Fisatur

ATLANTIC NETWORK OF FISHING AND MARITIME TOURIST EXPERIENCES

DELIVERABLE 2.2
GIS-Cartographic viewer

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ipvc Instituto Politécnico
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L'INSTITUT
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Angers

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Table of contents

List of figures

List of tables

List of annexe

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Acronym: FISATUR

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1 (Coord.)	FUNDACION PARA LA PESCA Y MARISQUEO FUNDAMAR | FUNDAMAR
2	INSTITUTO PARA EL CRECIMIENTO SOSTENIBLE DE LA EMPRESA SL | ICSEM
3	COMUNIDADE INTERMUNICIPAL DO ALTO MINHO | CIM ALTO MINHO
4	TECHNOPOLE QUIMPER CORNOUAILLE | TQC
5	INSTITUTO POLITECNICO DE VIANA DE CASTELO | IPVC
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1. Introduction

A. Tourism associated with fishing, aquaculture and maritime heritage: the challenge addressed by the FISATUR project

The development of tourism linked to fishing, aquaculture and maritime heritage can be observed throughout Europe. It is being driven by two factors: the decline in income generated by fishing and the search for alternative or additional income for fishermen, and the development of a leisure economy for both residents and tourists. While this market is expanding, particularly in the Mediterranean basin, the professional world of fishing and aquaculture is not always benefiting. On the one hand, the activities of seafood professionals are competing with the tourism industry and residential uses, which are becoming increasingly important as a result of the gentrification of the coastline. On the other hand, these professionals have to change their activity from a productive fishing or aquaculture activity to a multiactivity including service activities.

Today, against a backdrop of dwindling fish stocks and restrictions on access to fishing grounds in British waters as a result of Brexit, and in the Gulf of Gascony to avoid accidental catches of dolphins, fishing activity is being reduced, with many vessels being scrapped. Aquaculture, meanwhile, is highly dependent on sanitary conditions linked to water and environmental quality, with the risk of regular closures.

The drop in fishing and aquaculture activity has consequences for professionals, but also for activities linked upstream and downstream of the sector, as well as for coastal areas dependent on these activities. Could the development of tourism linked to fishing and aquaculture, but also to maritime heritage, offer an opportunity to diversify the activities of fishing and aquaculture businesses and the economy of these areas? Can the traditional activities of fishing and aquaculture, and the maritime heritage, offer new local resources to support local tourism?

B. Presentation of the FISATUR project

By promoting the blue economy, the FISATUR project has several aims. Firstly, it aims to identify tourism opportunities for professional players in the fishing and aquaculture industries and for local players in coastal areas, in order to ensure local development while preserving the environment. Secondly, it seeks to demonstrate the feasibility of local tourism based on fishing and aquaculture activities and the maritime heritage.

The FISATUR project relies on a Spanish, Portuguese and French consortium to (i) characterise the tourism market linked to fishing, aquaculture and maritime heritage activities, (ii) support the skills and know-how of project promoters wishing to develop a tourism activity linked to fishing, aquaculture or maritime heritage activities, (iii) support the emergence of new initiatives and activities in the field of tourism linked to fishing, aquaculture and maritime heritage activities, (iv) set up a network of partners in the field of tourism linked to fishing, aquaculture and maritime heritage activities, aquaculture or maritime heritage, (iii) support the emergence of new initiatives and activities in the field of tourism linked to fishing, aquaculture and maritime heritage activities, (iv) set up an Atlantic network of tourism products and services linked to fishing, aquaculture and maritime heritage.

The FISATUR project is aimed at professionals in the fisheries, aquaculture and tourism sectors who share the objective of developing local coastal areas by supporting the development and promotion of innovative

tourism products and services linked to fisheries, aquaculture and maritime heritage. The 28-month project is divided into three phases. The first is a documentation and study phase to qualify the market for tourism products and services linked to the maritime heritage of fishing and aquaculture in each of the areas studied: Atlantic Brittany, Galicia and Northern Portugal.

The second phase involves setting up an incubator for tourism projects related to fishing, aquaculture and maritime heritage. Each region will provide support to 10 project leaders, helping them to move from the idea of a project to the design of a tourism offering covering all its tangible, intangible, human, economic and commercial dimensions.

Finally, the third phase is organised around the creation of a maritime route from France to Portugal. Two project promoters from each region will be selected to take part in a boat trip linking the project regions. The boat's stops in various ports will provide opportunities for discussions and for promoting the project promoters' tourism products and services, as well as activities already present in the area. These promotional activities will ensure benchmarking between local players and professionals involved in the FISATUR project.

