPA is implemented or actively managed, if enabling CONDITIONS are in place. Last, our synthesis also identifies research priorities, including examining MPAs' effectiveness across LEVEL of protection for climate mitigation and adaptation, social change, and comprehensive marine spatial planning. ■

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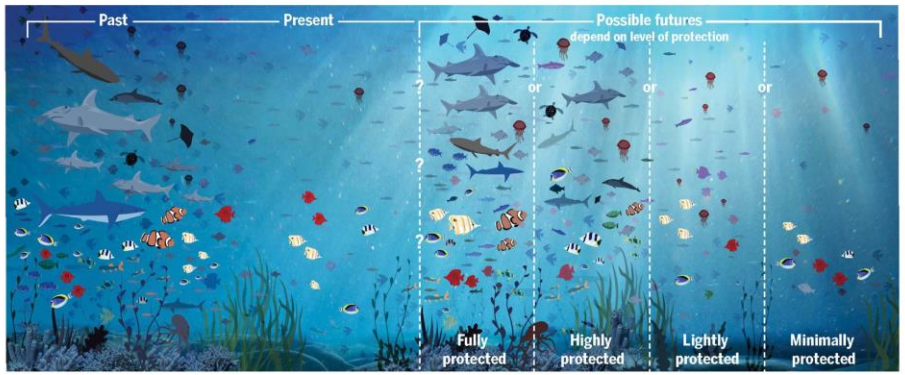

The level of protection, and therefore the effectiveness of MPAs, will greatly influence the future state of the ocean. Past ocean ecosystems were abundant and diverse in species and habitats. Over time, expanded and intensified human activities depleted and disrupted ocean ecosystems and reduced their services. MPAs, in conjunction with climate mitigation strategies and more sustainable uses of the ocean, can conserve and restore biodiversity and the resilient ecosystems needed for human well-being. Different levels of protection will result in different outcomes, if enabling conditions are satisfied.

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THE MARINE PROTECTED AREAS GUIDE (*MPA GUIDE*)

MARINE PROTECTED AREAS

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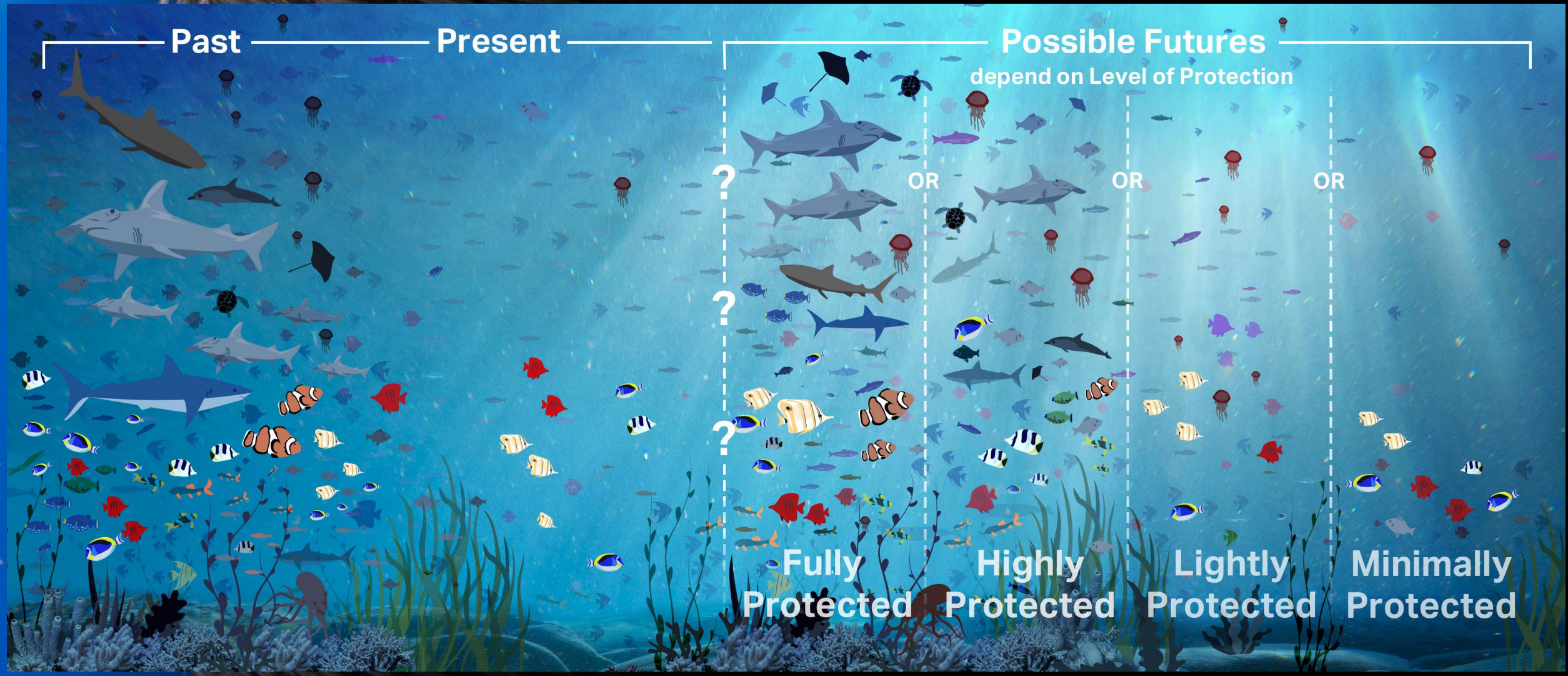

