SEAGHOSTS Global spatial ecology and conservation of the world's smallest and elusive seabirds, the storm petrel

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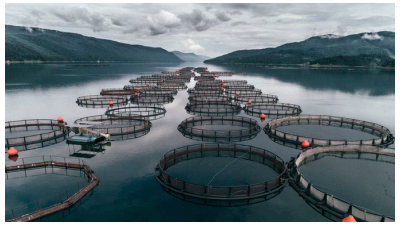
Introduction

SEAGHOSTS

Anthropogenic impacts at sea

Inform management and conservation



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Strom Petrel Relevence

Studies on seabirds have been biased towards the largest species

Storm petrels are the smallest seabirds

Spatio-temporal distributions &

foraging ecology

the current last frontier

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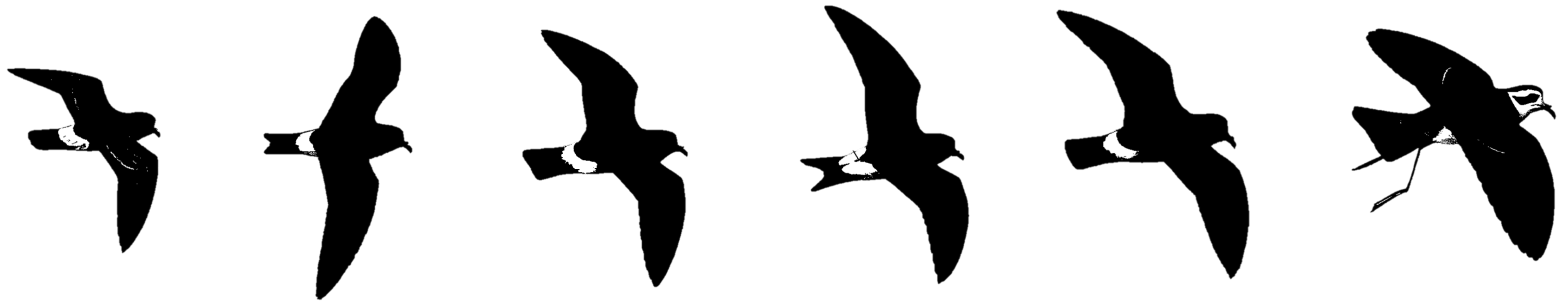
Strom Petrel Relevence

6 storm petrels currently recognized as species



HYDPEL HYDMON HYDCAS HYDLEU HYDJAB PELMAR

Annual movements, phenology, vocalizations and the feeding ecology

1. distributions, hotspots and seascapes European waters
2. define the most relevant taxonomic units
3. evaluate several anthropogenic impacts on storm petrels
4. suitable locations for future Marine Protected Areas

SEAGHOSTS Objectives

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Gobierno de España · Vicepresidencia Tercera del Gobierno · Ministerio para la Transición Ecológica y el Reto Demográfico

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In a nutshell

SEAGHOSTS

Winged Ghosts Wandering the Oceans

Coordinated by

Universitat de Barcelona

Partners (10)

Universitat de les Illes Balears

Ciências ULisboa – Faculdade de Ciências da Universidade de Lisboa

OKEANOS-UAc

Università degli Studi di Palermo

Università degli Studi di Milano

NINA – Norwegian Institute for Nature Research

Ornithological Society – Hellenic Ornithological Society

Justus-Liebig-Universität Giessen

ISPRA – Istituto Superiore per la Protezione e la Ricerca Ambientale

Aarhus University – Department of Ecoscience

Self-Funded Partners (6)

UCC – Coláiste na hOllscoile Corcaigh, University College Cork, Ireland

Cardiff University – Prifysgol Caerdydd

Bretagne Vivante – Une voix pour la nature

Environment and Climate Change Canada / Environnement et Changement climatique Canada

Náttúrustofa Suðurlands

World Seabird Union

- SINRC
- NINA
- Aarhus Univ
- Univ Cork C
- Cardiff Univ
- Giessen Univ
- Bretagne Viv.
- Fc. Ciências
- Okeanos Az
- Univ Barcelona
- Univ I Balears
- Univ Palermo
- Univ Milano
- ISPRA
- HOS