C. Presentation of WP2

WP2 of the FISATUR project aims to characterise the tourism market linked to fishing and aquaculture and the development of natural and cultural maritime heritage. The characterisation of this market is based, on the one hand, on the documentation and mapping of the tourist offer present in the area and, on the other hand, on the qualification of the tourist demand on the part of residents and tourists welcomed to the area. In this document, we will focus on the GIS presentation of the WP2.

2. Methodology

The mapping of tourism initiatives in the FISATUR project has been organised in two stages: firstly, the identification of emblematic tourism initiatives in each region and, secondly, their mapping so that visitors to these regions can find them.

The first stage of the survey involved **setting up a database shared by** all the partners to collect tourism initiatives linked to fishing, aquaculture and maritime heritage. This inventory was carried out by collecting a variety of initiatives from each region among the tourist products and services linked to fishing, aquaculture and maritime heritage. This information was collected mainly by searching on Internet browsers using various keywords and their combinations: fishing and tourism, shellfish farming and tourism, aquaculture and tourism, natural heritage and tourism, maritime crafts, maritime festivals, environmental education and the sea, etc. Sometimes, information from the following fieldwork phase completed this collection via the Internet. The database was structured to feed the geographic information system and contains data to characterise these initiatives and geographic information to locate them. The diversity of the partners and initiatives collected meant that a great deal of work had to be done to standardise the database.

The second stage aims to **provide a spatial representation of these initiatives** so that visitors to these areas can find them during their stay. This spatial representation is based on the implementation of a geographic information system (GIS) to enable online consultation of the initiatives using an interface integrated into the FISATUR website and the production of a cartographic atlas.

The GIS contains the following data:

Table 1: GIS data

Item	Explanation
Location of structures and/or their activities	GPS coordinates[1]
Type of structure	**Portugal and Spain :** association, sole proprietorship, company, cooperative, other private, local authority, public establishment, other public
Type of tourism products and services offered	Cf Table 2 : Tourism products and services related to fishing, aquaculture and maritime heritage
Contact	Address, telephone number, website, e-mail address

Source: FISATUR, 2024

Table 2 : Tourism products and services related to fishing, aquaculture and maritime heritage

Title	Explanation
Environmental education activities (services)	The aim of these activities is to encourage and support people in adopting responsible practices in relation to environmental issues, by offering events, interpretation and awareness-raising activities to help them learn more about the maritime and coastal environment. In FISATUR, this category includes educational excursions at sea, walks on the foreshore to discover its specific features and issues, outings with fishing guides to discover the species fished and fishing techniques, visits to marine aquariums to observe reconstructed marine environments and marine animal and plant species.
Cultural and heritage activities (services)	These activities promote maritime culture, whether professional or heritage-based. They take a variety of forms, from the discovery of seafood-related gastronomy[2] to seafood cookery courses, maritime museums and events promoting maritime culture such as maritime festivals and culinary festivals.
Business tourism (services)	This type of tourism showcases the activities of companies and the expertise of professionals in the fishing, aquaculture and marine industries. This category includes visits to businesses throughout the industry (fishing boats, oyster farms, fish auctions, canneries, net construction and repair, boats, etc.).
Crafts (products)	This category includes craft products made from bio-sourced materials (from animal or plant matter from the sea or coast) or professional materials (for example, objects made from fishing nets or boat wood).
Other products and services	A final category brings together tourism initiatives that are relevant to FISATUR but cannot be classified in the previous categories: other services, other products, multiple for initiatives combining several products and services from different categories.

Source: FISATUR , 2024

In order to ensure the longevity of the tool (at least 5 years as required by the funder) and to facilitate its maintenance and accessibility for the FISATUR project partners, ©Google My Maps was chosen as a simple

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[1] To simplify datacollection, locations were entered in the form of string addresses. An R code using an API key was then used to find their geographical coordinates in DMS.

[2] In this case, to avoid listing all the restaurants offering shellfish or fish dishes, only gastronomic experiences combining a cultural and heritage activity have been included.

GIS. The ©QGIS tool was also chosen for producing the cartographic atlas and storing the vector files used to produce the maps.