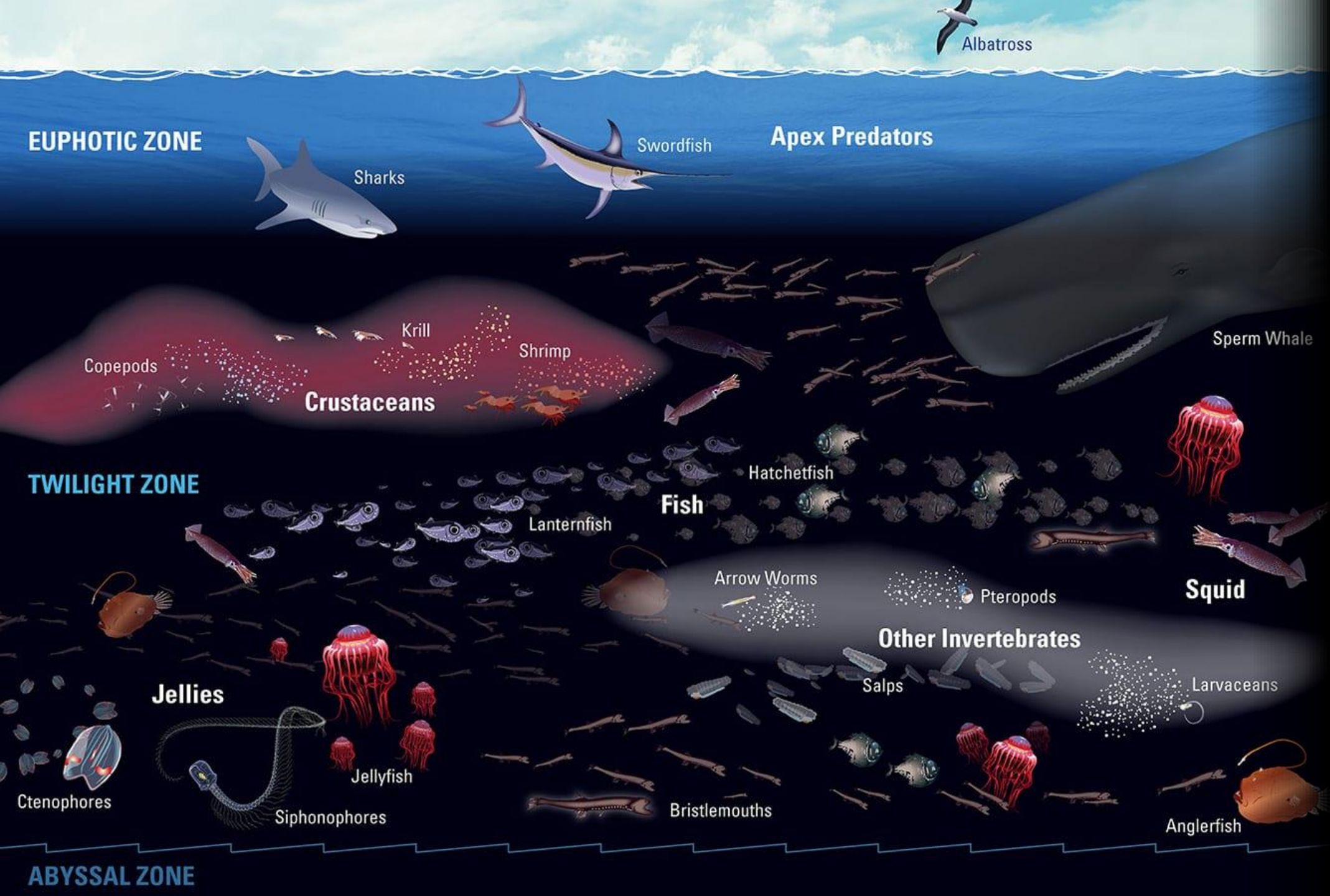

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Seabird aggregations

Increased nutrients

Taylor columns

Increased nutrients

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Pelagic predators

Light-dependent coral reefs

Pelagic predators

Mixing

HIGH SEAS SEAMOUNT