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Project ID
Biodiversa2022-442

€ 2,084,298

Apr 2024
Mar 2027

Funded by FB, FCT, GSRI, RCN, MUR, IFD, DFG, & EU

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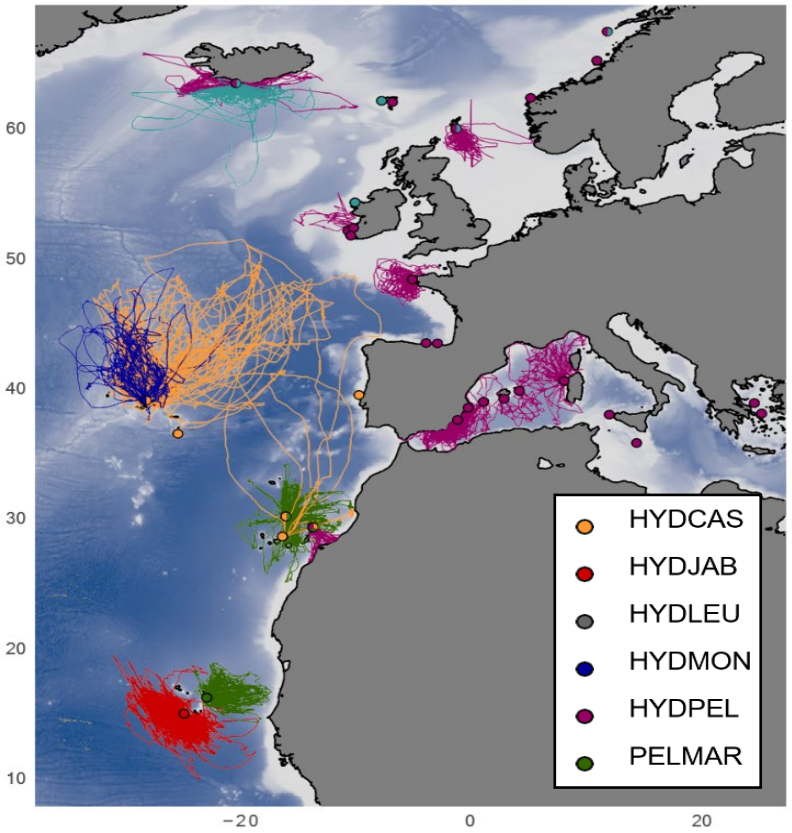
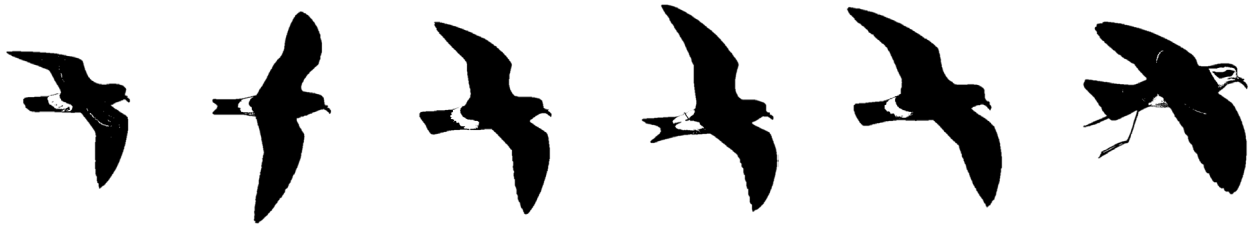
Spatial distribution and trophic ecology of the STORM PETRELS





O1: ***Spatial distribution and trophic ecology*** *of the storm petrels that breed along Europe*

O2: *Annual distribution,* ***migratory connectivity*** *and at-sea behaviour of storm petrel populations*