Type of maps		Number	Scale	Thematics
General		1	1:7 000 000	Presentation of the initiatives
Region		9	1:1 200 000	Initiative x3 Structure type x3 Value chain x3

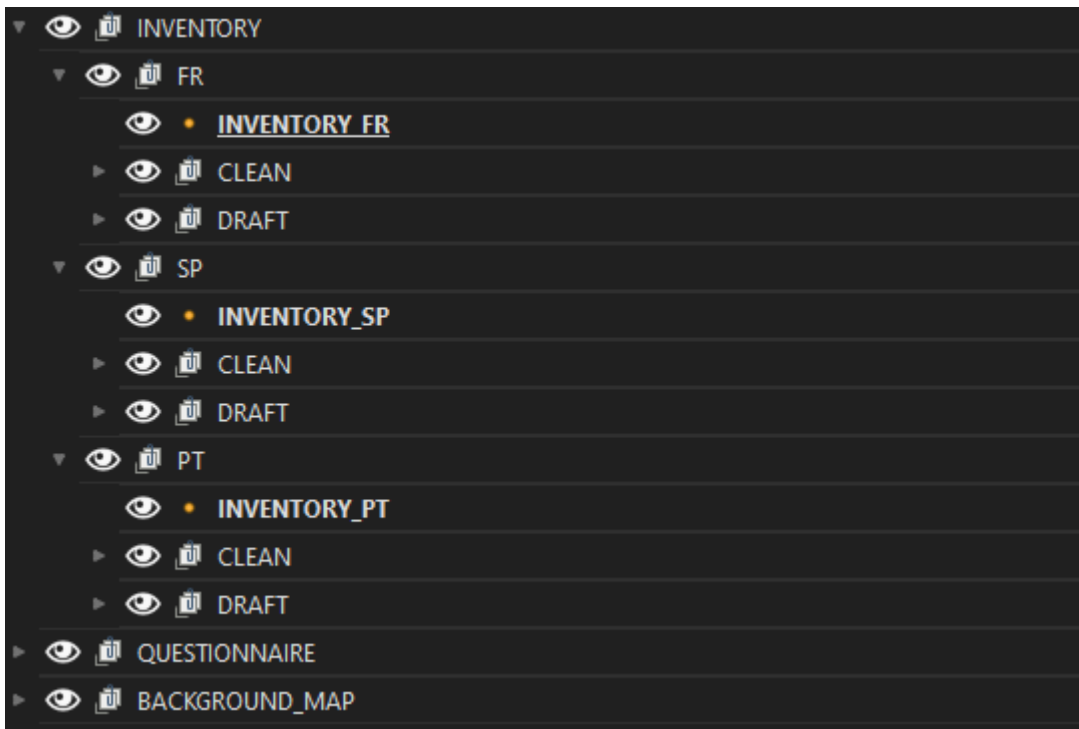The used projection is EPSG : 3395, and the project have the following structure :

The GIS is structured into three major layer groups: one dedicated to the inventory, another for the WP2 questionnaire, and a third for the base layers. Each group is further organized by country, ensuring a clear and efficient geographic distinction. Where necessary, sub-groups are employed to differentiate between working layers and final layers, allowing for a streamlined and organized approach to managing and analyzing spatial data.

