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DiadSea

DiadSea

Transnational cooperation to improve the management and conservation of diadromous fish at sea

EAPA_0011/2022

Stakeholders' session

Midterm meeting, 15 October 2025

2021 2030 United Nations Decade of Ocean Science for Sustainable Development

DiadSea - Transnational cooperation to improve the management and conservation of diadromous fish at sea (EAPA_0011/2022)

Partnership:

- 9 Beneficiary partners (Lead Partner – University of Évora)
- 28 Associated partners

Dates: November 2023 to October 2026

Total Budget:

- 3,4 M €

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UNIVERSIDADE DE ÉVORA

MARE

AR NET AQUATIC RESEARCH NETwork

Ciências ULisboa

USC UNIVERSIDADE DE SANTIAGO DE COMPOSTELA

INRAE

IPMA Instituto Português do Mar e da Atmosfera

Foras na Mara Marine Institute

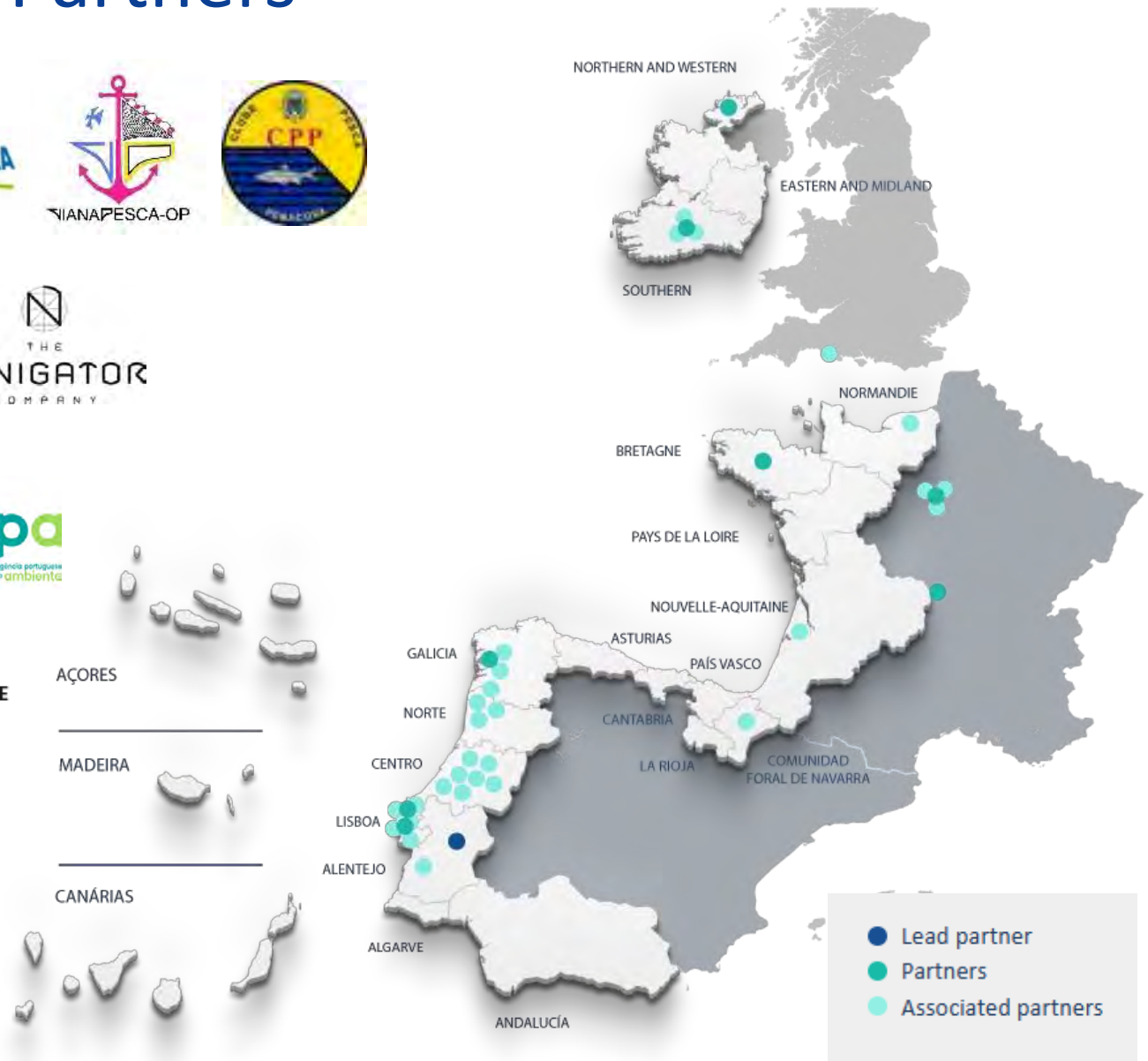
Iascach Intíre Éireann Inland Fisheries Ireland

MUSÉUM NAL HIST NATURELLE

LOGRAMI Loire Grands Migrateurs

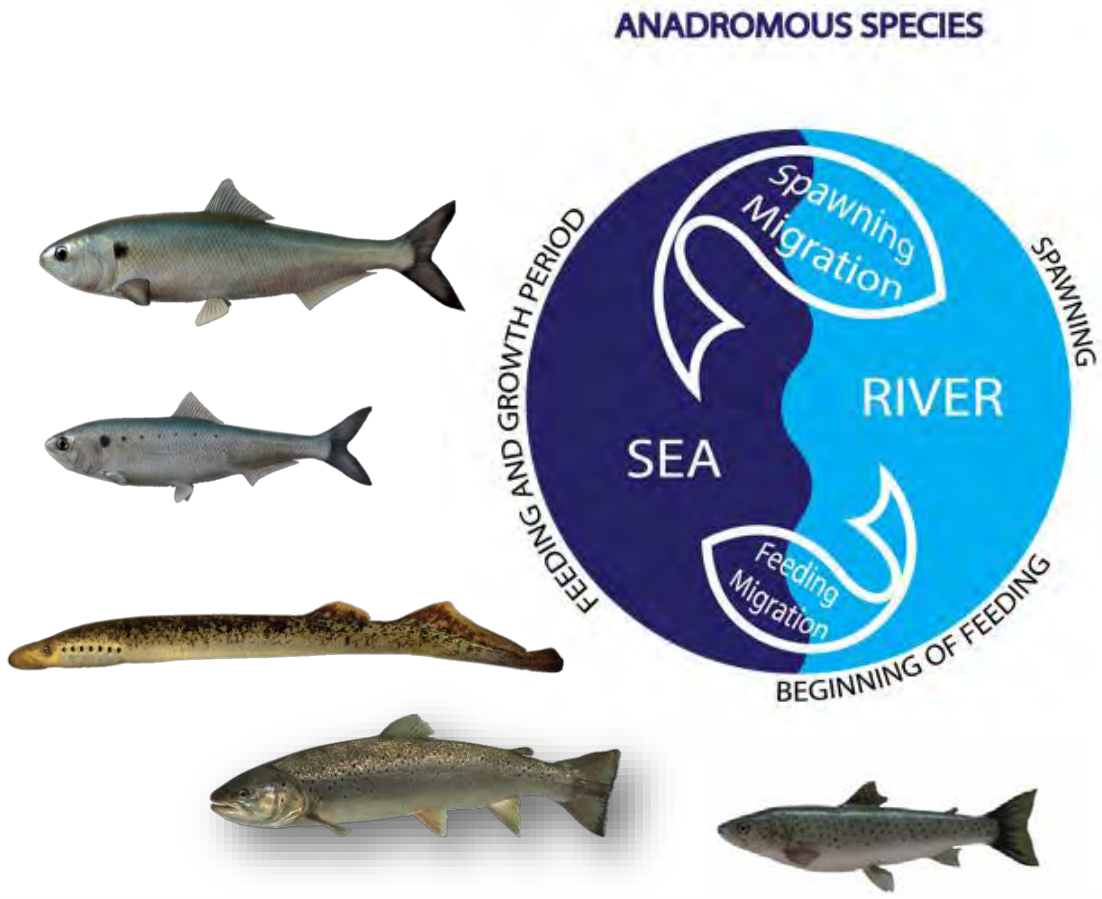
Associated Partners

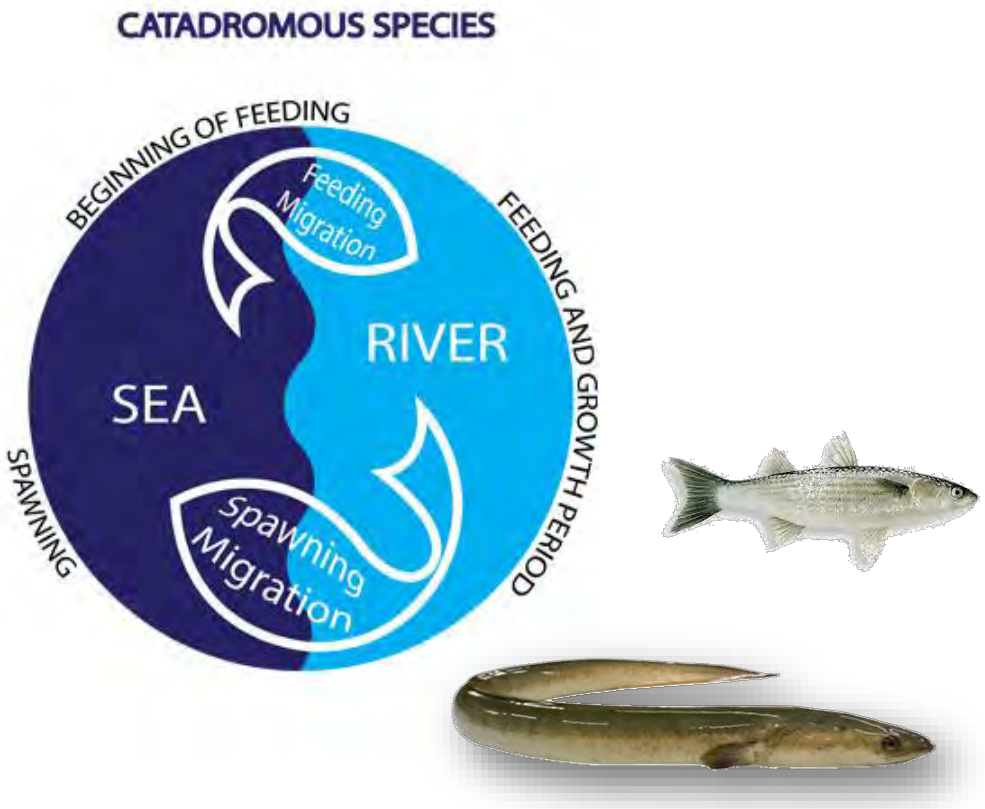
APPRMM - Associação de Profissionais de Pesca do Rio Minho e do Mar



https://www.atlanticarea.eu/discover-our-projects/approved-projects/diadsea

Diadromous species across the Atlantic Area targeted in DiadSea





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Problematic and main objectives

- **Knowledge gaps and fewer management and conservation actions directed to diadromous fish in the marine environment.**

- Diadromous fish occur along the Atlantic Area (AA) but there is a **lack of joint solutions to mitigate common threats exacerbated by climate change.**

- DiadSea aims to foster a **transnational cooperation in the AA**, to enhance the sustainable management and conservation of diadromous fish in marine habitat.

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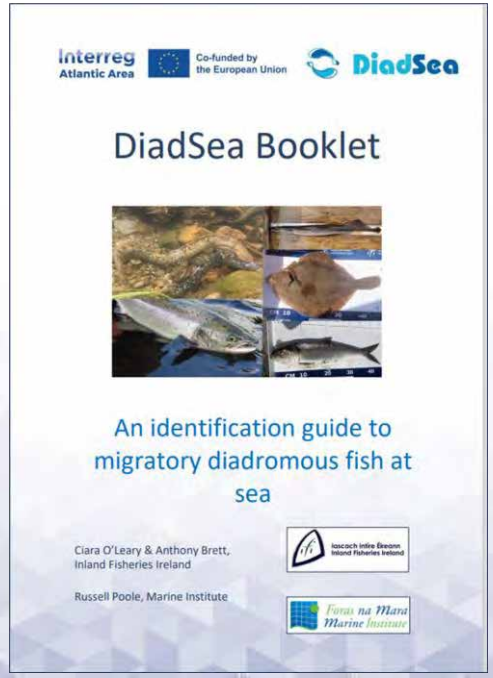
WP1: Biological data collation

DiadSea Project:

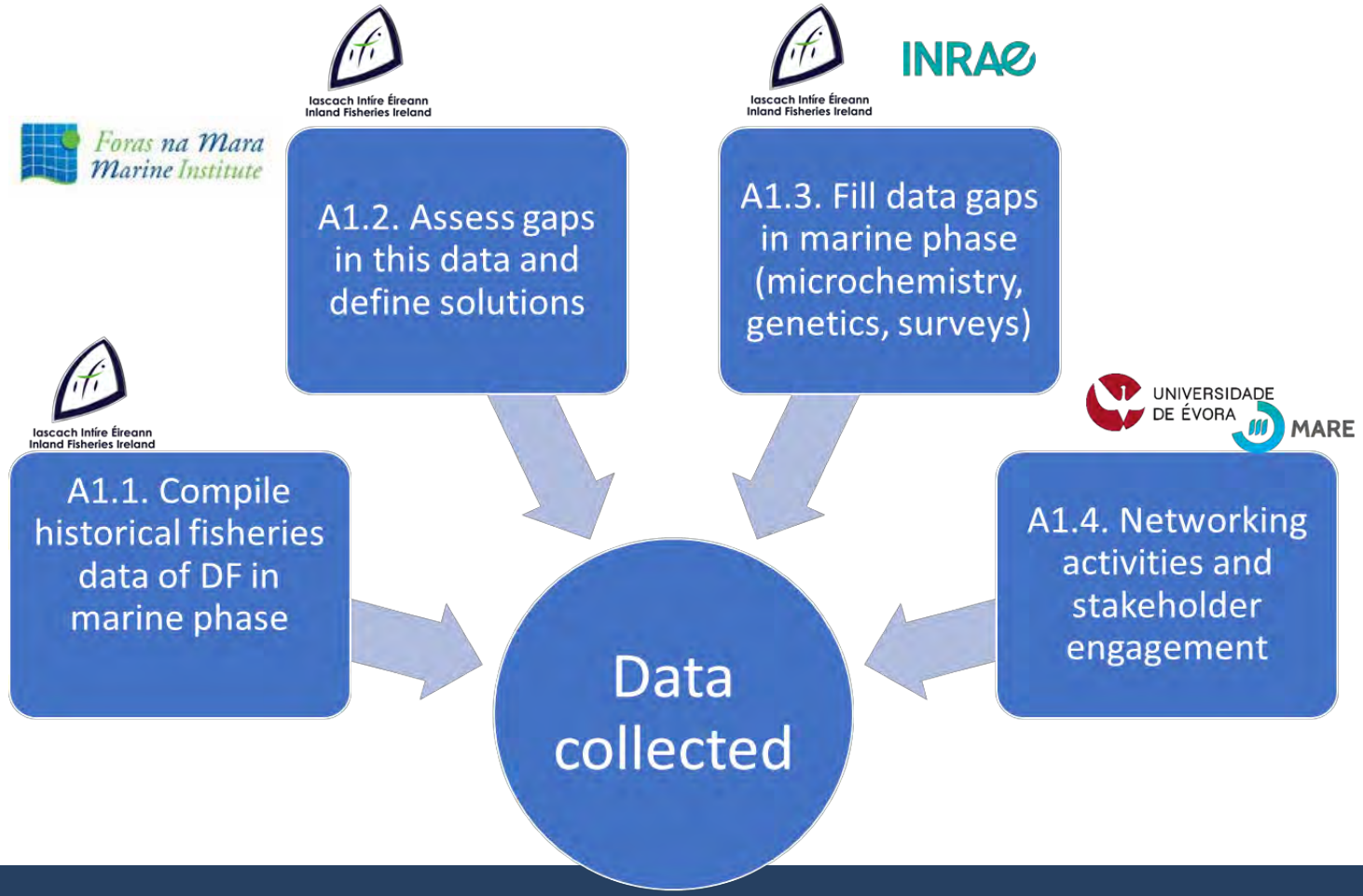
Transnational cooperation to improve the management and conservation of diadromous fish at sea (EAPA_0011/2022)



Ciara O'Leary
Anthony Brett
Inland Fisheries Ireland

This project is co-financed by the Interreg Atlantic Area Programme through the European Regional Development Fund.