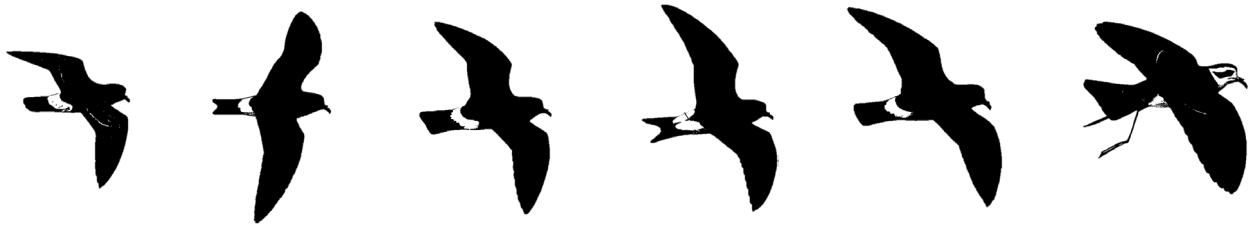
O3: *Establishing the* ***Conservation Units*** *for the storm petrels that breed in Europe*

O4: *Overlap between the abundance of storm petrels and* ***human activities at sea***

O5: *Practical toolkit for* ***improving research and conservation*** *of storm petrels at colony sites*

Aims

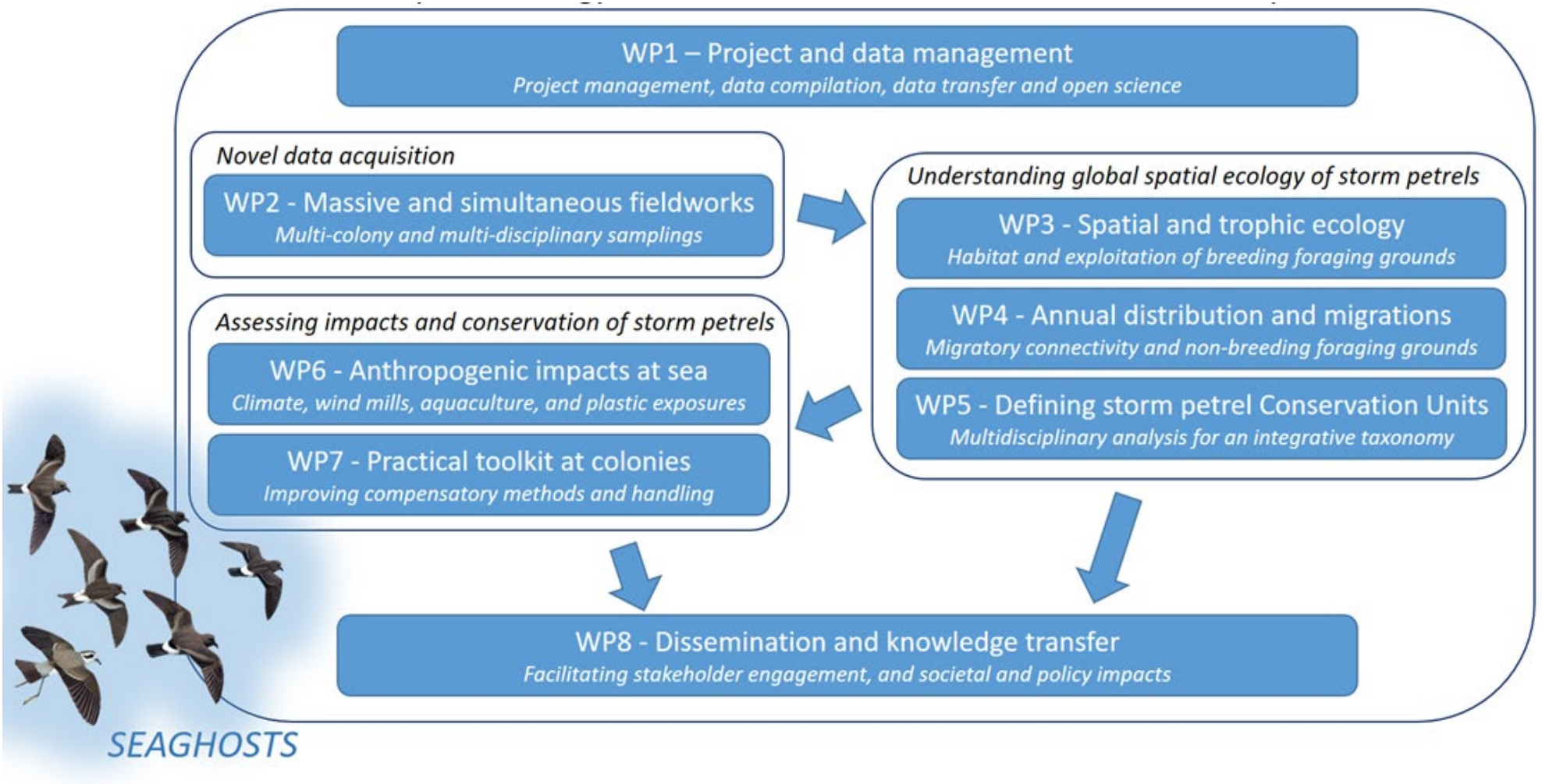
Spatial distribution and trophic ecology of the STORM PETRELS