3. Results of the inventory of tourism initiatives linked to fishing, aquaculture and maritime heritage

A. Inventory features
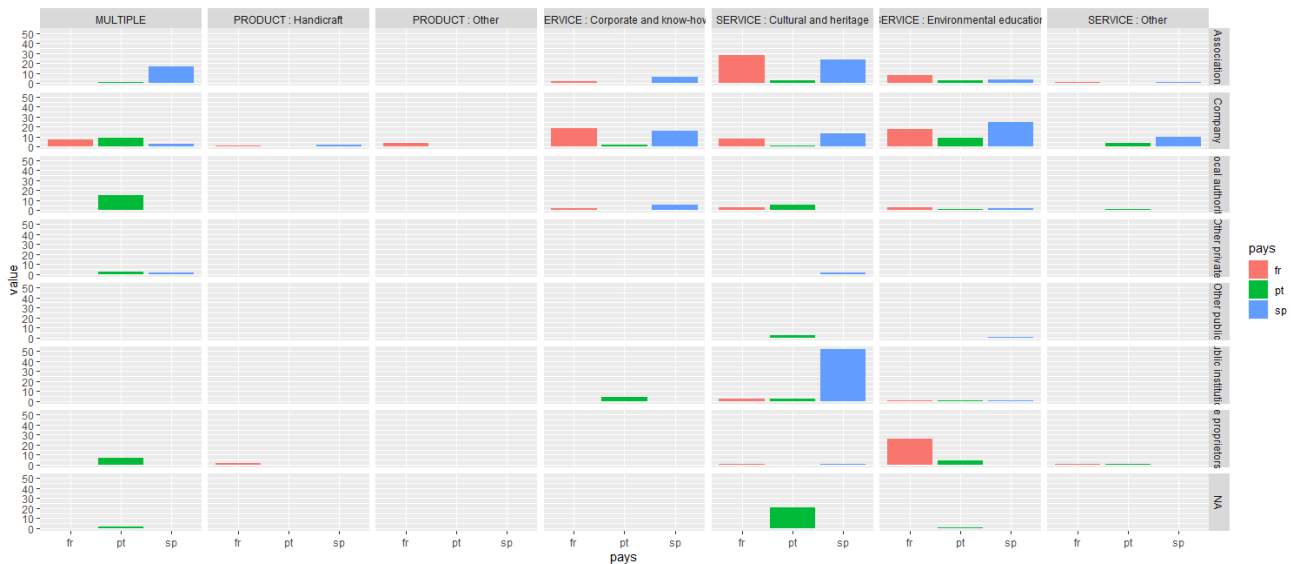
Figure 2: Inventory characterisation.

The inventory results encompass a total of 425 organizations, with 137 based in France, 102 in Portugal, and 186 in Spain. Among the unused characteristics, there are no 'Local Authorities' listed under the product category. The same applies to associations, other private/public entities, public institutions, and NA. This is because products are typically produced by companies, and in the case of craftsmanship, by sole proprietorships in France.

The majority of the organizations are involved in providing services, predominantly by companies and associations, with fewer contributions from local authorities.

Notably, certain trends emerge depending on the country. For instance, Spain has a significant number of public institutions offering cultural and heritage services, which is not observed in France or Portugal. Conversely, France has a notable presence of sole proprietorships providing environmental education services, a category absent in the inventories of Spain and Portugal.

While France and Spain exhibit relatively similar profiles, Portugal presents a distinct pattern. It is the only country with undefined types of organizations, featuring sole proprietorships offering multiple services/products, public institutions delivering corporate and know-how services, and local authorities providing a diverse range of services/products.

B. The GIS

Each country have is own GIS :

- en : https://www.google.com/maps/d/u/1/embed?mid=1v3WEEForGlGa0hkYNz9Crorfeo4zH6Q&ehbc=2E312F&noprof=1
- es : https://www.google.com/maps/d/u/1/embed?mid=1wm0fWVVNf5DVBBjlQflE5P_oF1kVj38&ehbc=2E312F&noprof=1
- pt : https://www.google.com/maps/d/u/1/embed?mid=1ge6ARzgpPOOz5DBkTyBuDa3hwyvp818&ehbc=2E312F&noprof=1
- fr : https://www.google.com/maps/d/u/1/embed?mid=1_dB9fsHhJIiIUQ4TAYIbt3agX4q44UE&ehbc=2E312F&noprof=1