WP 1: Biological data collation



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Target Species:

- Atlantic salmon
- Sea trout
- European eel
- Thin-lipped mullet
- Golden-grey mullet
- Flounder
- Allis shad
- Twaite shad
- Sea lamprey
- River lamprey
- Smelt









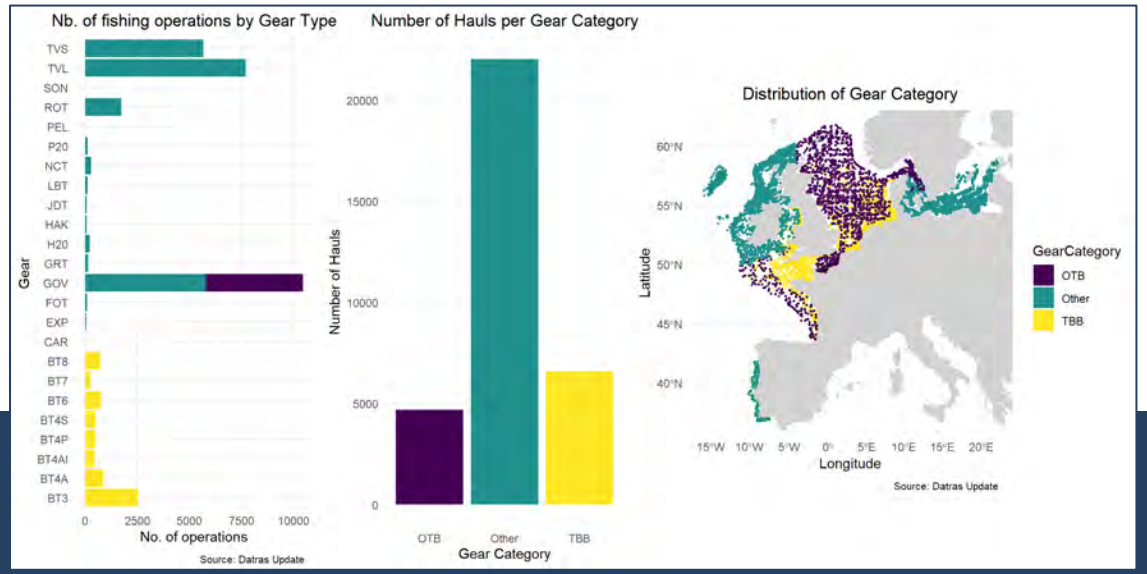

Task 1.1: Compilation of historical fisheries data [Complete]

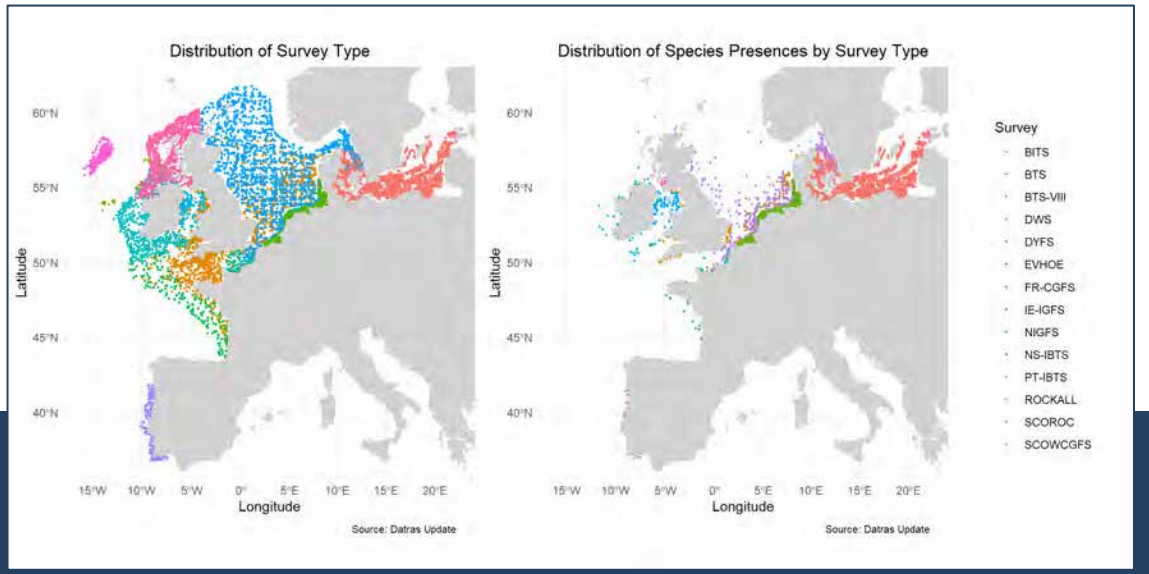
Aim of task:

- Collate and interrogate existing fisheries dependent and independent data from across the Atlantic Area (AA) (Led by IFI).
- Create a database to visualise the collated data (led by INRAE)

Outcome of collation:

- **42** data sets were collated that accounts for **468,085** fishing hauls.
- INRAE created database to visualise the collated datasets





Task 1.2: Assess gaps in this data and define solutions [Complete]

O2: Data gaps report

Main results:

- Shared observations (across all countries):
  - Lack of available data sources (DF spp)
  - Misidentification of species
  - Lack of ‘true’ presence data
  - Predominance of bycatch data available

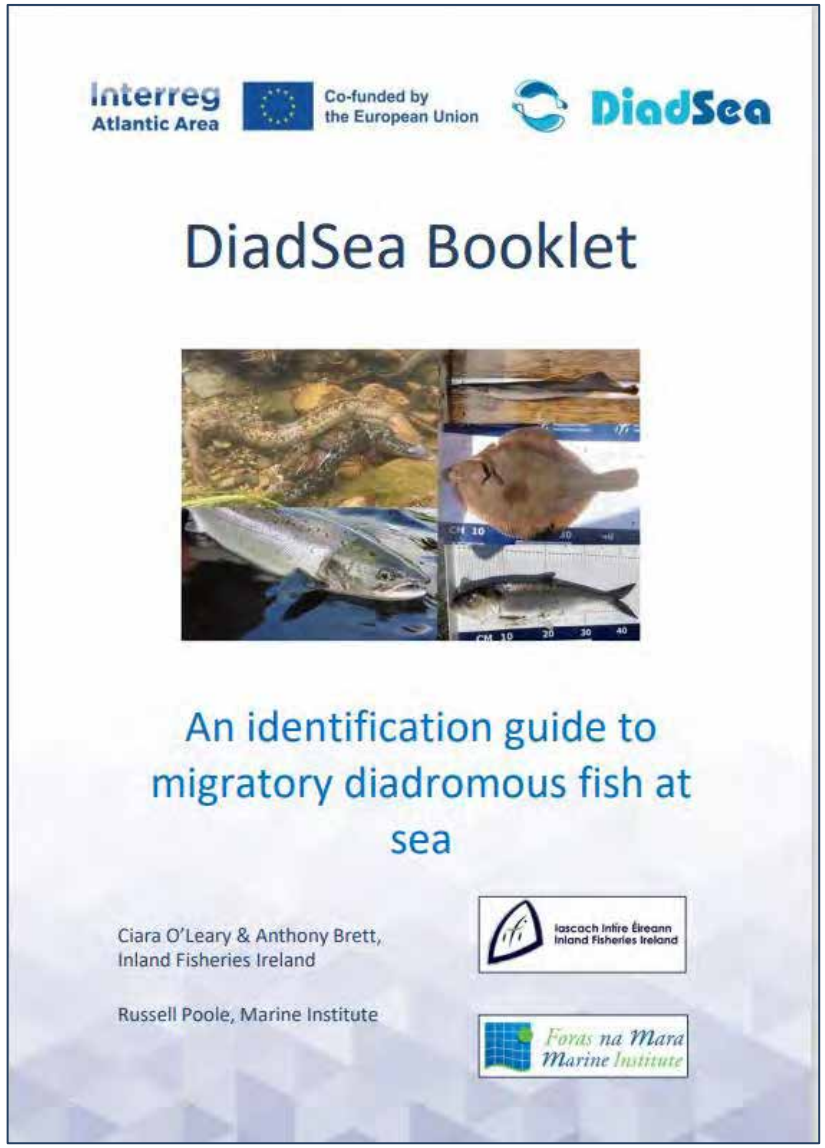
Task 1.2: Assess gaps in this data and define solutions

D3: Identification booklet (Collaboration with MI)

- DF species are underreported and regarded as bycatch in some countries – due to lack of economic importance amongst other reasons

Aims:

- To aid in accurate Diadromous Fish (DF) identification at sea
- Increase presence reporting at sea



ID Booklet:

Translated to:

- Spanish
- French
- Portuguese

5 Atlantic Salmon (*Salmo salar*)

Identifiable features:

- Post-smolts and adults steel-blue or silver in colour at sea/ freshly returned to freshwater
- Colour gradually changes to dark brown after returning to freshwater
- Streamlined shape with pointed head
- Upper jaw does not extend beyond the rear of the eye
- Few, if any black spots found below the lateral line
- Concave/forked tail with a slim tail wrist
- Easy to pick up by tail
- Juvenile 'Smolts' typically leave freshwater from March – late May
- 'Multi-sea winter' adult fish typically return to freshwater in spring and 'grilse' from June onwards to spawn over the winter months. Post spawning adults known as 'Kelts' are encountered in freshwater during their downstream migration from winter to early spring.

Table 1. Salmon freshwater/marine presence calendar.

Salmon (Adult)												
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Marine phase				Marine or Freshwater				Freshwater phase				

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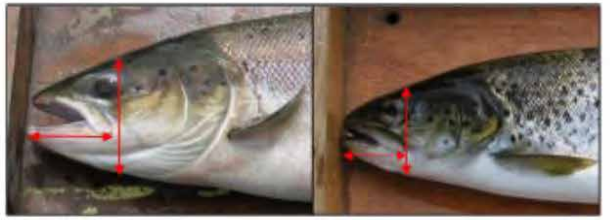
16 Direct visible comparisons:

Salmon vs Sea trout



Salmon (left): Upper jaw does not extend further than the rear of the eye.
Sea trout (right): Upper jaw extends further than the rear of the eye.

European eel vs Sea lamprey:

Eel (left): Clearly developed jaw.
Sea lamprey (right): No jaw present, oral sucker disc present instead

European eel vs Conger eel:
Conger upper jaw extends beyond lower jaw. European eel lower jaw extends beyond upper jaw.
Conger dorsal fin begins just behind pectoral fin, further back on a European eel.

This project is co-financed by the Interreg Atlantic Area Programme through the European Regional Development Fund.

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Task 1.3: Fill the data gaps

Aim:

To fill the data gaps using fishery independent and dependant surveys

Fishery Independent:

- eDNA surveying
- Genetic analysis of shad and sea trout
- Microchemistry analysis of shad and sea trout

Fishery Dependant:

- Angler interviews and bycatch survey
- Fish market and Harbour visits
- Online angler surveys

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eDNA sampling:

- 4 sampling sessions in **Ireland** and **France** (respectively)
- Divided into **2 * Spring** & **2 * Summer** sessions
- SOP created under task 1.2
- 2 peristaltic pumps filtering water for **45** minutes per site
- Main aims:
  - Detect diadromous species
  - Assess difference in species assemblages between:
    - Location
    - Season
    - Country
- **Portugal** sampling (Scheduled in Dec – Jan)
  - Focus on Sea Lamprey and Shads

Preliminary results for Spring sampling: Ireland

Youghal:

6 spp detected

- *Anguilla sp.* (sites 1 and 2)
- *Alosa sp.* (sites 1 and 2)
- *Chelon ramada* (site 2)
- *Salmo sp.* (sites 1 and 2)
- *Lampetra sp.* (site 2)
- *Petromyzontidae* (site 2)

Waterford:

8 spp detected

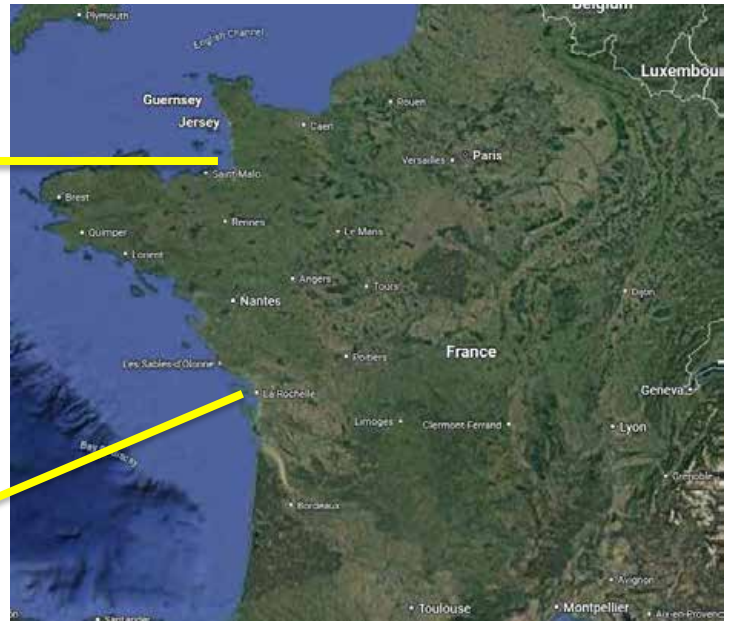
- *Anguilla sp.* (sites 1 and 2)
- *Alosa sp.* (sites 1 and 2)
- *Chelon ramada* (sites 1 and 2)
- *Osmerus eperleanus* (sites 1 and 2)
- *Salmo salar* (site 1),
- *Salmo sp.* (sites 1 and 2)
- *Lampetra sp.* (site 1)
- *Petromyzontidae* (site 2)

Preliminary results for Spring sampling: France

Mont–Saint-Michel Bay:

3 spp detected

- *Anguilla sp.* (site 1)
- *Chelon ramada* (sites 1 and 2)
- *Salmo sp.* (sites 1 and 2)



Gironde Estuary:

2 spp detected

- *Alosa sp.* (sites 1 and 2)
- *Chelon ramada* (sites 1 and 2)

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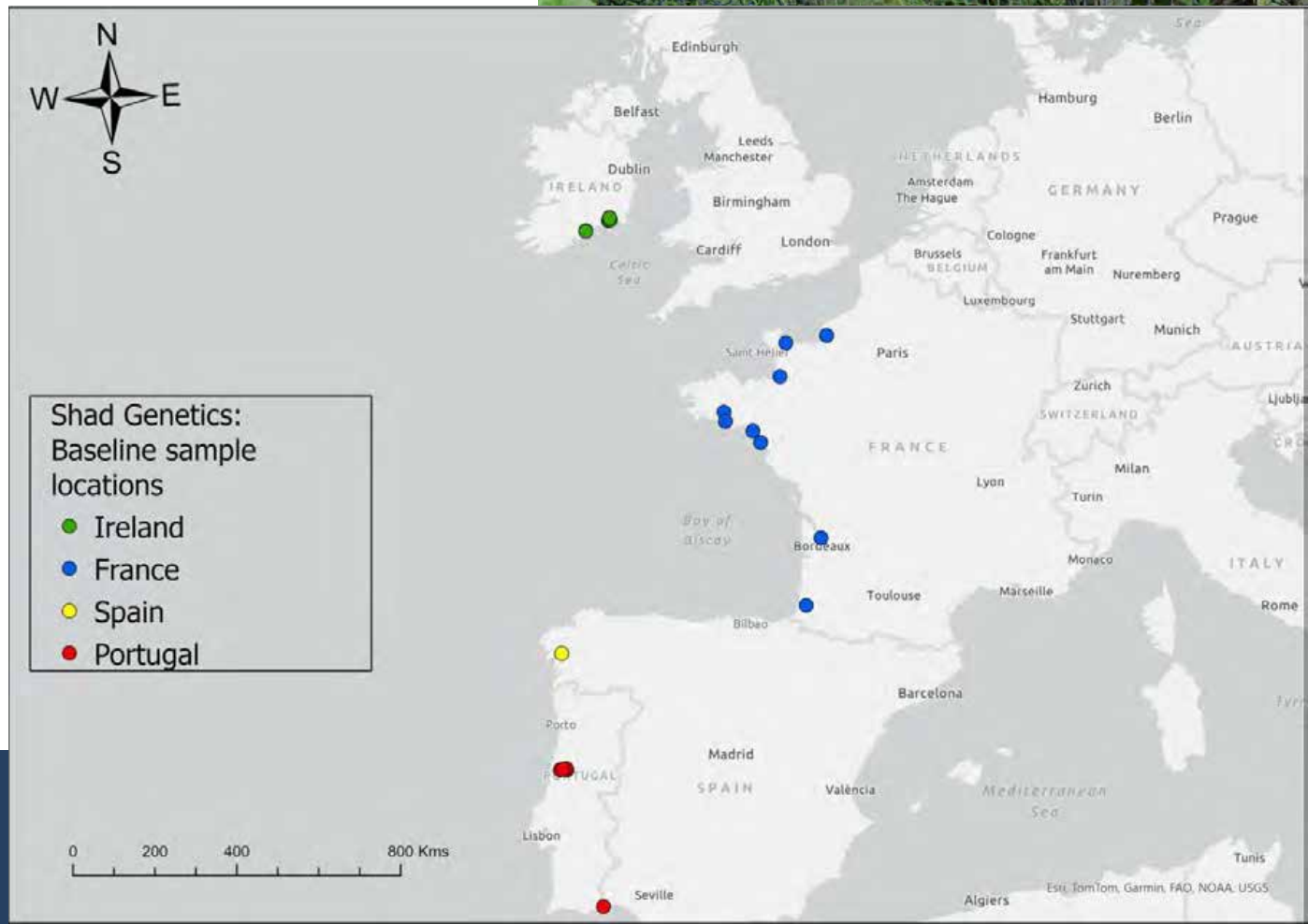
1.3 Genetic analysis: Shad

Aims:

- To build on DiadES data by sampling marine caught Shad
- Create genetic database
- Assess area of origin for marine shad in the Atlantic Area

Update:

- Samples have been collected and sent to **INRAE** (France)
- Samples are being processed