SEAGHOSTS **aims to** gather the efforts of all sectors involved in Marine Biodiversity and MSP

- **Academia, Science and Technology**
- **Policy**
- **Industry**
- **NGOs**
- **Civil Society**

The Work Package structure



Global spatial ecology and conservation of the world's smallest and elusive seabirds, the storm petrel, across the Mediterranean and the North East Atlantic Ocean

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Fundación Biodiversidad

Objective FIVE. ***Produce a practical toolkit for improving research and conservation of storm petrels at colony sites***: contribution to ethical research and management guidelines.

Task 7.1 - Testing for detrimental effects of predators at colony sites on storm petrels

Task 7.2 - Testing for detrimental effects of researchers' manipulation on storm petrels

Task 7.3 - Testing for beneficial effects of artificial nesting on storm petrels

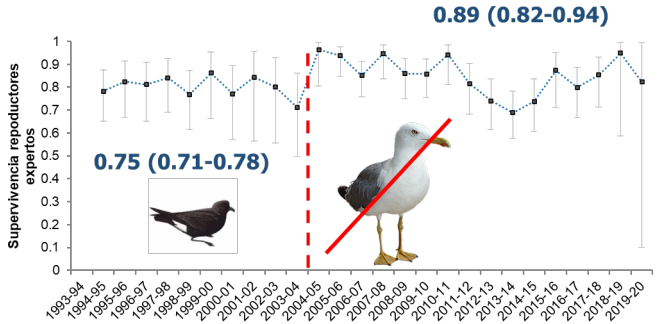
Task 7.1 - Testing for detrimental effects of predators at colony sites on storm petrels

Identify colonies with predation over storm petrels

- Types of predators (rats, cats, gulls, lizards….)
- Management actions

Demographic analyses (survival & BS)

% colonies threatened by predators. Is an increasing threat?



Task 7.2 - Testing for detrimental effects of researchers' manipulation on storm petrels

Demographic analyses GLS, GPS, Sampling vs. control (survival, bs, return rates)

- Experiment at Benidorm (10 birds metal rings vs 10 birds PVC rings)

DATA AVAILABLE:

GPS incubation	N retrieved/tagged
Benidorm	43/43 **(100%)**
Espartar	12/14 **(86%)**
Pobra	4/7 **(57%)**
Aire	4/6 **(67%)**
Others	…

GLS	N retrieved/tagged GLS	N retrieved/tagged Control	BS year tagging	BS GLS year retrieval	BScolony year retrieval
Benidorm 2019-20	9/10 **(90%)**	23/57 **(40%)**	100%	56%	58%
Benidorm 2020-21	11/20 **(55%)**	69/106 **(65%)**	65%	60%	59%
Benidorm 2021-22	8/10 **(80%)**	88/136 **(65%)**	70%	37.50%	51%
Espartar 2021-22	4/10 **(40%)**	10/47 **(21%)**	40%	50%	61%

Task 7.3 - Testing for beneficial effects of artificial nesting on storm petrels

Types of nest boxes and petrel species

- Demographic analyses (survival & BS) nest box vs natural nest
- Nest box occupation (previous nest?, illuminated area?, density storm petrels? Others?)