They all look the same, it is possible to click on the item to get more information :
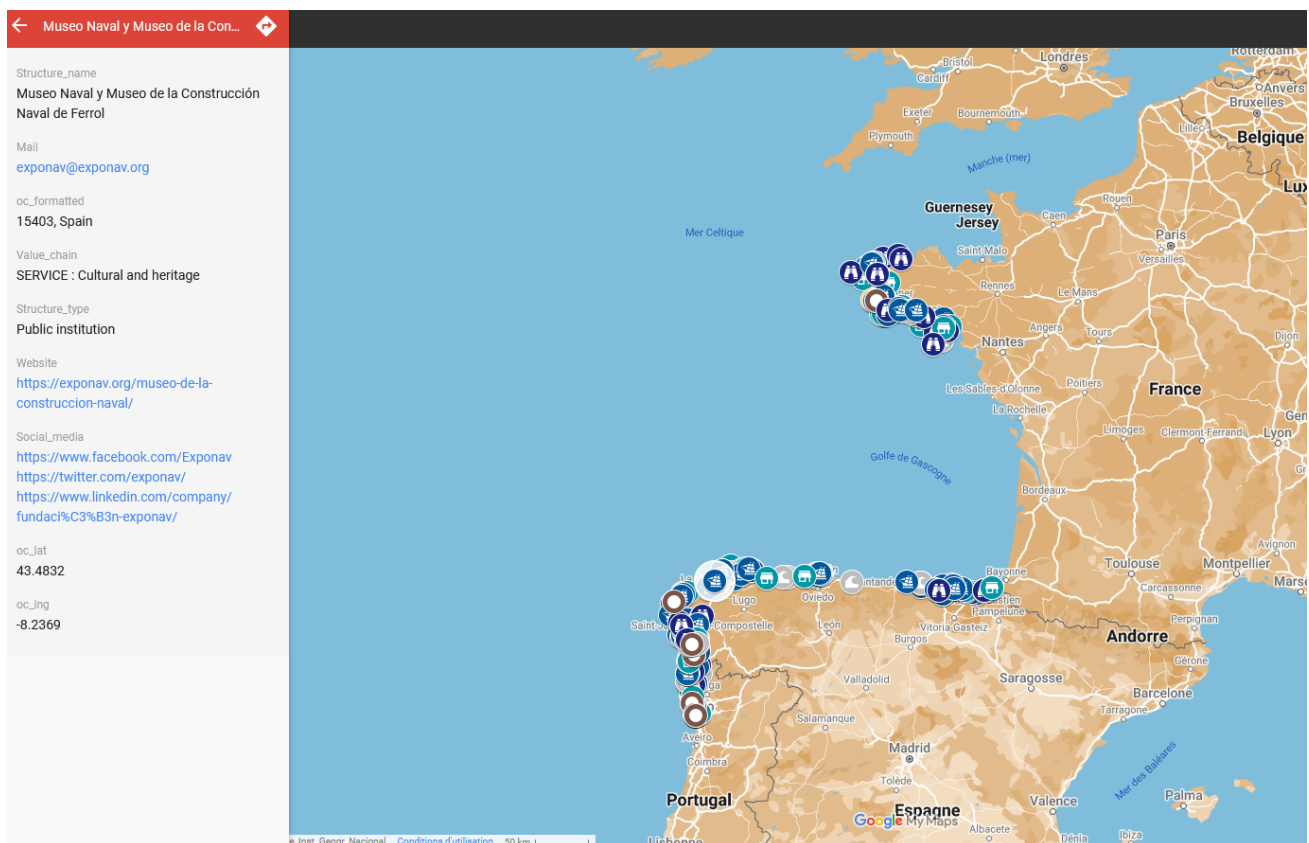
Figure 3 : Screenshot of the english GIS.

The item have particular symbol :

	Service : Cultural and heritage
	Service : Environmental education
	Service : Corporate and know-how
	Multiple
	Service : Other
	Product : Other
	Product : Handicraft

C. Cartographic atlas

All maps in annexe.