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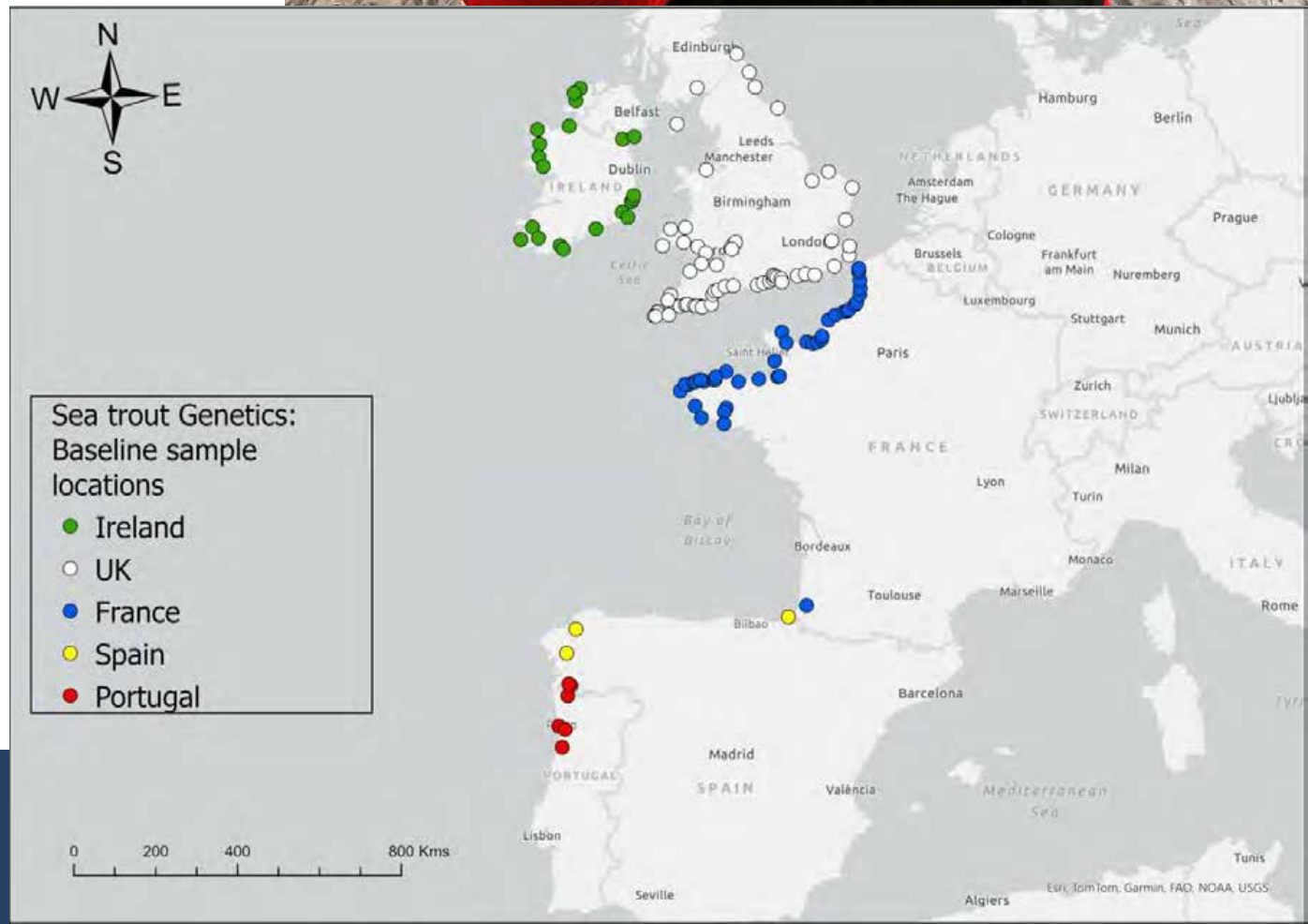
1.3 Genetic analysis: Sea trout

Aims:

- Create genetic database Sea trout
- Identify genetic area of origin for sea trout adults

Update:

- **University College Cork** contracted to undertake the genetic analysis
- Samples have been collected and sent to **University College Cork** (Ireland) and **INRAE** (France)
    - Aligning analysis with SAMARCH project
- Samples are being processed



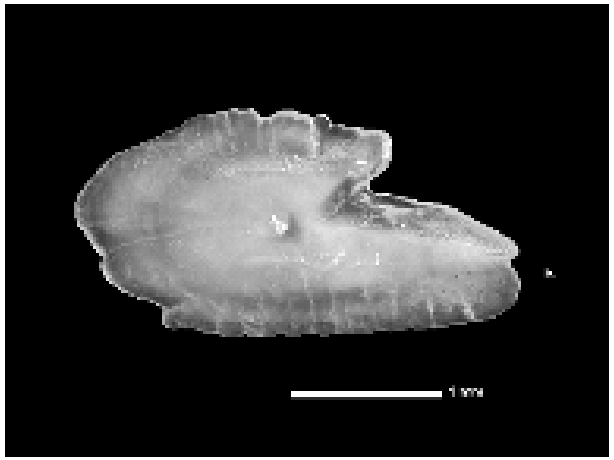
1.3 Microchemistry analysis: Shad and Sea trout

Aims:

- Use Shad otoliths to build on work undertaken in DiadES (identify marine habitat use at sea)
- Use Sea Trout otoliths to investigate natal origin across the Atlantic area
    - Samples will be referenced against previously created baselines

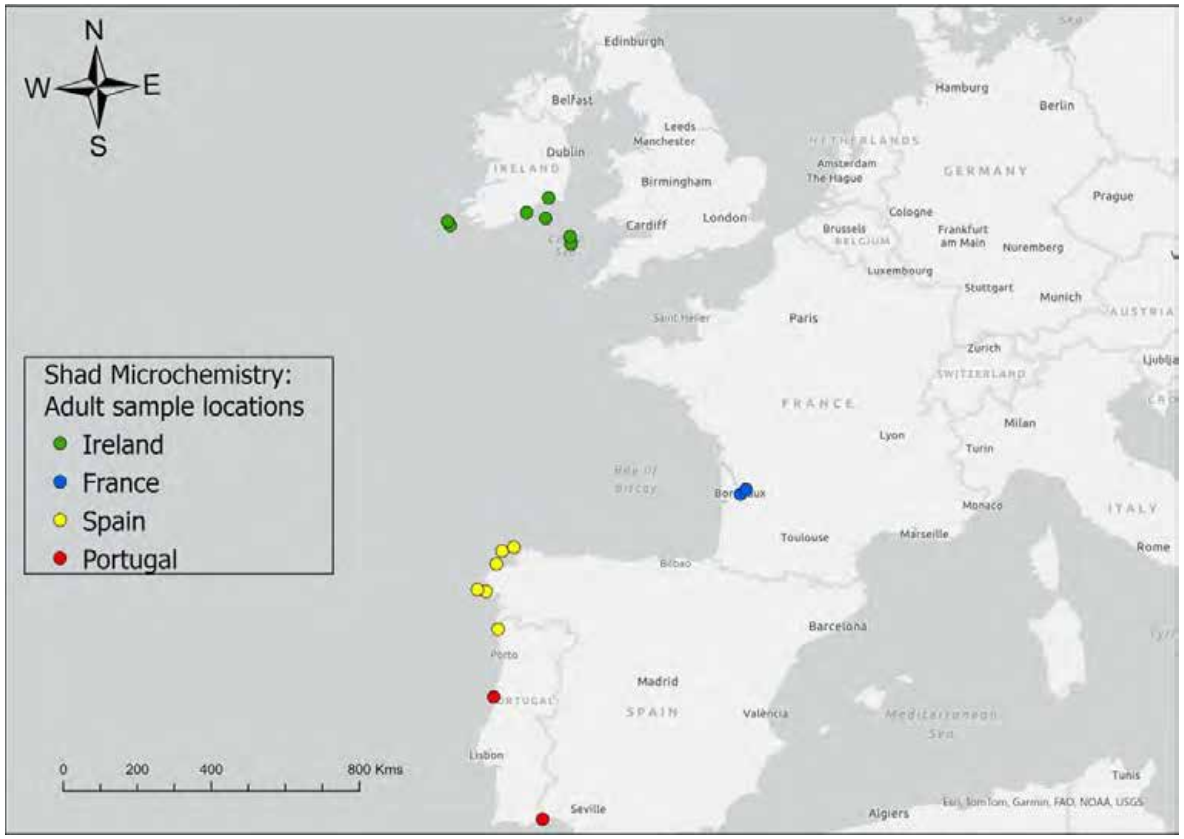
Updates:

- Majority of samples have been sent to INRAE
- Remaining samples being prepared for shipping
- Samples are being prepared for analysis

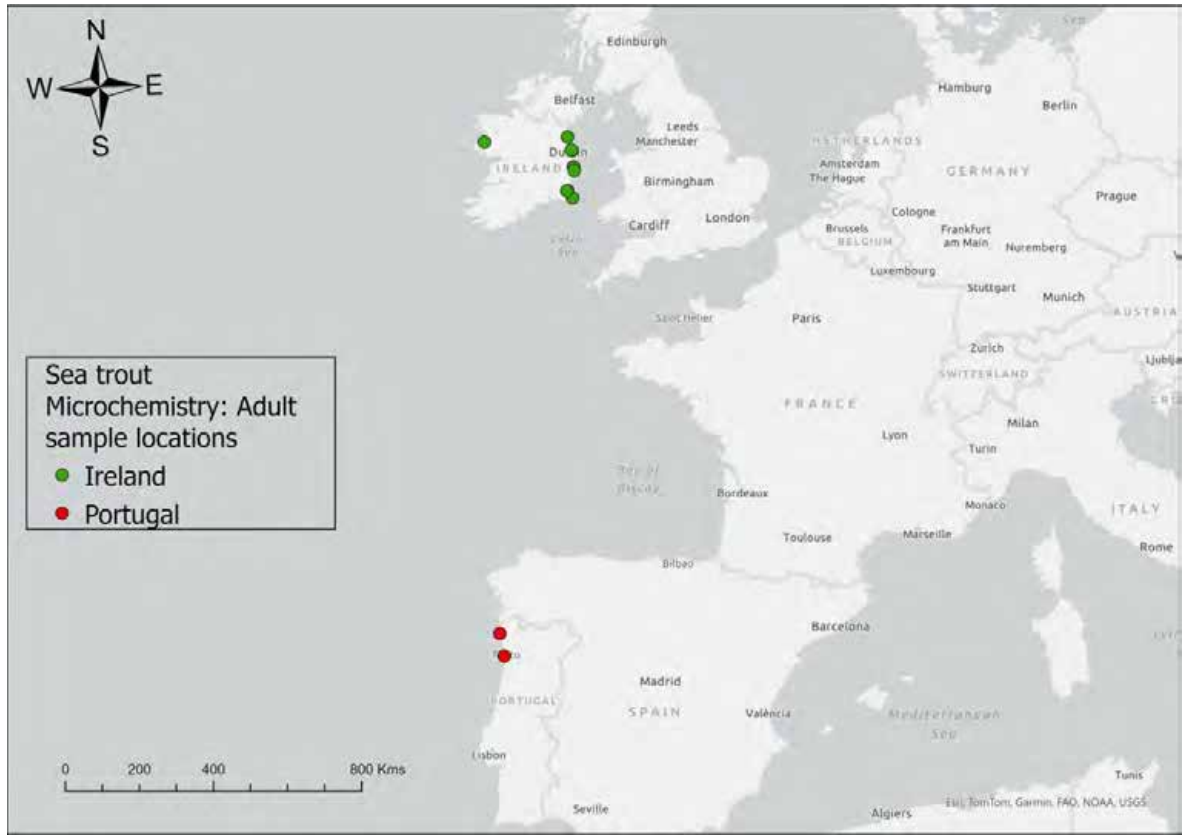


Adult marine sample locations:

Shad



Sea trout



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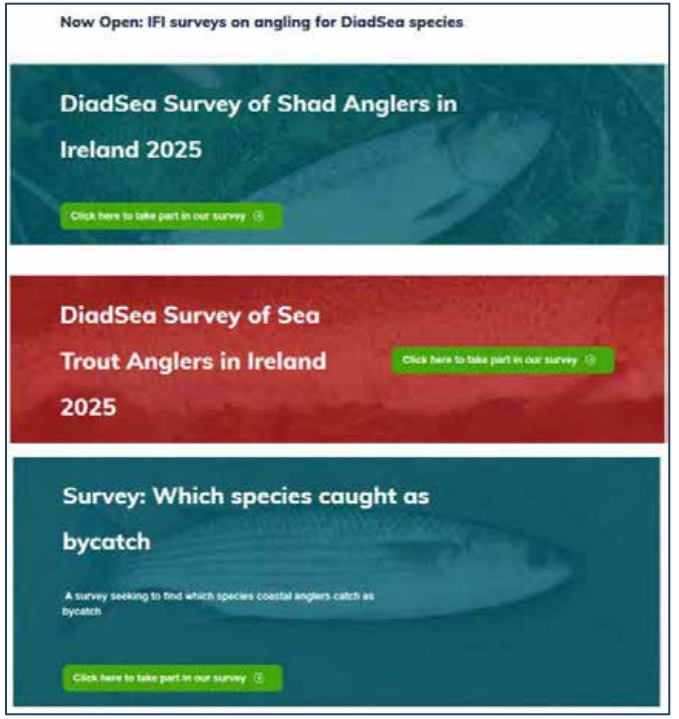
1.3 Fishery dependant surveys:

- Fish market/ auction visits
- Harbour visits
- Distribution of ID booklets
- Angler surveys
- Online surveys (Ireland)
  - Angling experience (Shad and Sea Trout)
  - Diadromous bycatch



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WP1 Update:

Thank you for listening!

Contact details:

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Ciara.OLeary@fisheriesireland.ie

WP1 Collaborators and contributors to WP1 :

- Catarina Matheus
- Joana Boavida – Portugal
- Ana Filipa Belo
- Inês Oliveira
- Carlos Alexandre
- Russell Poole
- Sara Jane Moore
- Clair Moore
- Dave Stokes
- Dave Currie
- Clarisse Boulenger
- Francoise Daverat
- Gaspard Dubost
- Laurent Beaulaton
- Patrick Lambert
- Anaïs Janc
- Géraldine Lassalle
- Mégane Lebreton
- Anne Lizé
- Alexandre Carpentier
- Fernando Cobo
- Rufino Vieira
- Barbara Serra Pereira
- Rory Feeney
- Sophie Launey

Ciara O'Leary
Anthony Brett

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WP2

Innovative Methods to fill Gaps in Data-poor Species

Ciências ULisboa

Bernardo Quintella, FCUL

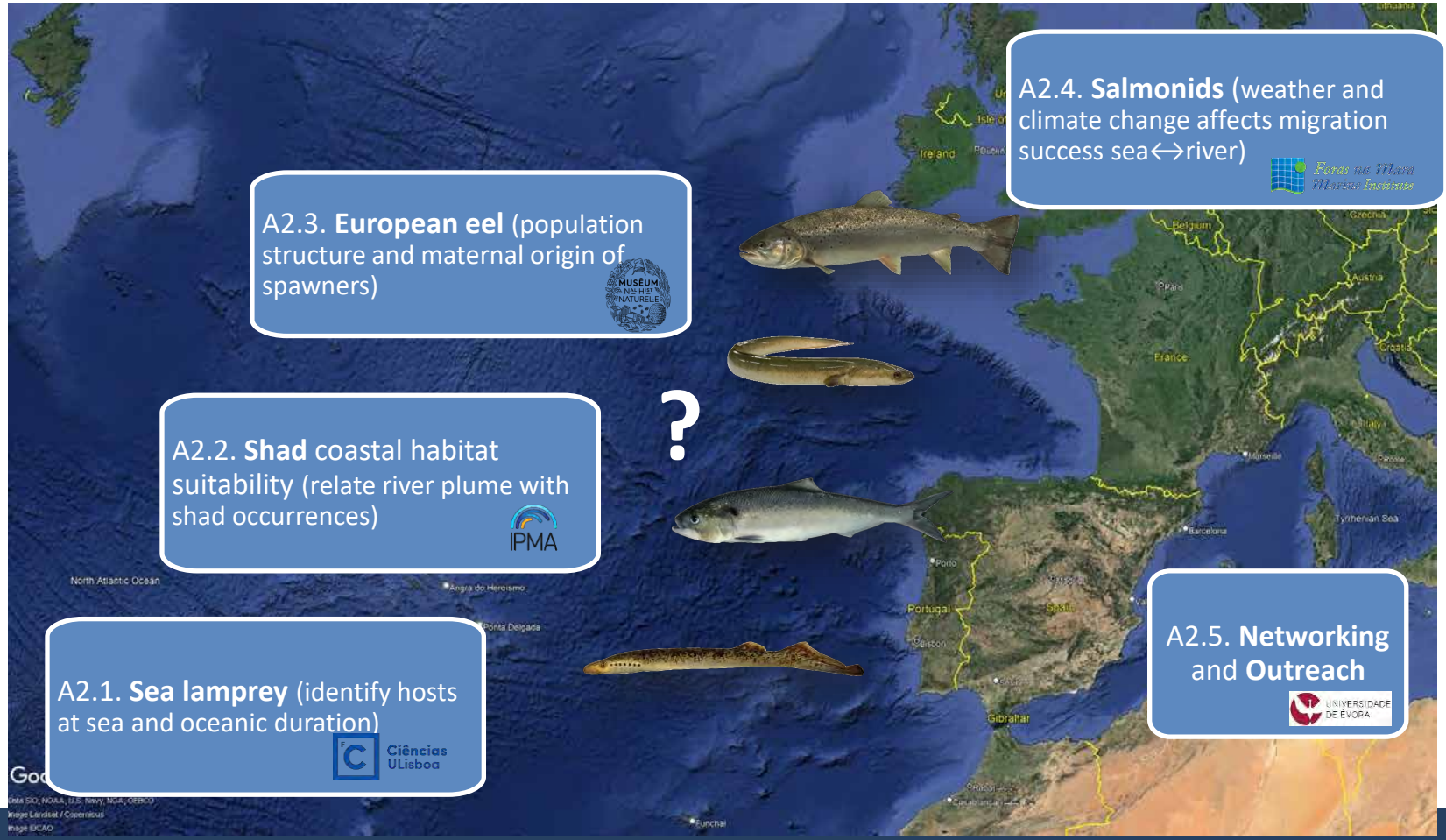
This project is co-financed by the Interreg Atlantic Area Programme through the European Regional Development Fund.

WP2 objectives

This WP will focus on assessing novel methodological approaches targeting data poor DF to obtain information on the marine life stage of their life cycles.

Start date	End date	Duration	Partners involved in WP2
November 2023	October 2026	36 months	FCUL (lead), UÉvora, IPMA, MNHN, INRAE, MI, USC

WP2 activities



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A2.1. Unravelling Sea lamprey ecology at sea with DNA metabarcoding and tagging

Image: Pedro Batista

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A2.1 - Unravelling **Sea lamprey** ecology at sea with DNA metabarcoding and tagging (FCUL; Uévora; USC)

The aim is to obtain information (main hosts and oceanic phase duration) on the sea lamprey parasitic phase at sea.