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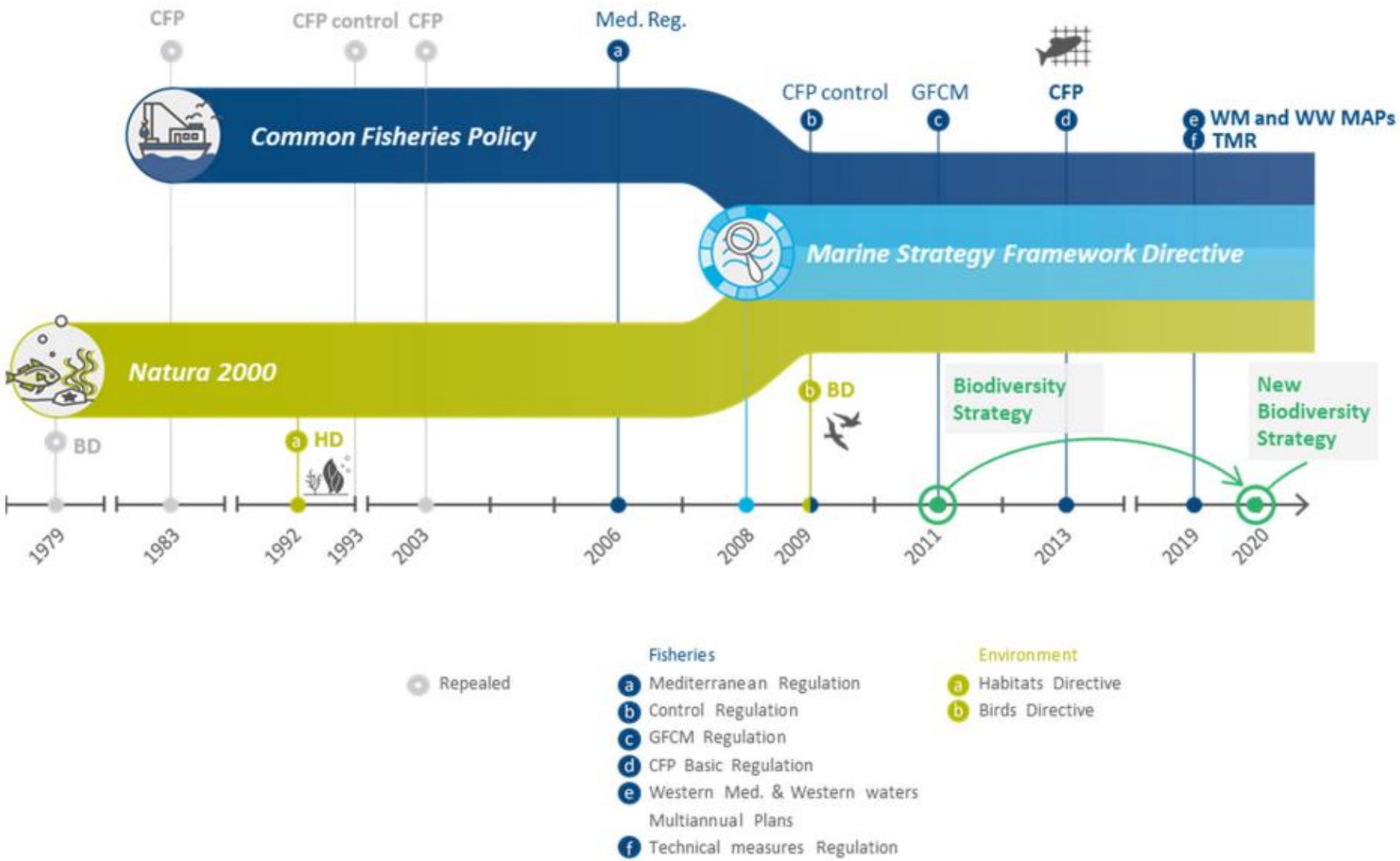
Cold-water coral reefs

Vertical migrating species

Internal waves

Internal waves

Figure 4 – Policy overview



Source: ECA.

From government leadership to community-based approaches

Case studies from Portugal for effective marine protection

THANK YOU!

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