4. Annexes

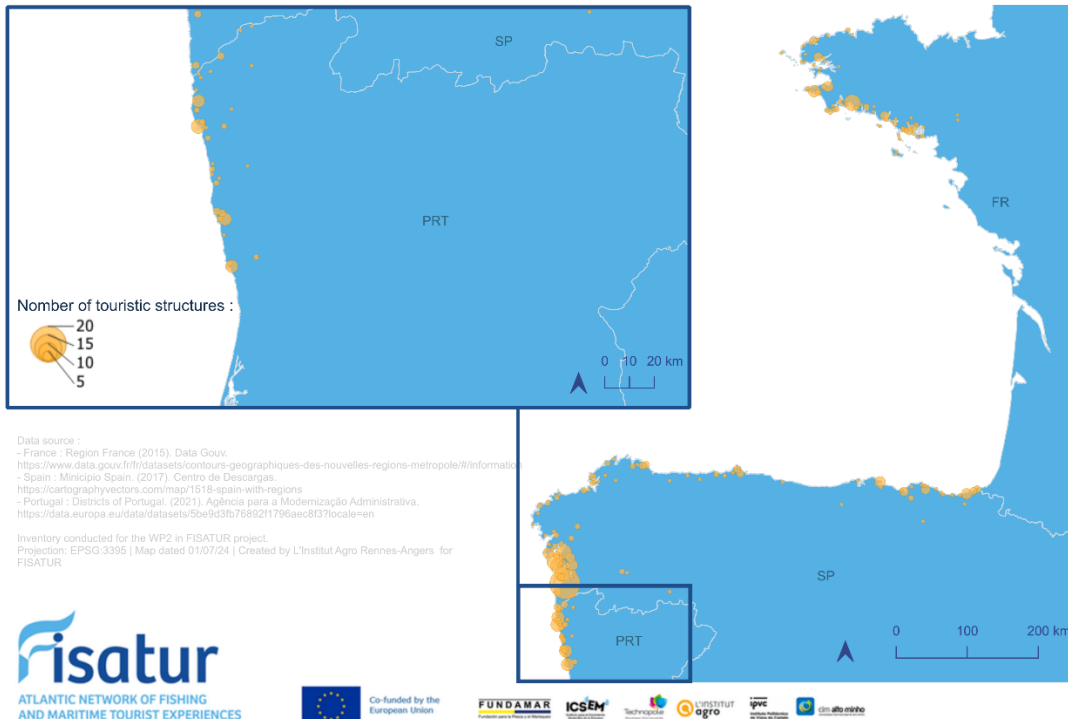*Annexe 1*

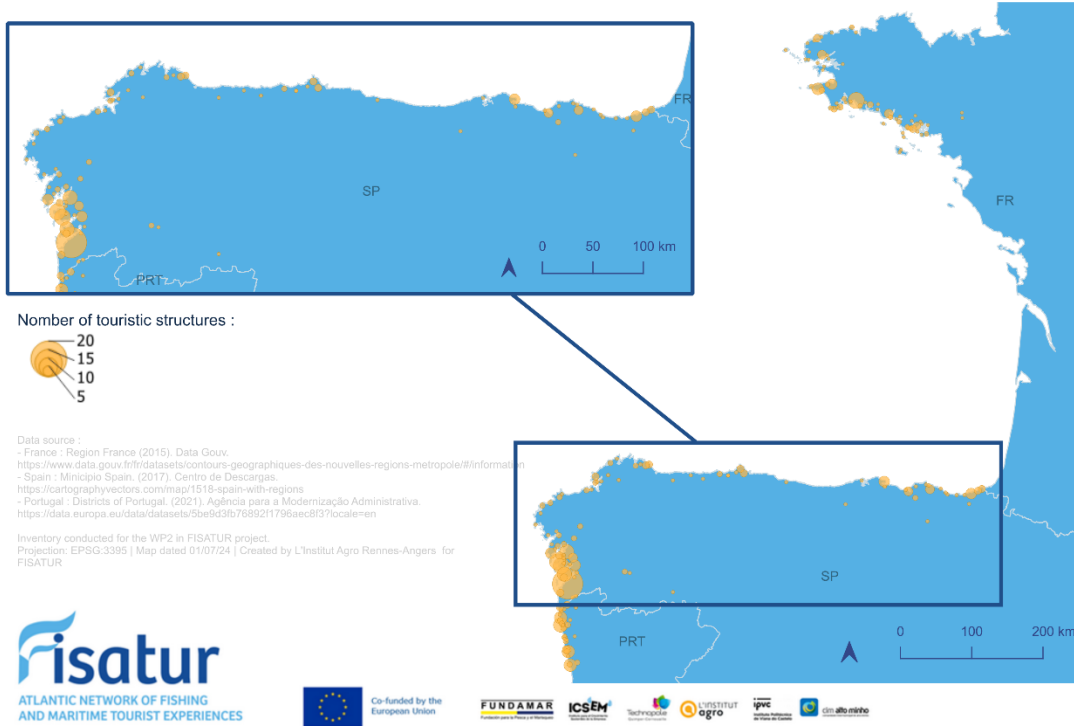## INVENTORY OF TOURISTIC STRUCTURES

Nomber of touristic structures :

- 20
- 15
- 10
- 5

Data source :
- France : Region France (2015). Data Gouv.
https://www.data.gouv.fr/fr/datasets/contours-geographiques-des-nouvelles-regions-metropole/#/information
- Spain : Minicipio Spain. (2017). Centro de Descargas.
https://cartographyvectors.com/map/1518-spain-with-regions
- Portugal : Districts of Portugal. (2021). Agência para a Modernização Administrativa.
https://data.europa.eu/data/datasets/5be9d3fb76892f1796aec8f3?locale=en

Inventory conducted for the WP2 in FISATUR project.
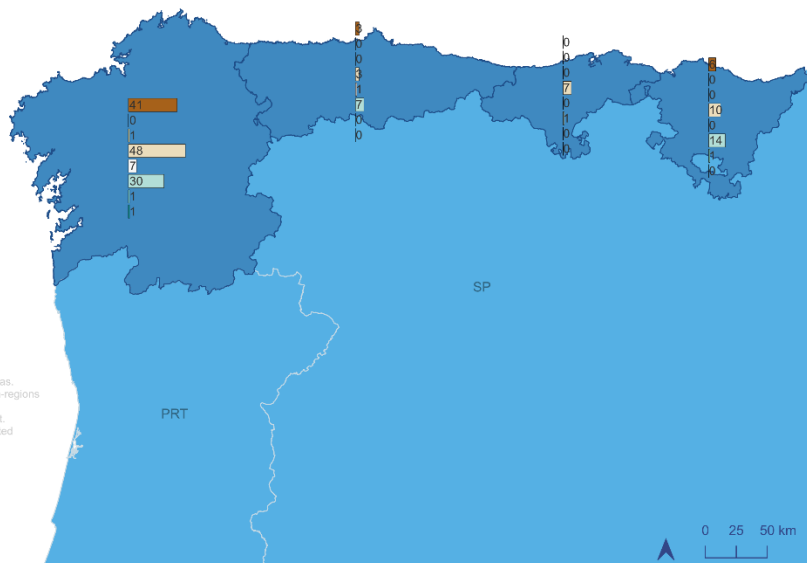Projection: EPSG:3395 | Map dated 01/07/24 | Created by L'Institut Agro Rennes-Angers for
FISATUR