The activity is focused on Portugal and Spain, and the following two tasks are being implemented:

- Identification of hosts with DNA metabarcoding gut contents analysis of lampreys;
- PIT tagging downstream migrating juveniles to assess the duration of the parasitic phase at sea (rivers Mondego, Vouga, Ulla);
- ~50% concluded:
  - 210 gut samples!
  - 512 juveniles tagged!

Image: Joshua Moyer

A2.1 Outputs and Deliverables

- No output/deliverable produced yet but on schedule!
  - **Deliverable 8** - Short progress report on sea lamprey ecology data collection - to be presented in November 2025;
  - **Output 5** - Advisory report with recommendations for sea lamprey management – to be completed by October 2026;
  - **Deliverable 6** - Open access scientific publications – identification of sea lamprey hosts at sea - to be submitted by the end of 2026.

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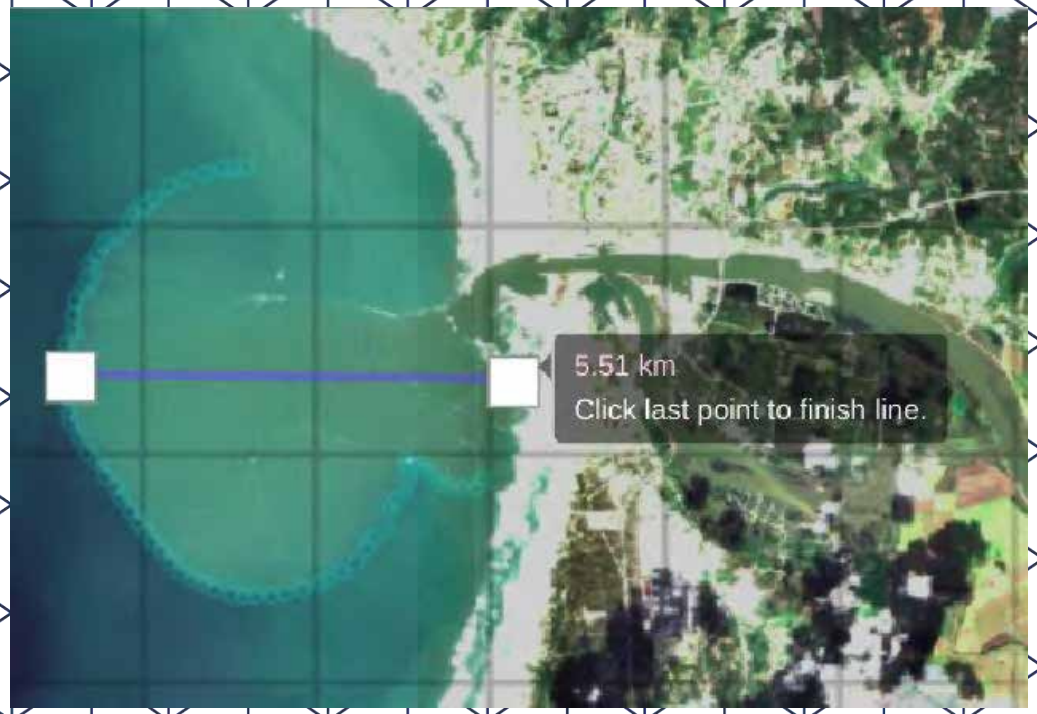
A2.2. Mapping shad coastal habitat suitability in the NW Iberian Peninsula with innovative environmental variables



IPMA

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Ciências ULisboa

A2.2 - Mapping shad coastal habitat suitability in the NW Iberian Peninsula with innovative environmental variables (IPMA; Uévora; FCUL; USC)

The aim is to use innovative environmental variables (turbid plumes estimated from remote sensing data, model outputs and field observations – shad capture data) to describe the fine-scale coastal distribution of allis shad;

The following four tasks ongoing:

- Characterize the spatio-temporal dynamics of the Mondego river (Portugal) plume (satellite images);
- Describe the vertical profile of the Mondego river plume in the coastal area with oceanographic data collected during routine fishing operations (in situ sensors);
- Assess the influence of the river plume in the habitat preferences and spatial distribution of shads at sea;
- Estimate the temporal variation (seasonal and interannual) in coastal habitat suitability for shads (modelling);
- ~60% concluded
  - An additional season to collect information is being prepared

Activity A2.2: Outputs and Deliverables

- No output/deliverable produced yet but on schedule!
  - **Output 6**: Seasonal climatological maps of NW Iberia coastal habitat suitability for shad – Maps produced during 2026
  - **Deliverable 6**: Statistical relationship between shad presence/absence and plume describing variables - Scientific publication on shad habitat suitability - to be produced in 2026
  - Project **Deliverable 9**: Establish contact, present and discuss activity and results with colleagues from PT and ES during the International Minho Symposia of 2023 and 2025 – (2023 event already delivered, remaining in Nov 2025, as planned)

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A2.3. Progressing on marine migration larvae of European eel, maternal origin of spawners and the panmixia hypothesis

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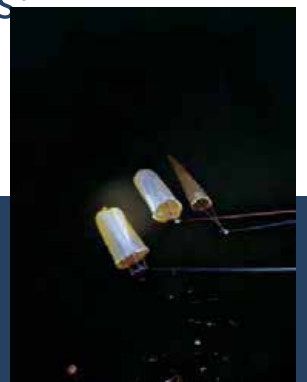
Ciências ULisboa

A2.3 - Progressing on marine migration larvae of European eel, maternal origin of spawners and the panmixia hypothesis (MNHN; INRAE)

The aim is to assess the maternal origin and oceanographic migration routes of glass eels captured along the AA, and to identify the degree of population organization of the European eel;

The following two tasks are ongoing:

- Inferring the maternal habitat origin of European eels from otolith microchemistry;
- Genetic population structure of the European eel: panmixing or not, what is the degree of population or sub-population organization?
- ~60% concluded
  - ~300 otoliths from glass eels collected for microchemical analysis;
  - 1200 individual genetic sequencing completed –
    ongoing data analysis;



Activity A2.3: Outputs and Deliverables

- No output/deliverable produced yet but on schedule!
  - **Output 7** - Advisory report with recommendations about habitat and sub-population management targets for glass eels – delivered during 2026
  - **Deliverable 6** - Open-access scientific publications - The deliverables for this activity are three scientific publications with baseline information for recommendations to European eel population management (to be submitted by the end of 2026):
    - Paper 1 will provide new insights on the migration routes of European larvae;
    - Paper 2 will explore the question of the maternal origin of glass eels caught along the Atlantic Arc;
    - Paper 3 will progress in understanding the genetic structure of the eel population thus challenging the Panmixia hypothesis.

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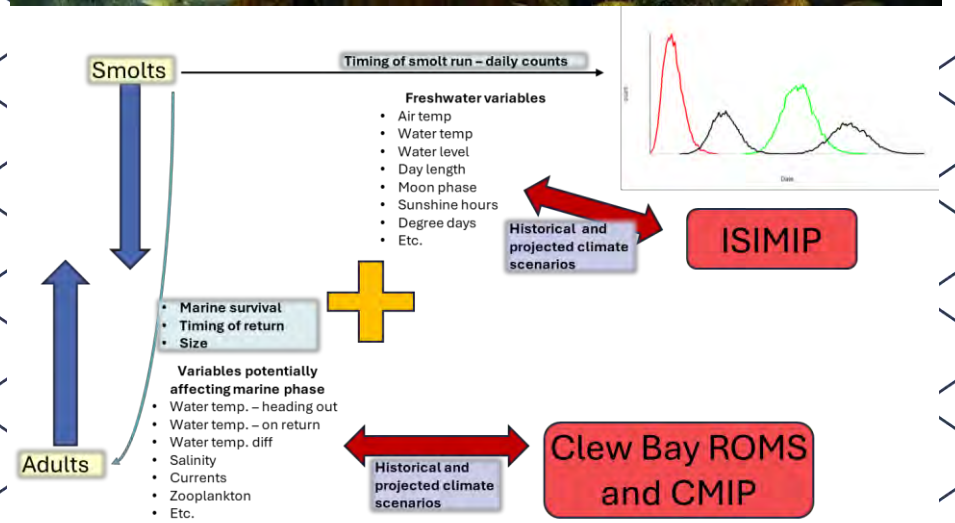
A2.4. Dynamic Salmonid Ocean Climate Modelling

Foras na Mara Marine Institute

INRAE

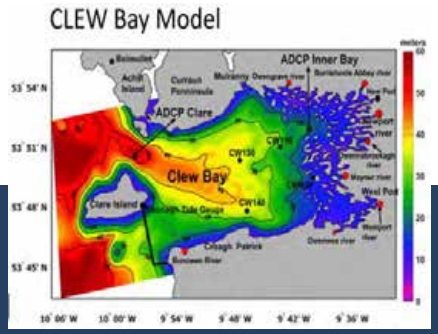


A2.4 - Dynamic Salmonid Ocean Climate Modelling (MI; INRAE)

The aim is to examine how local weather and the changing global climate may influence the annual success of migrating sea trout and Atlantic salmon, particularly during the transition phase from freshwater to the sea and back.

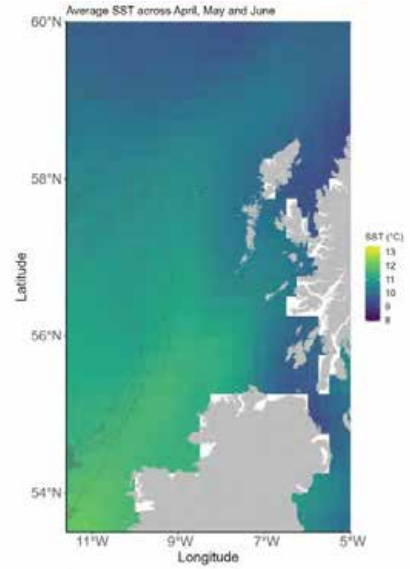
The following two tasks are ongoing:

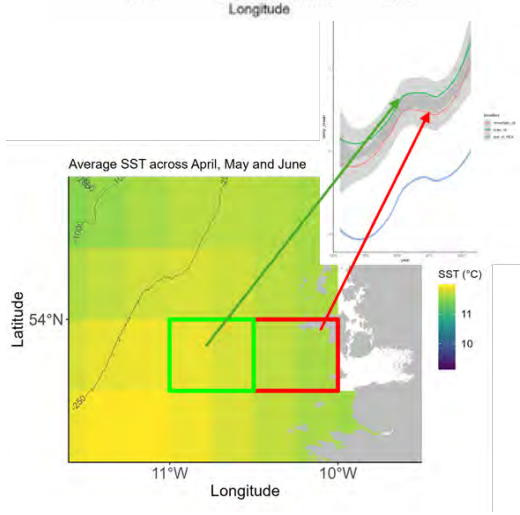
- Freshwater - examine the long-term census datasets collected for salmon and sea trout leaving and returning to the Burrishoole River (Ireland) along with the environmental conditions and 2 French rivers as a comparison;
- Marine - hydrographic model for the Clew Bay area (Ireland) to examine sea conditions pre- and during the smolt run and post-smolt periods
- ~40-50% concluded;



Activity A2.4: Outputs and Deliverables

- No output/deliverable produced yet but on schedule!
  - **Output 8** - Forecast model of fish dynamics and ocean climate change for sea trout and Atlantic salmon.
  - **Deliverable 10** - Analysis reports and projections composed by:
    - Report on variability of salmon and sea trout migrations to and from the sea;
    - Report on factors influencing DF performance in the sea;
    - Report on forecast projections on the possible future for salmon and sea trout under different ocean/climate scenarios.





A2.5 - Networking activities and stakeholder's support engagement (Uévora + all partners)

Planned to start on April 2026!

- This activity aims to engage external entities and to share and transfer knowledge coming from the pilot action activities;

- **Output 4** - Thematic digital poster infographics targeting DF stakeholders (e.g., commercial and recreational fishers, general public including the younger);

- **Deliverable 7** - Report on communication and network actions.

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WP2

Thank you for your attention!

Bernardo Quintella, FCUL
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WP3 : Assessment of priority areas for conservation

Gaspard Dubost, Clarisse Boulenger, Laurent Beaulaton, Sophie Elliott, Patrick Lambert, Anaïs Janc, Géraldine Lassalle

This project is co-financed by the Interreg Atlantic Area Programme through the European Regional Development Fund.

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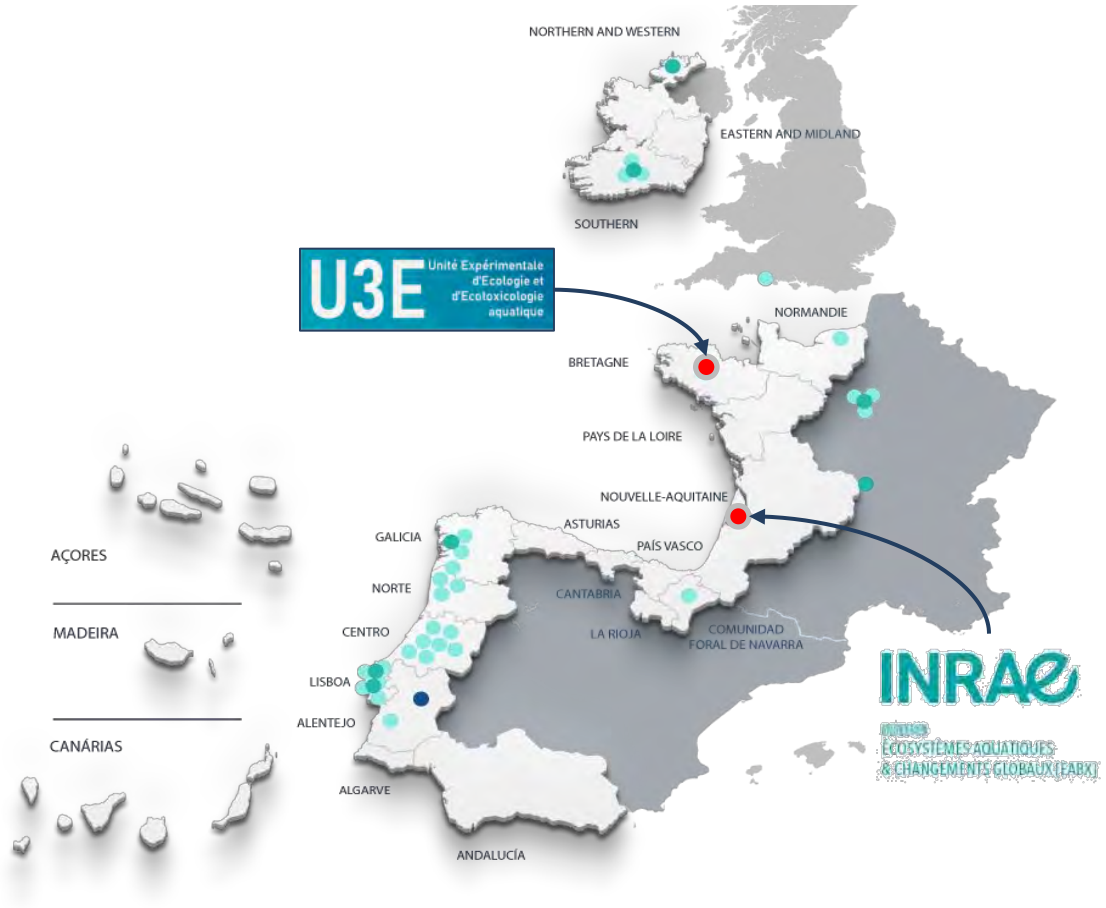
Work Package 3 lead by INRAE



INRAE - National Research Institute for Agriculture, Food and Environment :

- **U3E : Experimental Unit for Aquatic Ecology & Ecotoxicology (Rennes)**

- **EABX : Aquatic Ecosystems and global changes (Cestas)**

Partners involved :

Universidade de Évora · MARE · ARNET · Ciências ULisboa · USC Universidade de Santiago de Compostela · OFB Office Français de la Biodiversité · IPMA Instituto Português do Mar e da Atmosfera · Foras na Mara Marine Institute · Iascach Intíre Éireann Inland Fisheries Ireland · Muséum National d'Histoire Naturelle · LOGRAMI Loire Grands Migrateurs · Game & Wildlife Conservation Trust

→Anticipate distribution range shifts of DF due to climate and oceanographic changes

- 3.1 - Diadromous species marine distribution models for baseline and future climate change scenarios

- 3.2 - Identification of areas with higher turnover for diadromous species in marine areas under climate change scenarios

- 3.3 - Vulnerability and opportunities assessment for the species of interest

- 3.4 - Identification of important areas to ensure longitudinal (sea-river interface) and latitudinal connectivity through time

- 3.5 - Improving the Interactive Web Atlas with current and future distributions of diadromous species at sea.

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Data from WP1: Biological data collation

- Scientific Surveys, Fisheries dependant data & Landing data
- Availability of Length, Gear & Absence Data
- Spatial & Temporal Scale & Range

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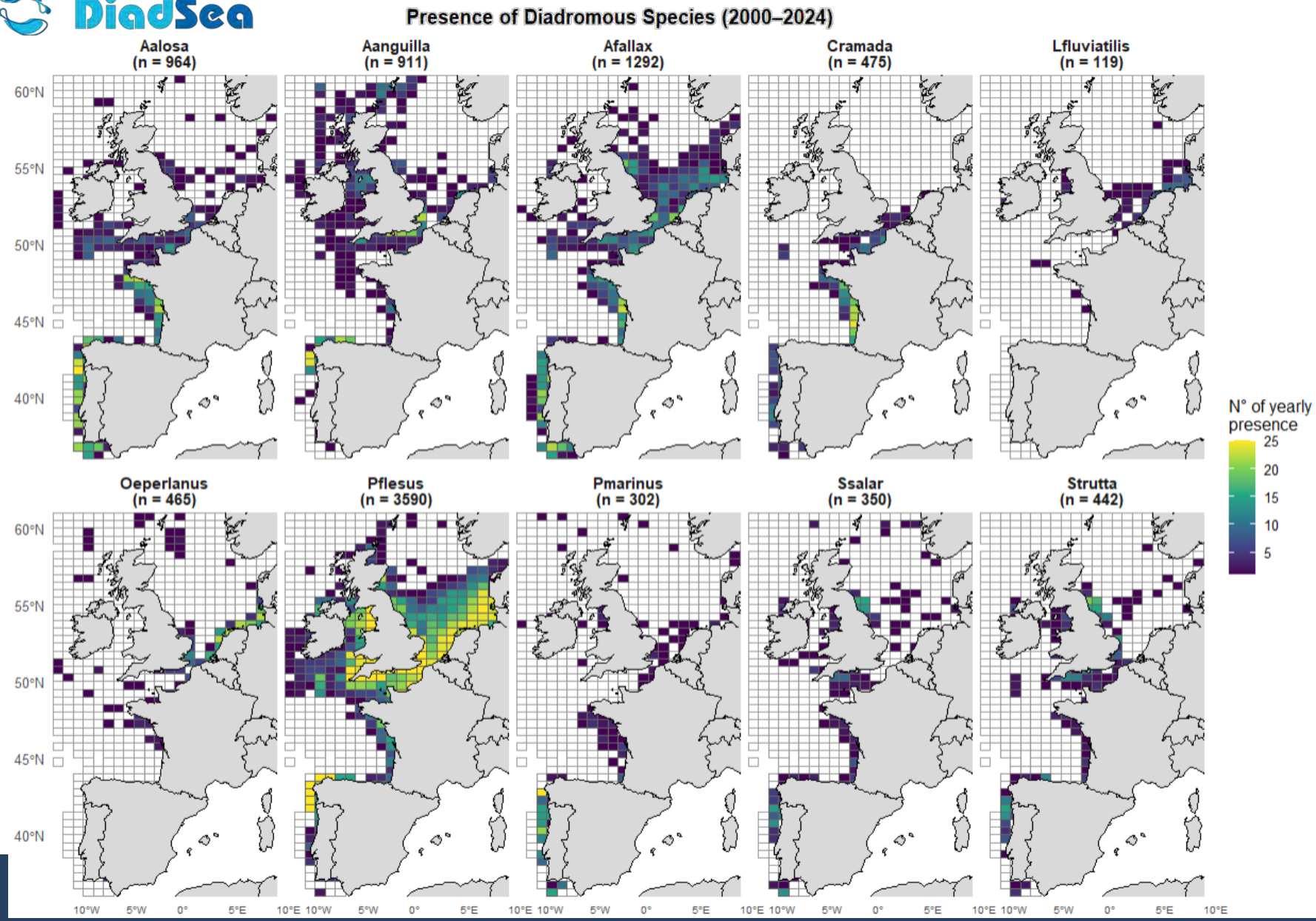
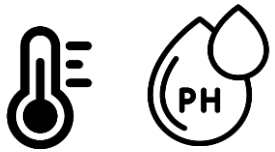
Compiled Database

- 2000-2024
- ICES Rectangles Scale
- Annual Precision



Marine Variable



- Spatial coverage of the study area
- Temporal coverage of the present, middle and end of the 21st century
- Integration of SSP (Shared Socio-economic Pathways) climate scenarios 2-4.5 (Middle of the road) & 5-8.5 (Fossil-fueled development)

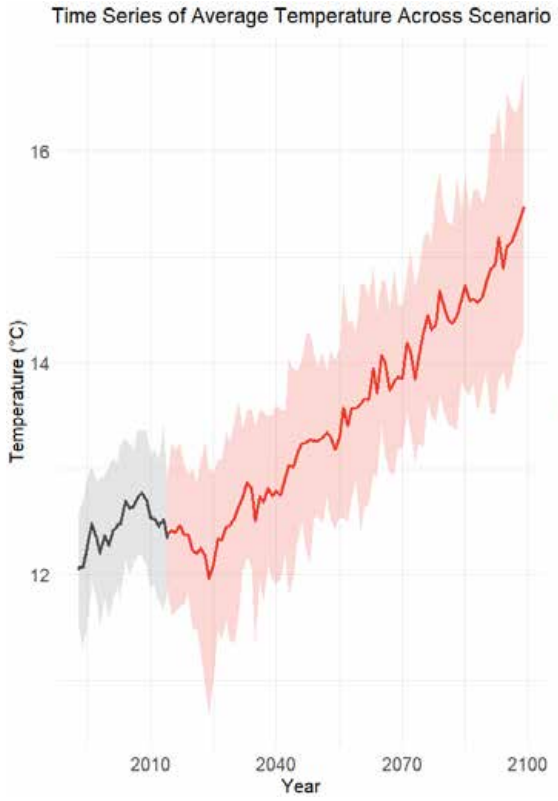
Future MARES – Climate Change and Future Marine Ecosystem Services and Biodiversity

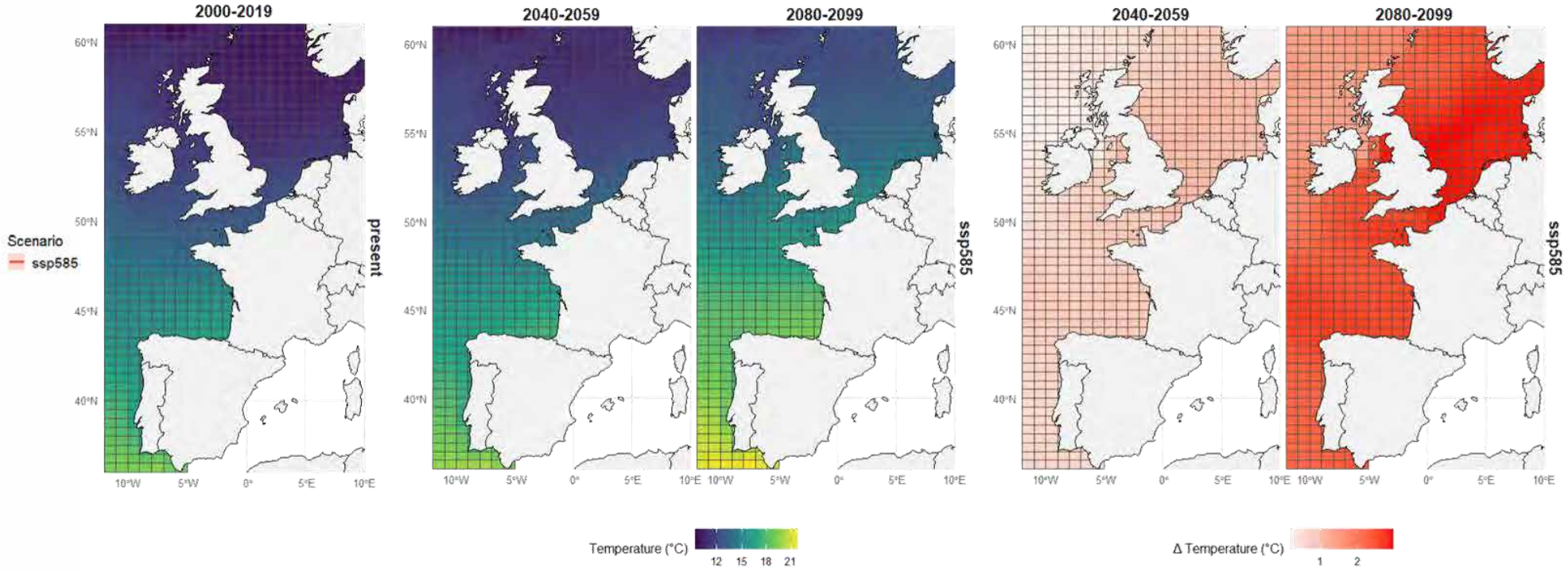
- Temperature (°C)
- Salinity
- pH
- Dissolved oxygen (ml/l)
- Chlorophyll (kg/m^3)

\+

- Depth
- Distance to the nearest watersheds hosting a functional population (Hydiad Model)

Temperature (°C)





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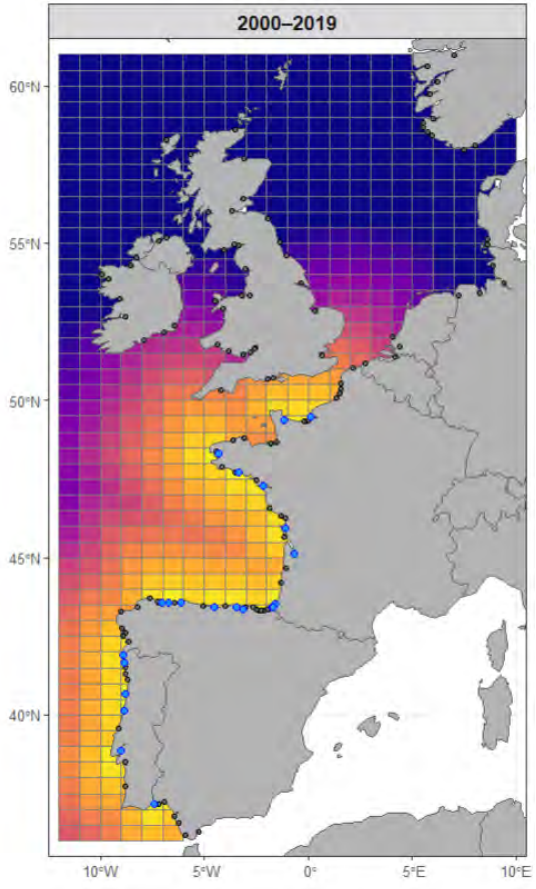
DiadSea

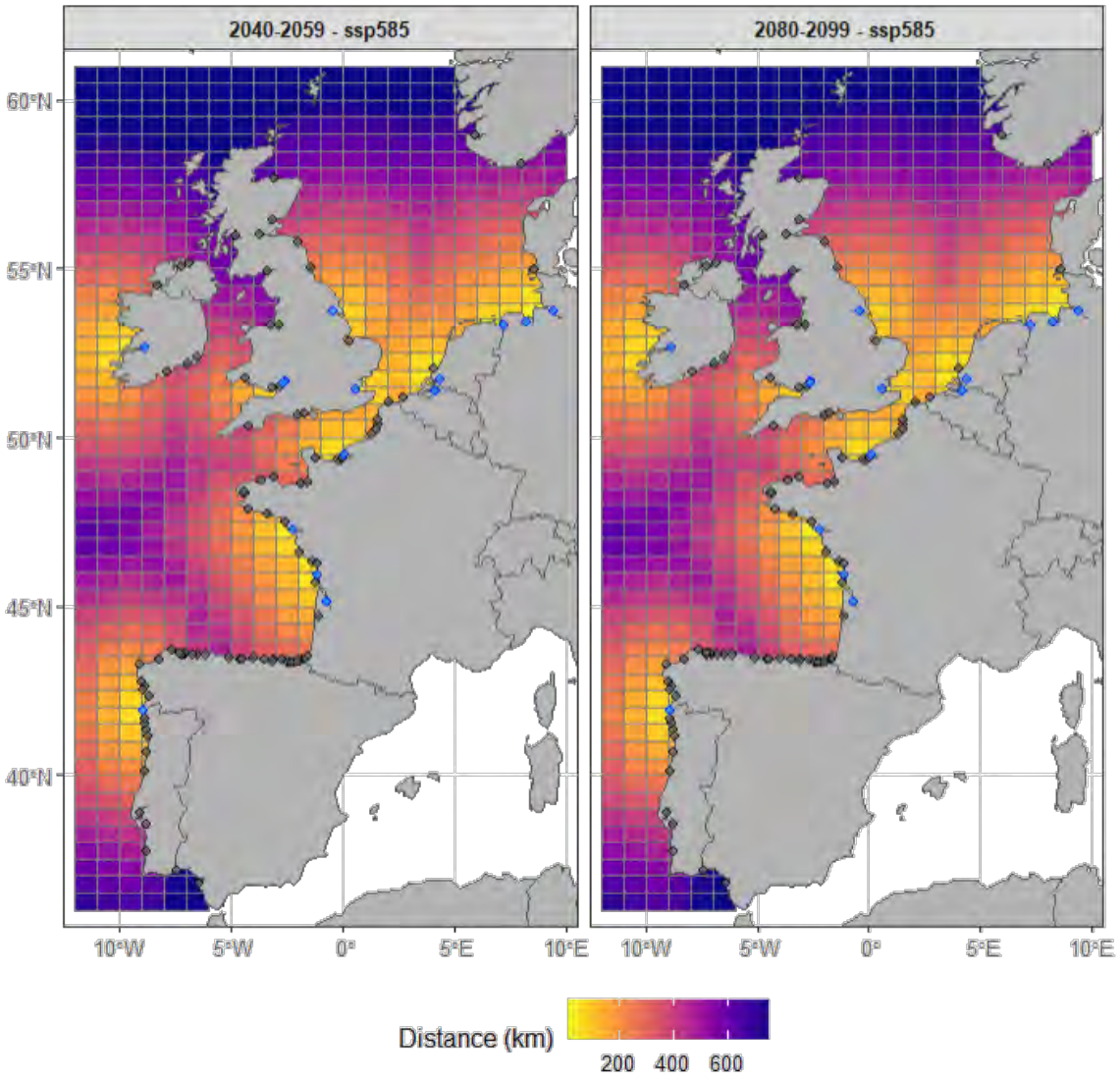
A. alosa

Distance to nearest watershed hosting a functional population

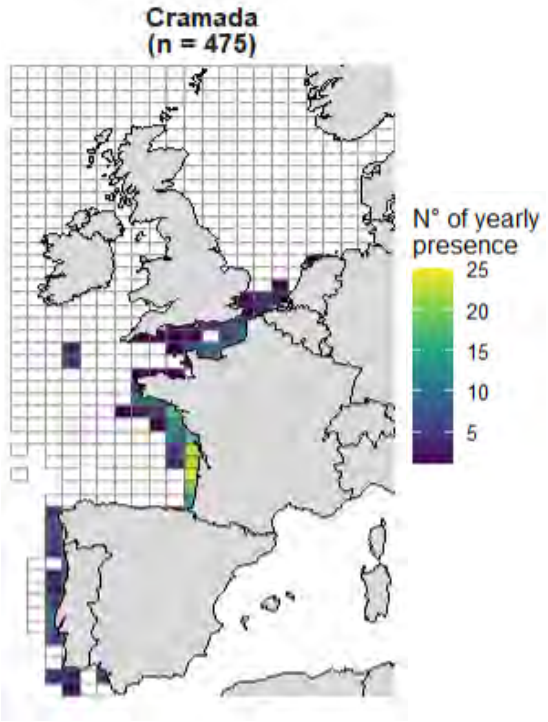
Habitat Suitability Index (HSI)
From HyDiaD Model