INVENTORY OF TOURISTIC STRUCTURES - FISATUR - FRANCE
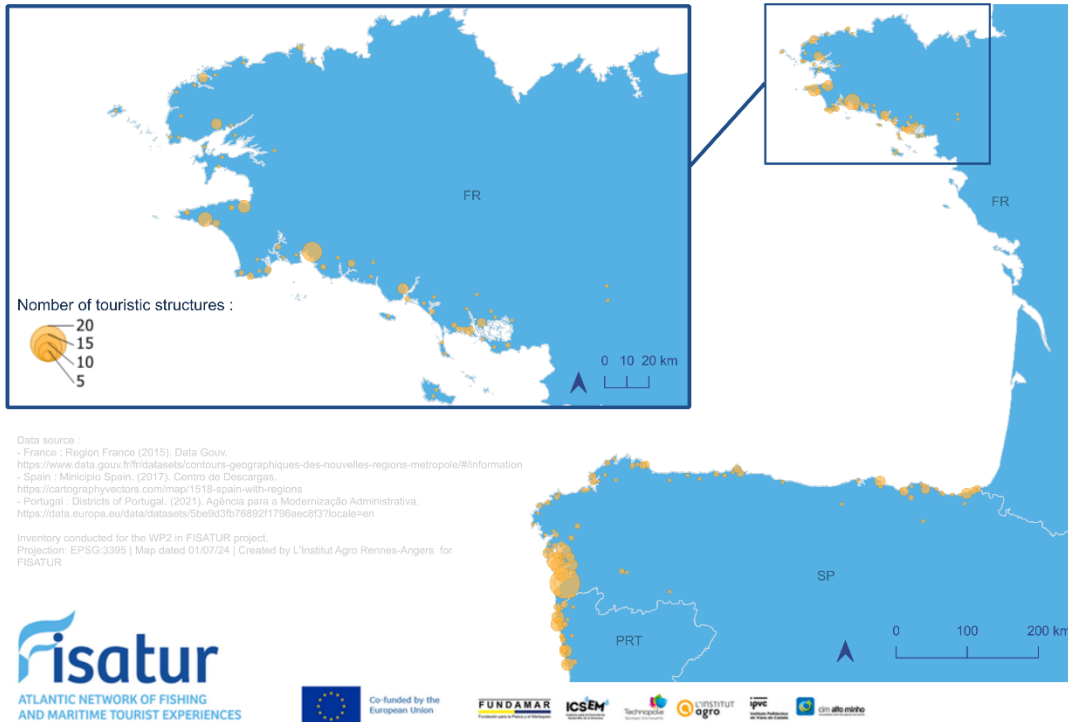
INVENTORY OF TOURISTIC STRUCTURES - FISATUR - PORTUGAL

INVENTORY OF TOURISTIC STRUCTURES - FISATUR - SPAIN

Nomber of touristic structures :
- 20
- 15
- 10
- 5

Data source :
- France : Region France (2015). Data Gouv.
https://www.data.gouv.fr/fr/datasets/contours-geographiques-des-nouvelles-regions-metropole/#/information
- Spain : Minicipio Spain. (2017). Centro de Descargas.
https://cartographyvectors.com/map/1518-spain-with-regions
- Portugal : Districts of Portugal. (2021). Agência para a Modernização Administrativa.
https://data.europa.eu/data/datasets/5be9d3fb76892f1796aec8f3?locale=en