DiadES

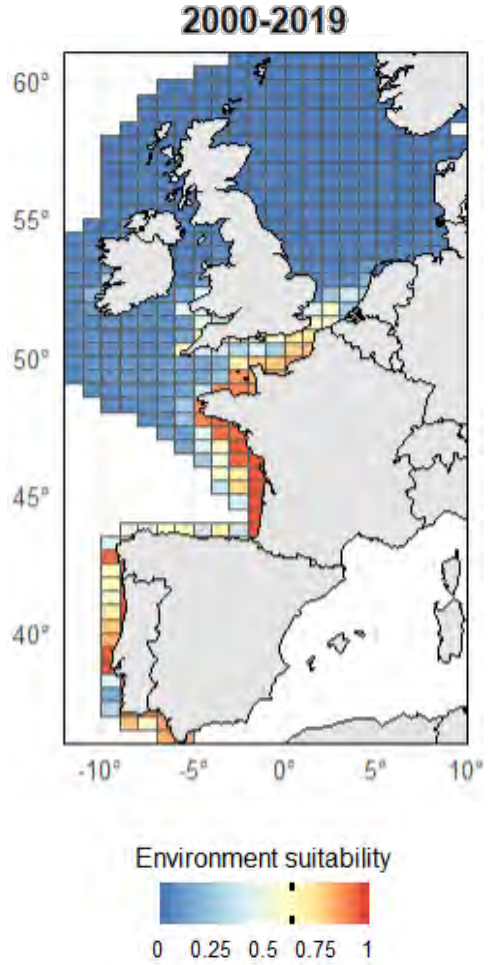




C. ramada

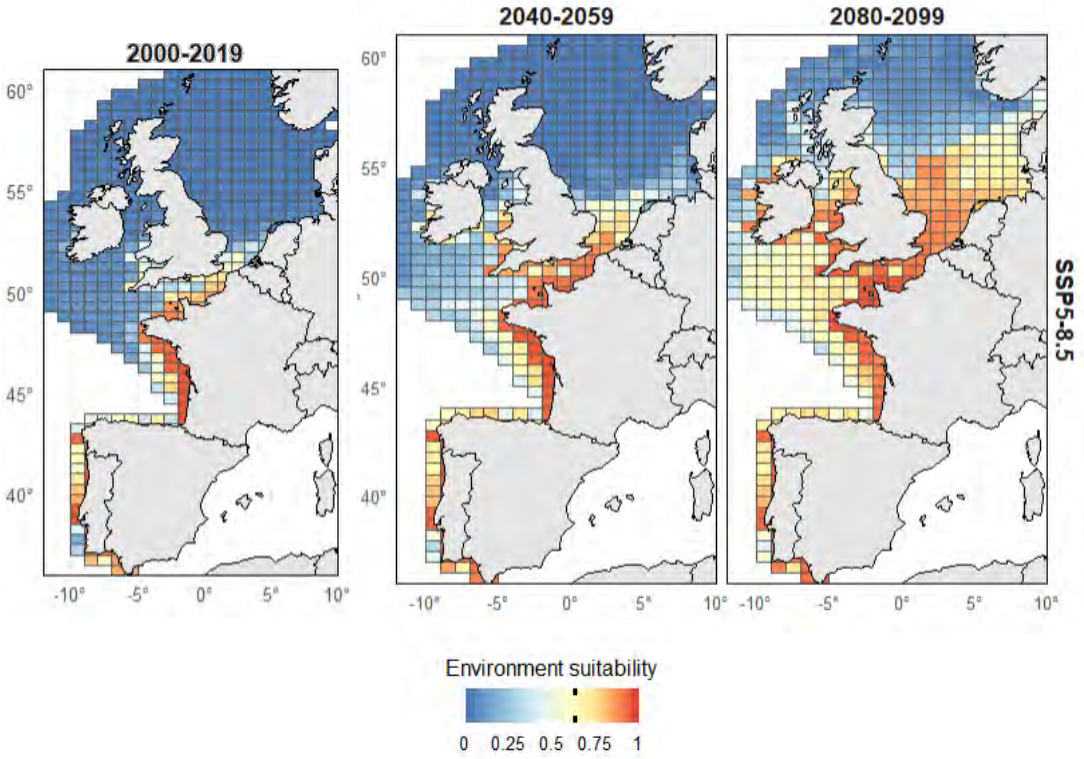


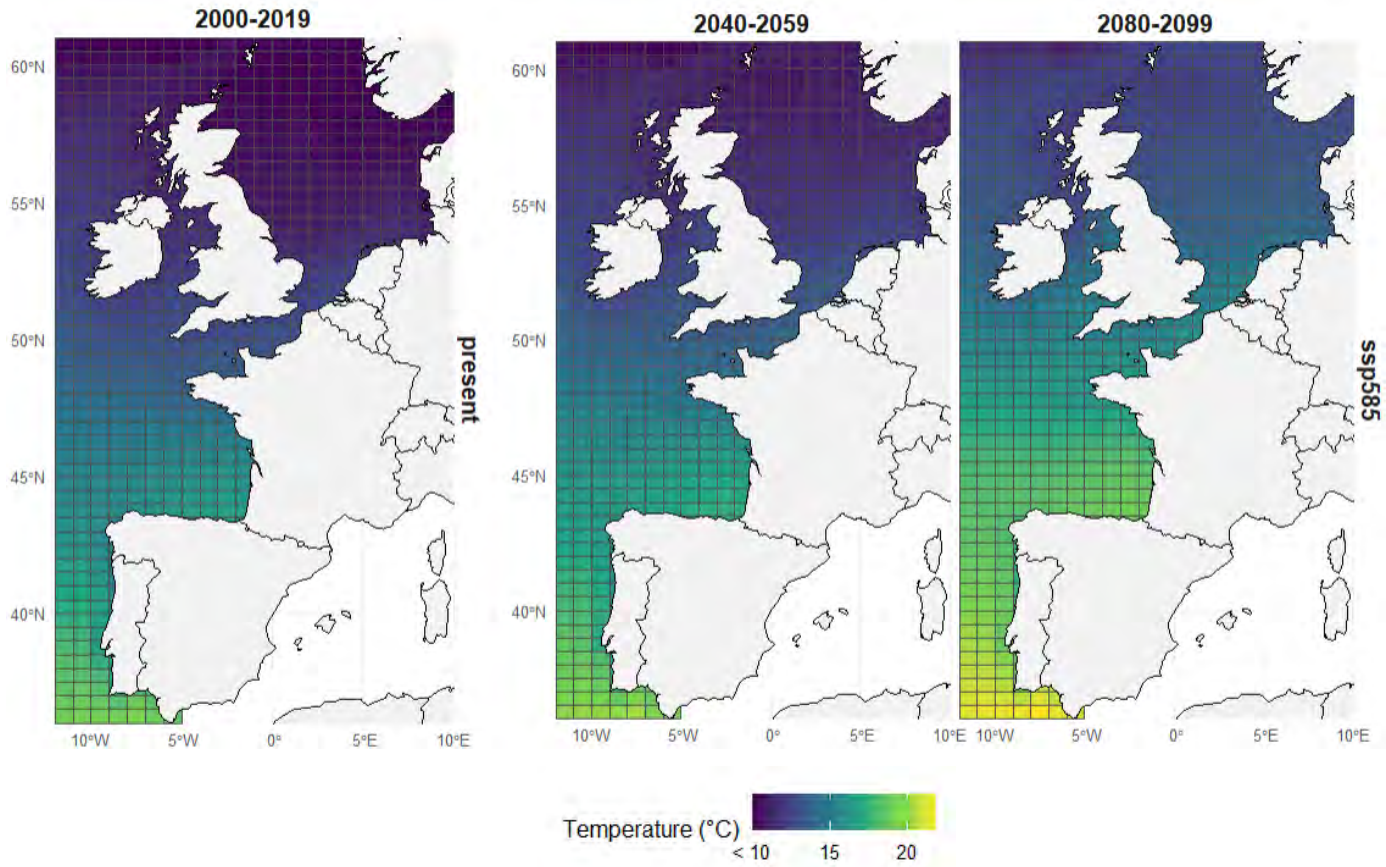
+ Temperature + Salinity + Chlorophyll + Depth =

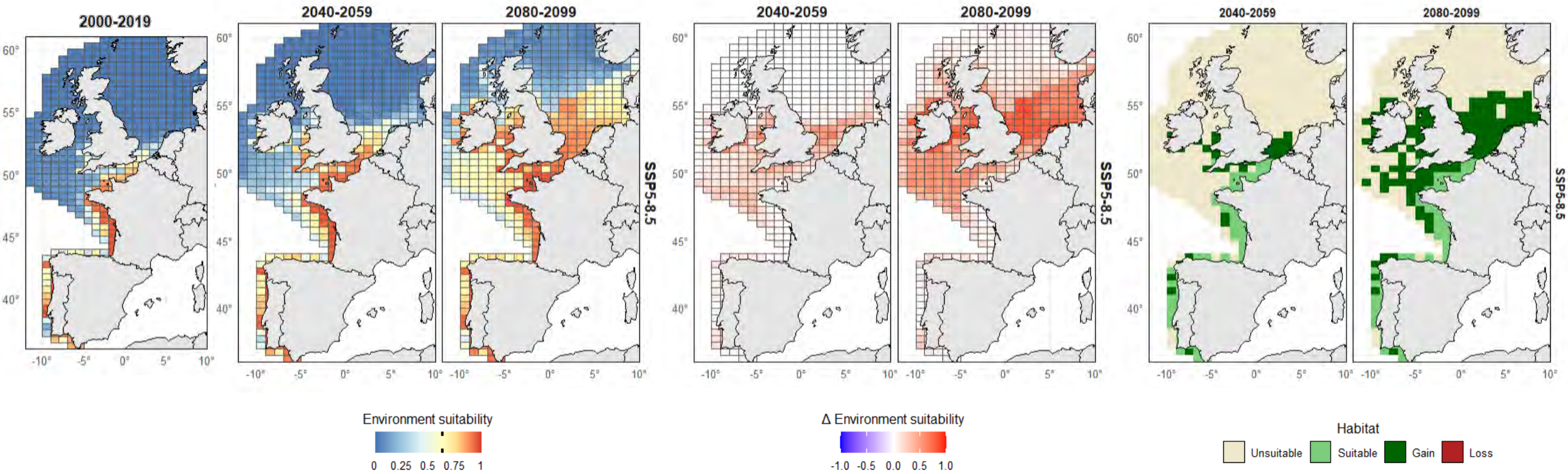



UNDER CONSTRUCTION

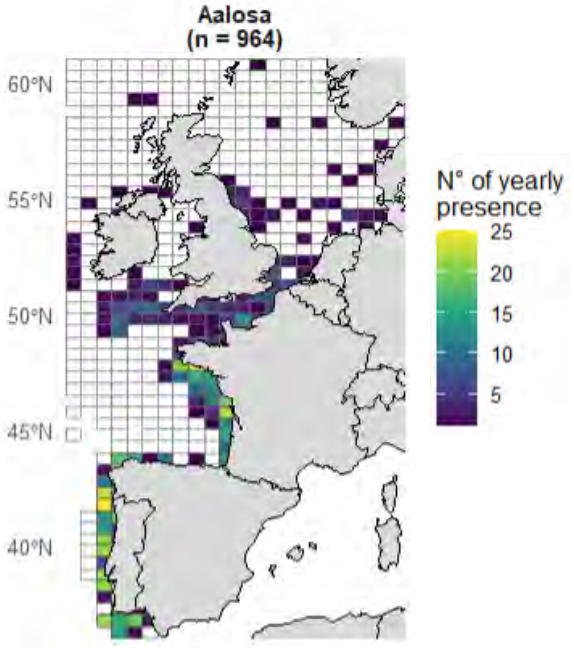
C. ramada


2000-2019
2040-2059
2080-2099
SSP5-8.5
Environment suitability
0 0.25 0.5 0.75 1

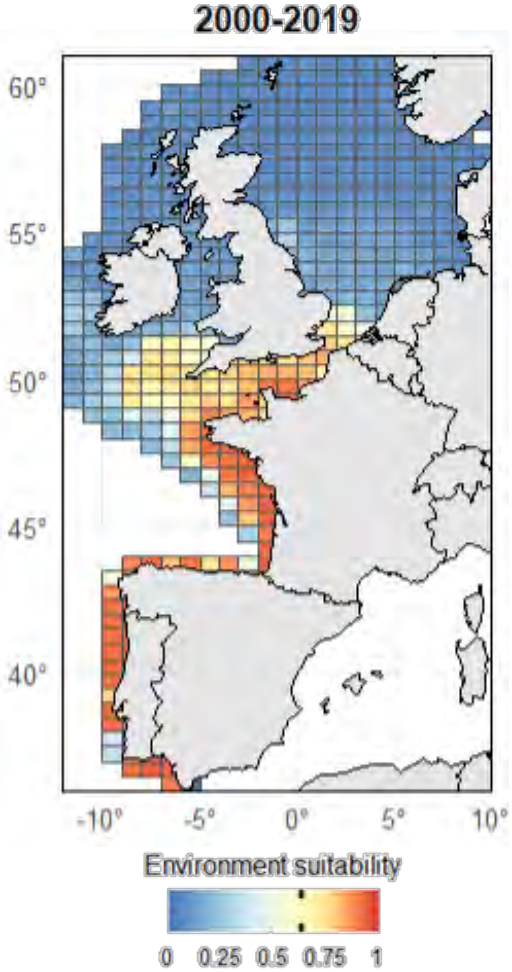

2000-2019
2040-2059
2080-2099
present
ssp585
Temperature (°C)
< 10 15 20


2000-2019
2040-2059
2080-2099
2040-2059
2080-2099
2040-2059
2080-2099
SSP5-8.5
SSP5-8.5
Environment suitability
0 0.25 0.5 0.75 1
Δ Environment suitability
-1.0 -0.5 0.0 0.5 1.0
Habitat
Unsuitable
Suitable
Gain
Loss

A. alosa

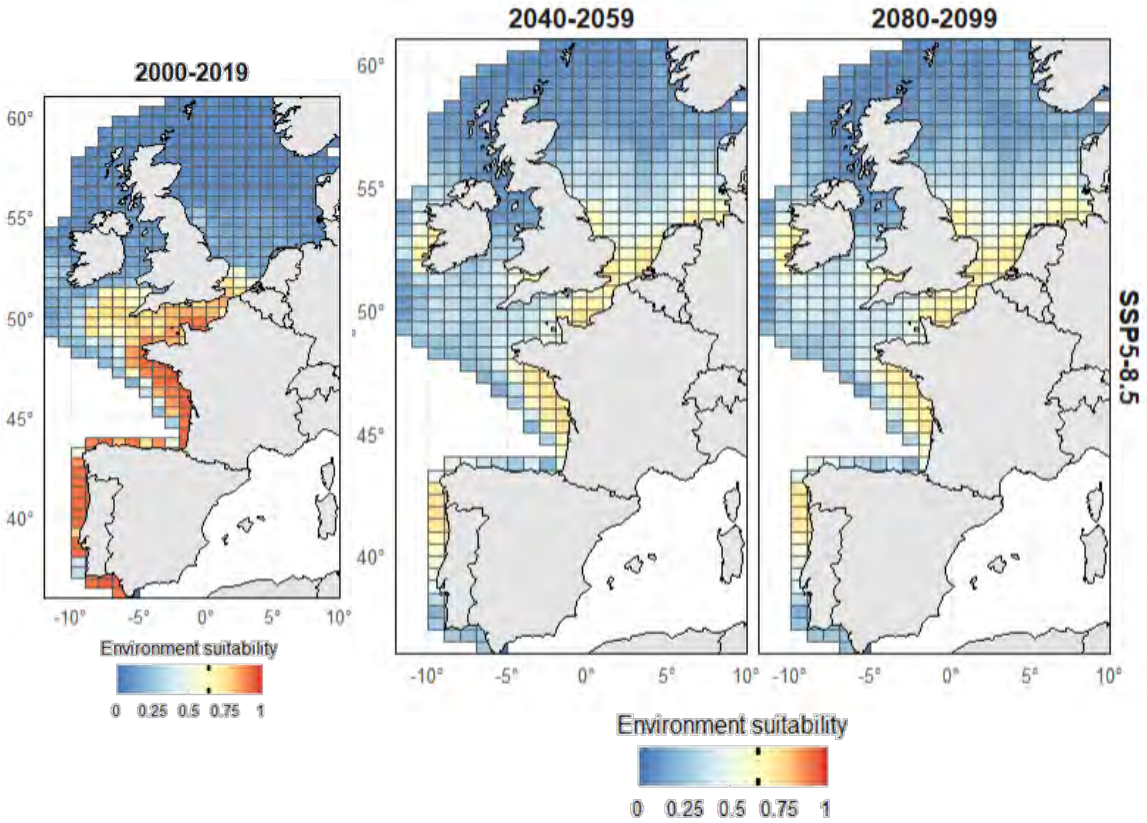


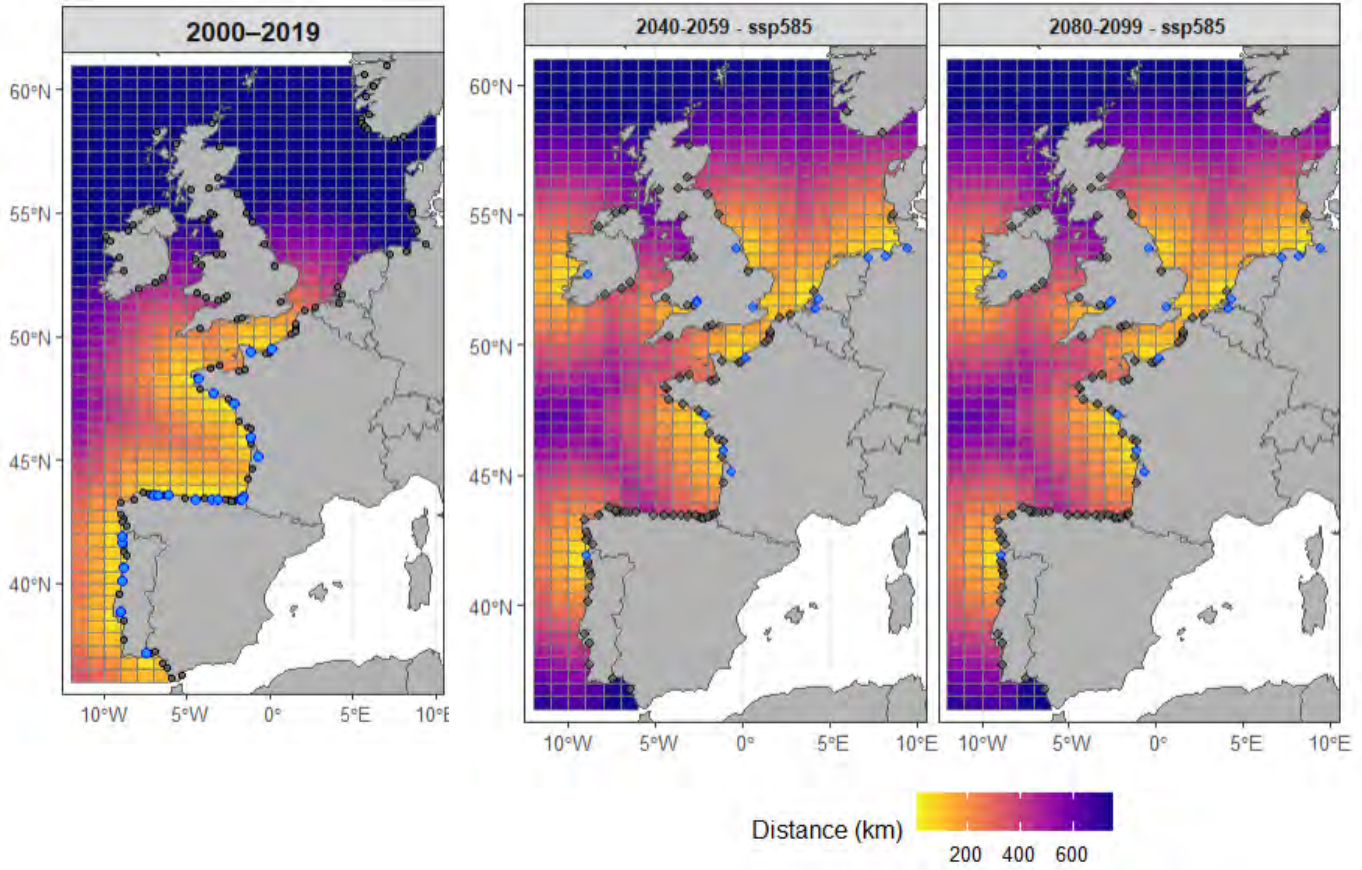
+ **Temperature + pH + Depth +**
Distance Watersheds with functional population =




UNDER CONSTRUCTION

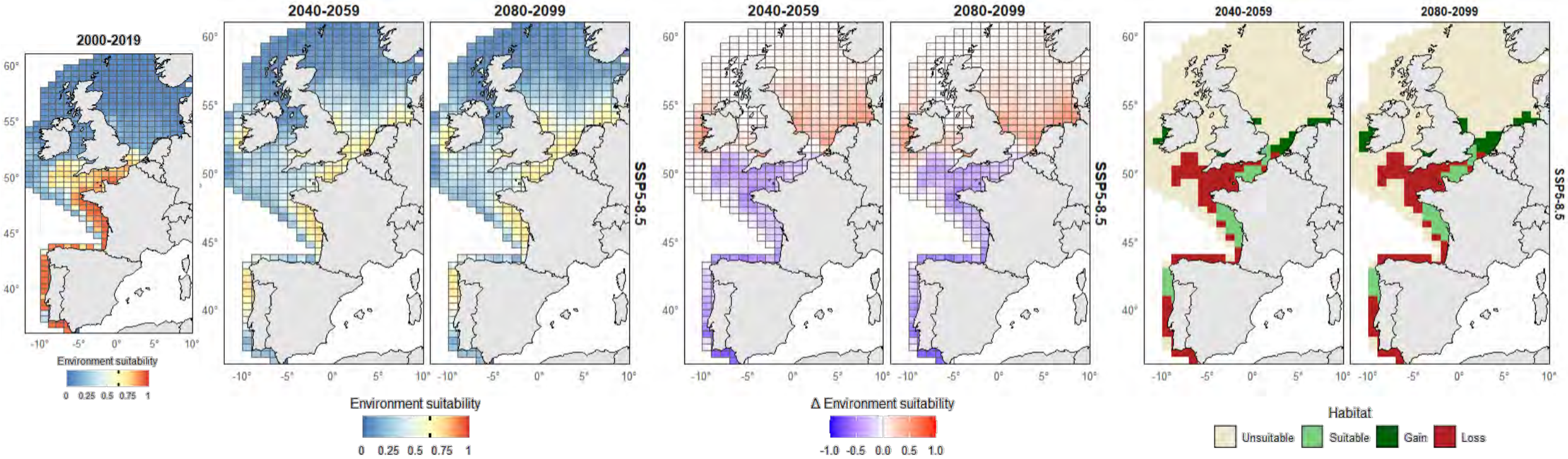
A. alosa


2000-2019
2040-2059
2080-2099
SSP5-8.5
Environment suitability
0 0.25 0.5 0.75 1


2000–2019
2040-2059 - ssp585
2080-2099 - ssp585
Distance (km)
200 400 600


UNDER CONSTRUCTION

A. alosa


2000-2019
2040-2059
2080-2099
SSP5-8.5
Environment suitability
0 0.25 0.5 0.75 1
Δ Environment suitability
-1.0 -0.5 0.0 0.5 1.0
Habitat
Unsuitable
Suitable
Gain
Loss

Next Steps

Analysing the **ecological relevance** of the results

Identification of :

- **Areas** with **higher turnover**
- **Areas** critical for ensuring **longitudinal** (sea-river interface) and **latitudinal connectivity** under climate change scenarios
- Species **vulnerability** and **opportunity assessments**

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WP3 : Assessment of priority areas for conservation

Thank you for your attention

Gaspard Dubost, Clarisse Boulenger, Laurent Beaulaton, Sophie Elliott, Patrick Lambert, Anaïs Janc, Géraldine Lassalle

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a

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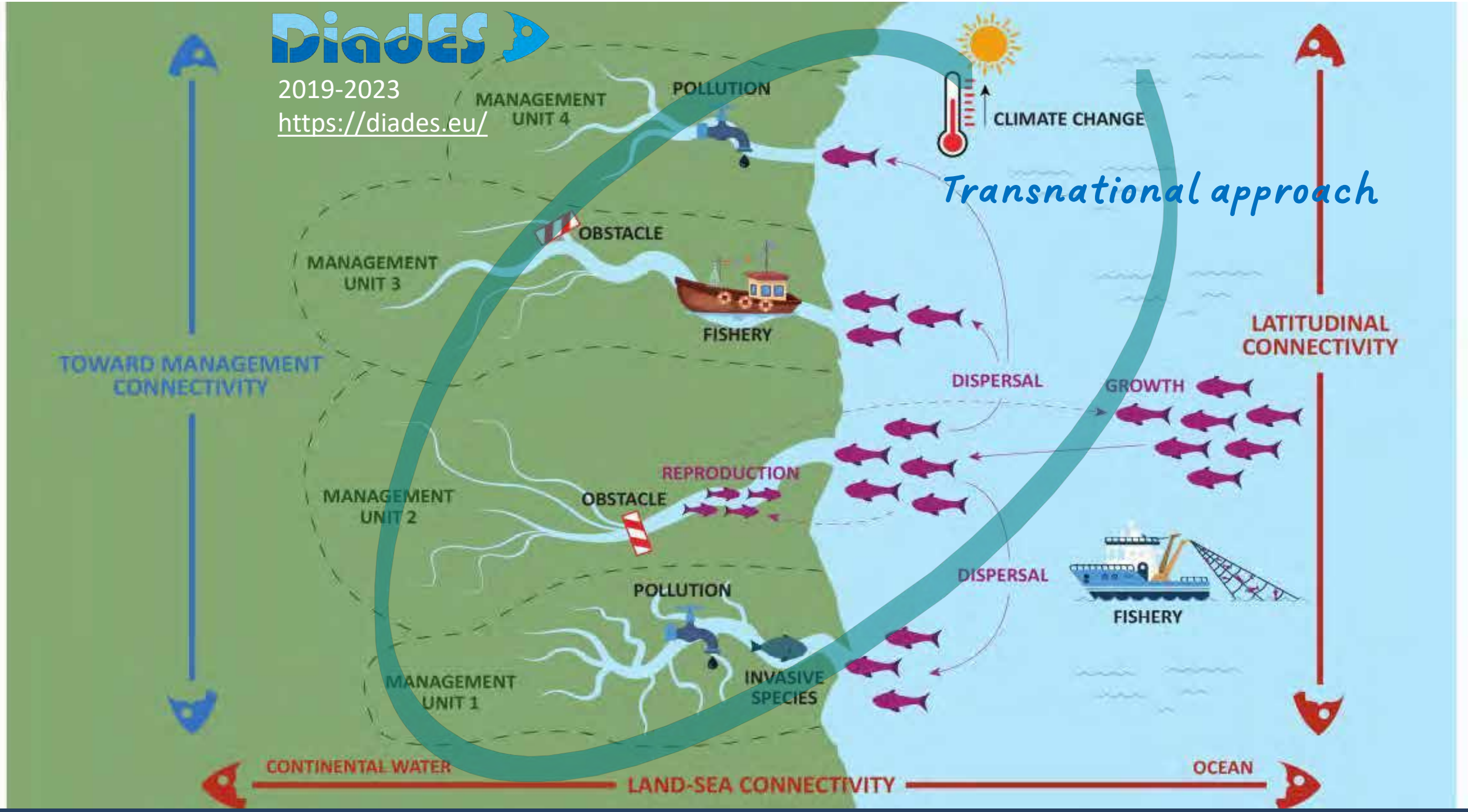
2021 2030 United Nations Decade of Ocean Science for Sustainable Development

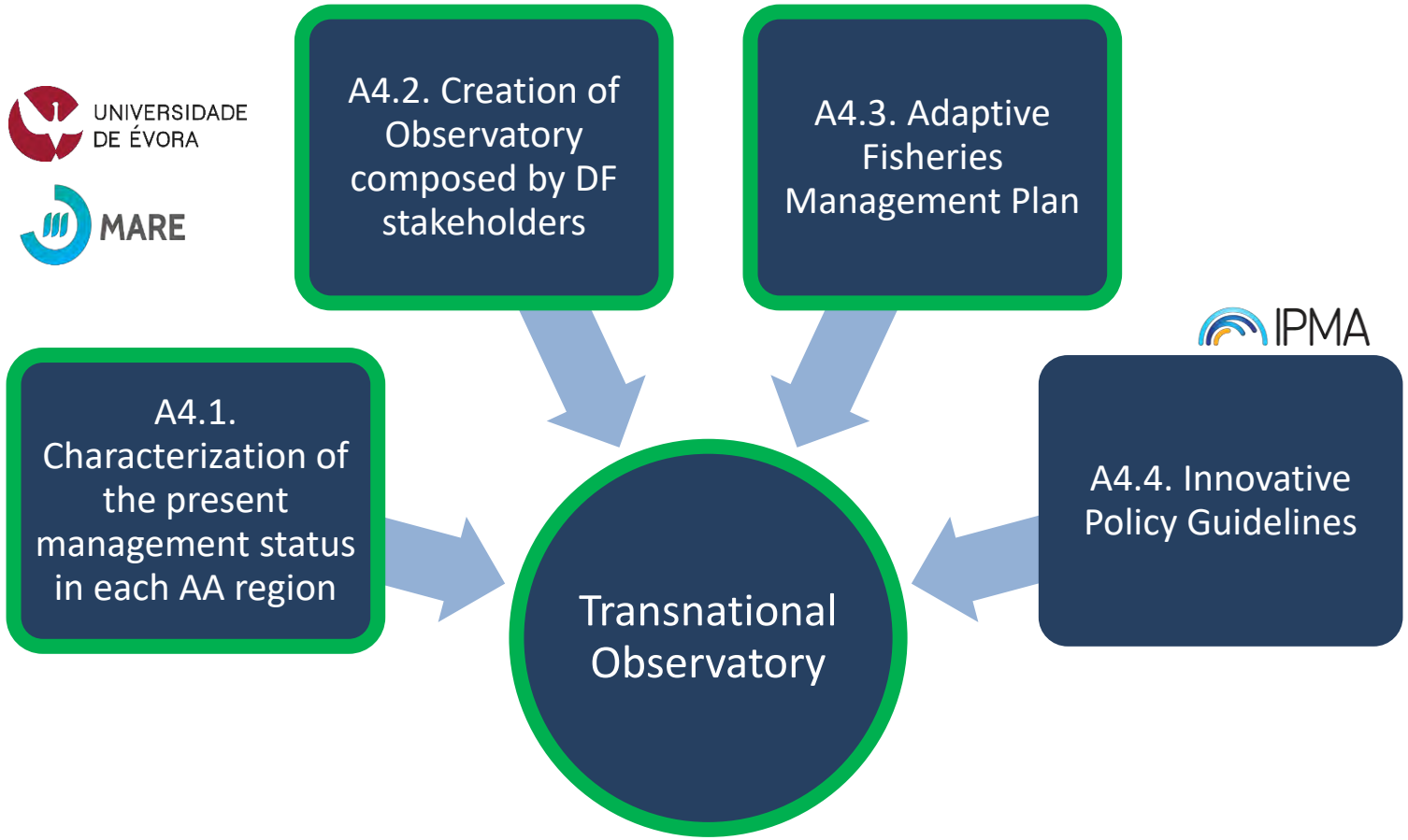
WP4 - Transnational management of diadromous fishes


Diades
2019-2023
https://diades.eu/
Transnational approach
MANAGEMENT UNIT 4
POLLUTION
CLIMATE CHANGE
OBSTACLE
MANAGEMENT UNIT 3
FISHERY
TOWARD MANAGEMENT CONNECTIVITY
LATITUDINAL CONNECTIVITY
DISPERSAL
GROWTH
REPRODUCTION
MANAGEMENT UNIT 2
OBSTACLE
DISPERSAL
POLLUTION
FISHERY
MANAGEMENT UNIT 1
INVASIVE SPECIES
CONTINENTAL WATER
LAND-SEA CONNECTIVITY
OCEAN

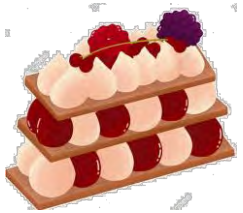
WP4 - Transnational management of diadromous fishes

- Focus on transnational approaches for the management of diadromous fishes, under climate change, to efficiently mitigate threats, which are common throughout DF distribution range in the Atlantic Area.

WP4 Transnational management of diadromous fishes



Report on the current legislation and practices in the management of diadromous fish in the Atlantic Area



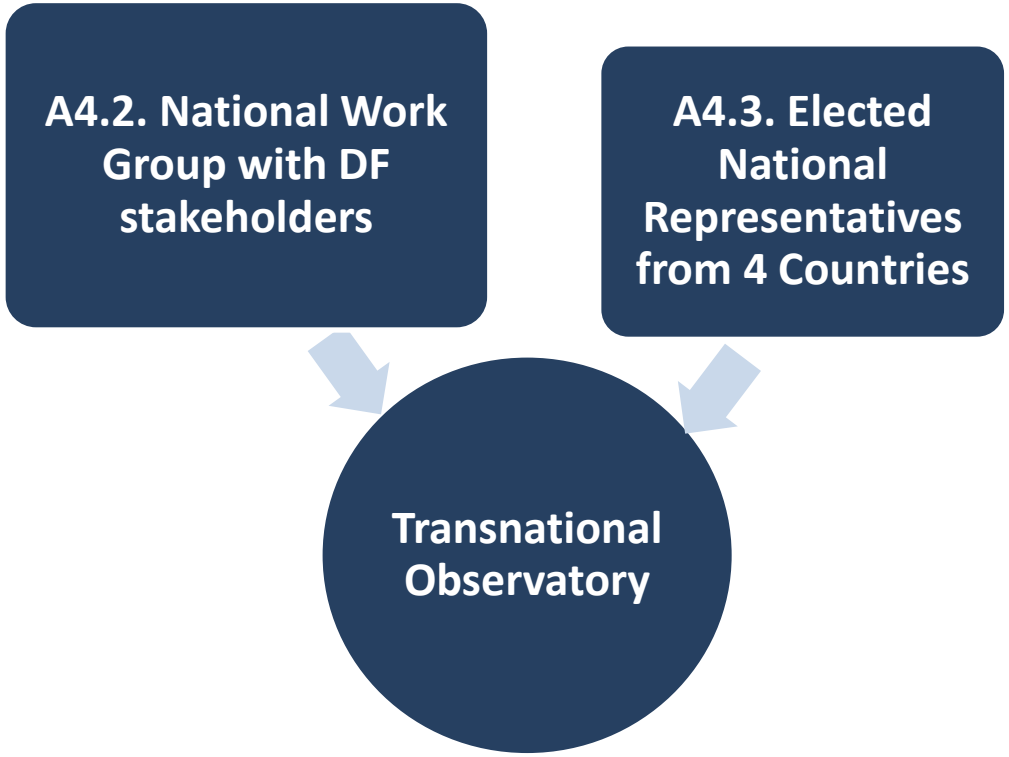
Global	A non-binding international legal framework that influences national frameworks (CBD, CITES, CMS…
European	Regulatory/normative framework (e.g., MSFD, WFD, CFP) and more specific ones (e.g., eel regulation)
National	General guidelines on fisheries/aquaculture, national implementation of the eel regulation, absence of National Restoration Plans
Regional	Territorialized public policies, basin = legislation

A4.1. Characterization of the present management status in each AA region

Transnational Observatory

Objectives

- **Shared international platform for cooperation** in managing and conserving DF species between rivers and the sea
- Promote an **integrated and coordinated European approach** to the ecological and socio-economic sustainability of DF
- Facilitate **information exchange**
- Identify **emerging threats and trends**



Launch Transnational Observatory

27 representatives from main **stakeholders** of DF management from the member states

- Fishermen
- Managers
- Scientists
- Intermediaries
- Journalists
- Local authorities

Faculty of Sciences of the University of Lisbon (FCUL) on the 25th of June 2025

Transnational Observatory

- Platform for **information exchange** among international stakeholders;
- Assessment of **common challenges** and differences between countries;
- Identification of **major marine threats and future fisheries trends**;
- Support for **coordination and joint strategies** for sustainable management.

Activity 4.4. Creation of innovative policy guidelines to strengthen DF management in AA

Objectives

Compile and synthesize co-produced knowledge gathered from Observatory meetings and previous project activities to inform policy

Integrate **transnational, multi-scale** and **participatory approaches** to develop innovative guidelines that consider **climate change scenarios**

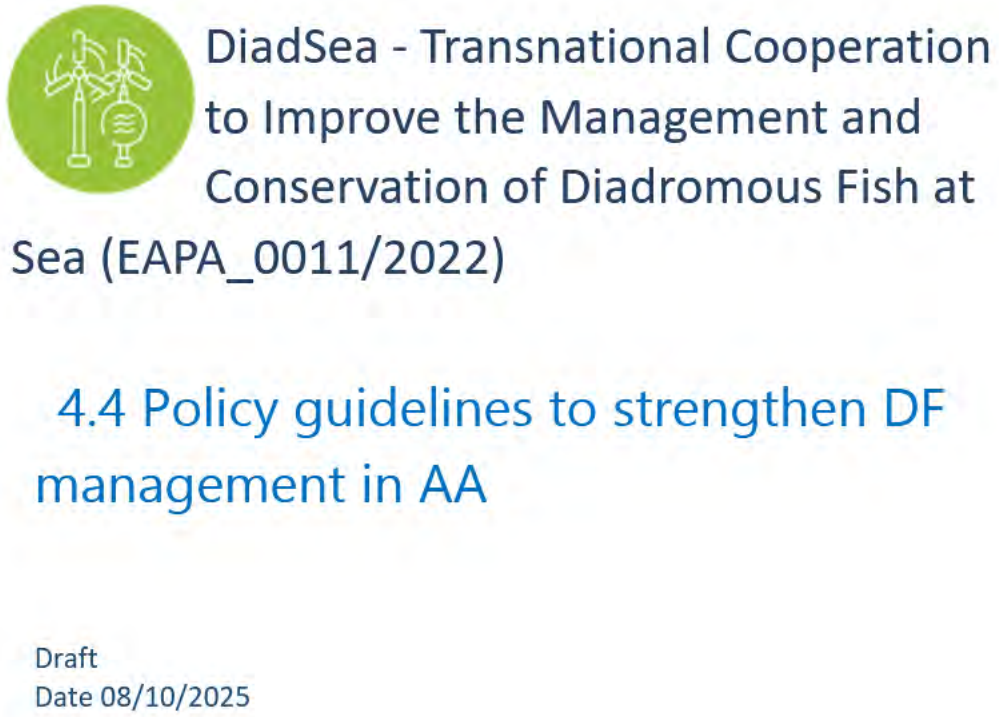
Focus

- Integration of climate change considerations
- Co-management and stakeholder involvement
- Legislative and financial support needed
- Social and cultural values of diadromous fish

What is the current situation in each AA region?

How to implement joint strategies to optimise management and foster cross-border cooperation?

Activity 4.4. Creation of innovative policy guidelines to strengthen DF management in AA



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2021 2030 United Nations Decade of Ocean Science for Sustainable Development

Thank you for your attention!

Joana Boavida-Portugal, Elisabeth Julien, Inês Oliveira, Ana Filipa Belo, Catarina Mateus, Pedro R. Almeida

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WP5 - Tools for Capacitation and Capitalization towards DF Sustainability.

Rufino Vieira, Alberto Gutiérrez, Sandra Barca, Fernando Cobo (USC)

This project is co-financed by the Interreg Atlantic Area Programme through the European Regional Development Fund.

WP5 Objectives

This WP focuses on ensuring the delivery of long-term benefits for DF species management and conservation through the implementation of a capitalization strategy involving all partners (beneficiaries and associates) as well as other stakeholders.

The strategy is based on two main outcomes: the creation of an integrated seal/label of origin system and the development of a **card game** and a **comic book** addressing DF issues in Europe.

WP5 Overview

ACTIVITY	LEADER
5.1.- Creation of a transnational and integrated label/seal of origin system.	UÉvora
5.2.- Production of a card game and a comic book on DF problematic in Europe.	LOGRAMI
5.3.- Networking activities and stakeholder's support engagement.	USC

WP5 activities

A5.1) Creation of a transnational and integrated label of origin system

Label of origin [In progress] 379 shads have been marked. A survey shows overall good opinion from 14 stakeholders.

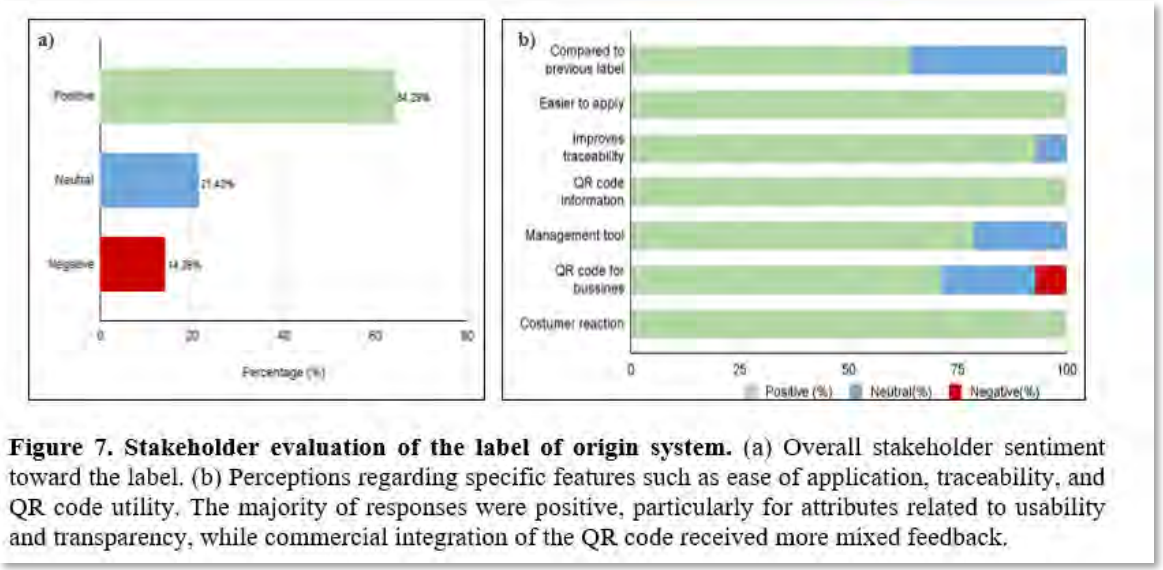

Figure 7. Stakeholder evaluation of the label of origin system. (a) Overall stakeholder sentiment toward the label. (b) Perceptions regarding specific features such as ease of application, traceability, and QR code utility. The majority of responses were positive, particularly for attributes related to usability and transparency, while commercial integration of the QR code received more mixed feedback.

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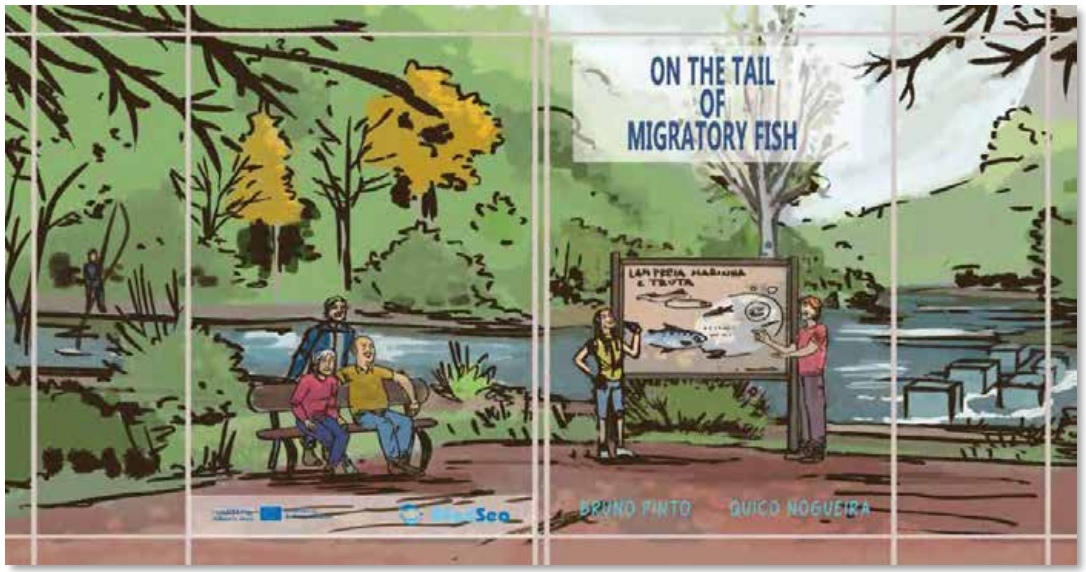
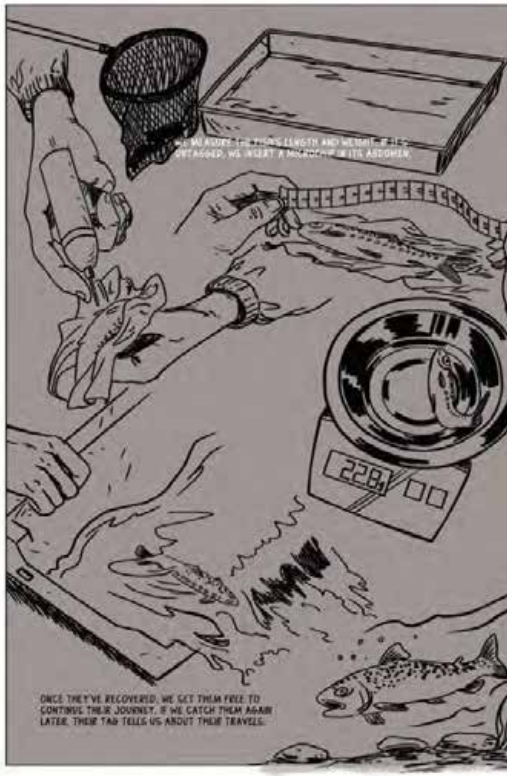
A5.2) Production of game tools and a comic book on **diadromous** species problematic in Europe

Comic book [In progress] Outreach for young generations. Expected to be ready (in color) in English, French, Spanish, and Portuguese by late 2025.





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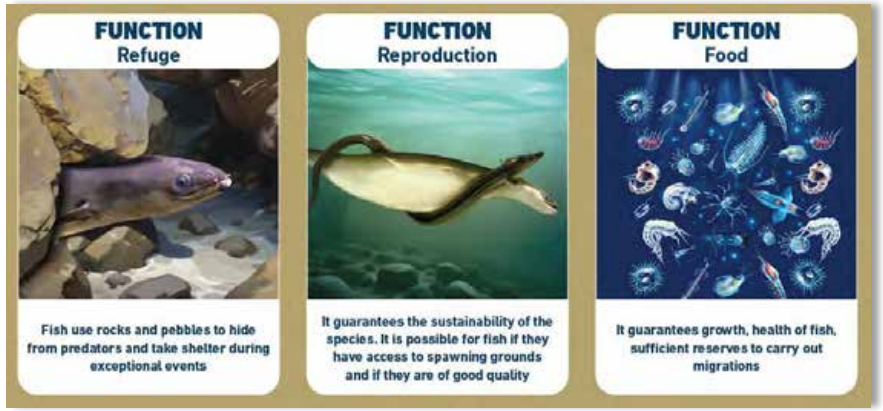
A5.2) Production of game tools and a comic book on diadromous species problematic in Europe

Card game [Finished]

- 4 types of cards: species, function, trump, and trap (55 in total).
- Objective: To create 3 **vital functions for these species while mitigating their problems**.
- For 2 people, around 15 minutes.



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Card game implemented in several activities

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A5.3) Networking activities and stakeholder's support engagement

- We have had face-to-face **meetings with fishermen** associations from 25 towns, mainly involving biologists, managers and fishermen, asking them to provide information about diadromous fish and their knowledge, and offering them outreach activities.

A5.3) Networking activities and stakeholder's support engagement

- **Outreach** activities to the general public.
- To carry out a **survey** about fishermen knowledge on diadromous fish (in progress).
- Script for a short outreach **video** on diadromous fish at sea (in progress).

Next steps

A5.3. Transference to stakeholders:

- To **deliver cards** to **NGOs**, **fishermen**, **local government agents** (Galicia, Asturias, Cantabria, Basque Country and Navarra), and other stakeholders.
- To promote the celebration of **World Fish Migration Day** in May 2026.
- To organize a **discussion forum** on DF in congresses (*e.g.* Symposia on Minho Basin, Galician Association of Water Researchers, etc.).
- To give lectures (both online and face-to-face) in secondary **schools**.
- **Label of origin** to be implemented in other species and areas.

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Thank you for your attention

Rufino Vieira-Lanero,
Alberto Gutiérrez-Barral,
Sandra Barca-Bravo,
Fernando Cobo, USC.

@DiadSea

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DiadSea@uevora.pt

UN Ocean Decade Endorses DiadSea Project for Sustainable Fisheries

DiadSea has been officially endorsed by the UN Ocean Decade.

This important recognition comes under the programme “Fisheries Strategies for Changing Oceans and Resilient Ecosystems by 2030 - FishSCORE 2030”.

2021 2030 United Nations Decade of Ocean Science for Sustainable Development

FishSCORE 2030
Fisheries Strategies for Changing Oceans and Resilient Ecosystems

Interreg Atlantic Area
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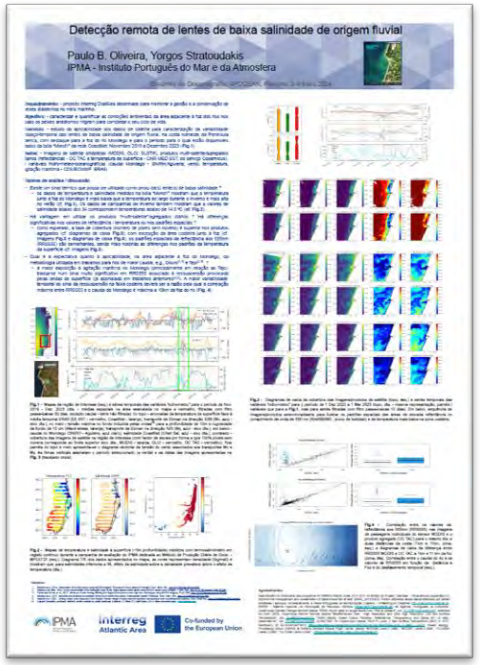
Some dissemination activities

- Participation in the several symposia and meetings.



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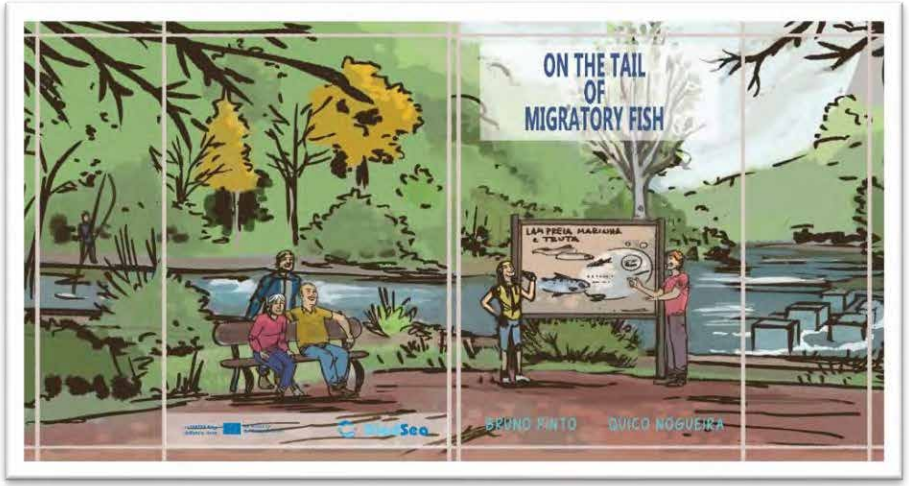
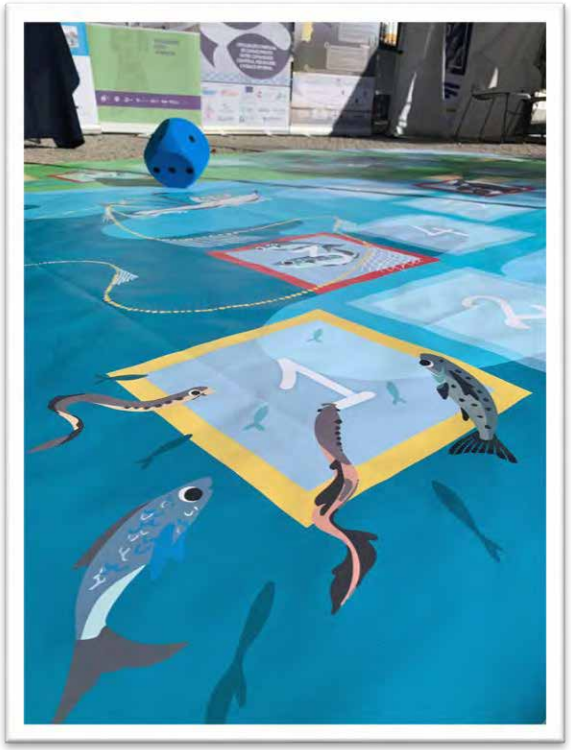
Some dissemination activities

- Floor game developed by UÉvora/MARE
- Card game developed by Logrami.
- Comic Book developed by FCUL.





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Some dissemination activities

- Media publications about the project DiadSea, or where the project is mentioned.

DIA DA EUROPA – DIA EUROPEU DO MAR

LIDERANÇAS PORTUGUESAS

ADT4Blue

ADVANCED DIGITAL TECHNOLOGIES FOR BLUE ECONOMY (ADT4BLUE)

ATLIC

ATLIC – ATLANTIC INNOBLUE COMMUNITIES

Atlantic Whale Deal

ATLANTIC WHALE DEAL: Mitigating Ship Strikes and Enhancing Carbon Sequestration in the Atlantic

SISDATA

DIADSEA – Cooperação transnacional para melhorar a gestão e a conservação dos peixes diádromos no Mar

CISION

Diário de Coimbra

ID: 109668335

19-02-2024

Meio: Imprensa
País: Portugal
Área: 364,82cm²
Âmbito: Regional
Period.: Diária
Pág: 14,1

Colóquio quer propostas para salvaguardar lampreia

Penacova "Chegou o momento de ouvir a voz da comunidade científica e pedir às autoridades medidas que protejam a espécie", alerta Álvaro Coimbra

BIODIVERSIDADE

Especialista defende proibição da pesca da lampreia devido à escassez. Penacova cancela festival

No rio Mondego, onde a pesca de lampreia é uma tradição ancestral, este poderá ser o pior ano de sempre. "Deveríamos fechar a pesca. A qualquer animal deve ser dada a oportunidade para se reproduzir."

Lusa e PÚBLICO

21 de Fevereiro de 2024, 16:23

Apesar da escassez no Mondego, o festival gastronómico vai decorrer na região de Valença, no Minho

MANUEL ROBERTO

OBSERVADOR

O vampiro dos mares que sobreviveu à extinção dos dinossauros

Passa os primeiros cinco anos como larva enterrada na areia. Iguaria no prato, a lampreia alimenta-se do sangue de outros peixes e a sua vida é feita de viagens e lutas a transpor barragens e açudes.

Há 500 milhões de anos, o planeta ainda estava longe de conhecer os dinossauros, muito menos os seres humanos.

NOTÍCIAS DE COIMBRA

Região

Região de Coimbra recomenda interdição de pesca de lampreia a nível nacional

NDC

Notícias de Coimbra com Lusa | 3 meses atrás em 21-03-2025

A Comunidade Intermunicipal da Região de Coimbra (CIMRC) aprovou hoje uma posição em que recomenda a interdição da pesca de lampreia a nível nacional e uma intensificação da fiscalização, face à escassez deste peixe nos rios portugueses.

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Some dissemination activities

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