Inventory conducted for the WP2 in FISATUR project.
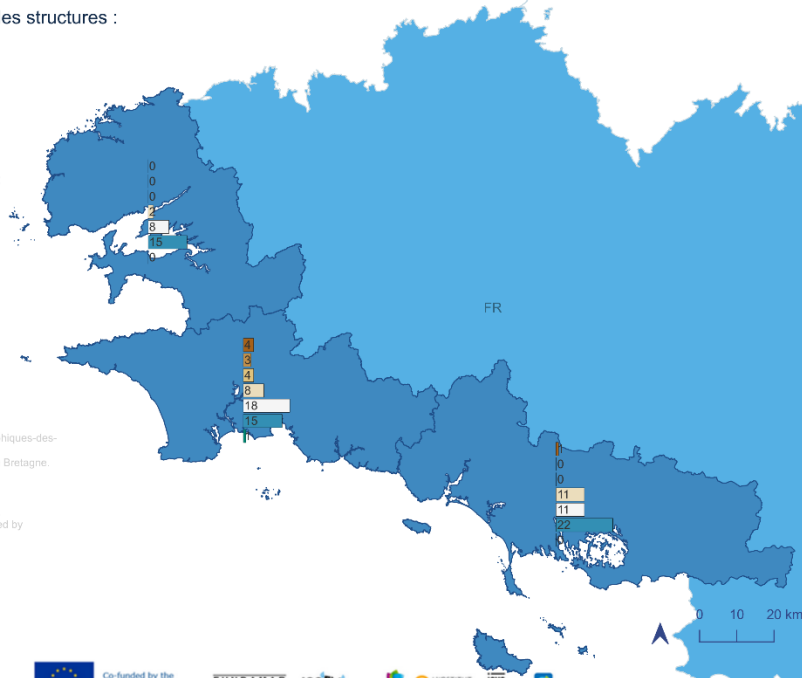Projection: EPSG:3395 | Map dated 01/07/24 | Created by L'Institut Agro Rennes-Angers for FISATUR

NOMBRE DE STRUCTURE PAR TYPE - FRANCE

Type de structure:
- Association
- Cooperative
- Entreprise individuelle
- Entreprise societaire
- Collectivite territoriale et regroupement
- Autre privé
- Autre public

Data source :
- France : Region France (2015). Data Gouv.
https://www.data.gouv.fr/fr/datasets/contours-geographiques-des-nouvelles-regions-metropole/#/information
- Destinations touristiques : Destination touristique de Bretagne.
(2019). Région Bretagne.
https://ows.region-bretagne.fr/geoserver/rb/wfs

Inventory conducted for the WP2 in FISATUR project.
Projection: EPSG:3395 | Map dated 02/07/24 | Created by
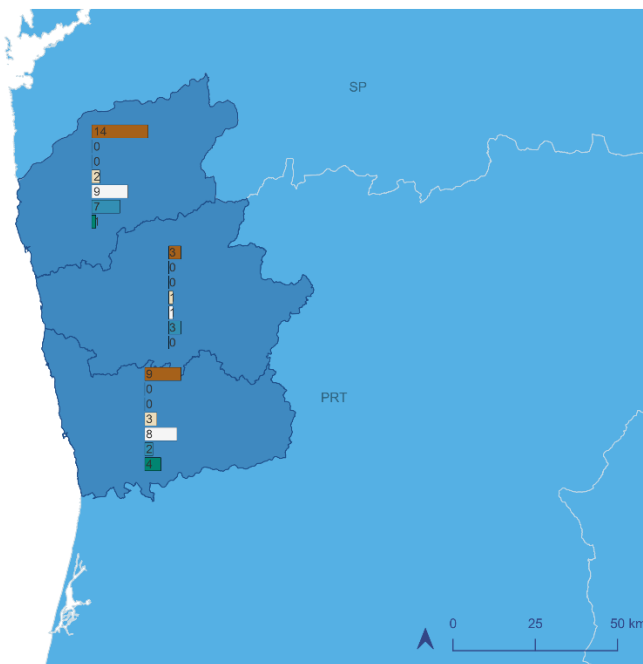L'Institut Agro Rennes-Angers for FISATUR

13

Annexe 6

NUMBER OF STRUCTURE BY STRUCTURE TYPE - PORTUGAL

Type of structure:

- ■ Association
- ■ Cooperative
- ■ Sole proprietorship
- ■ Company
- ■ Local authority
- ■ Public institution
- ■ Other private
- ■ Other public

Data source :
- Portugal : Districts of Portugal. (2021). Agência para a Modernização Administrativa.
https://data.europa.eu/data/datasets/5be9d3fb76892f1796aec8f3?locale=en
- Level 3 district : Portugal (2018). GADM.
https://gadm.org/download_country.html

Inventory conducted for the WP2 in FISATUR project.
Projection: EPSG:3395 | Map dated 02/07/24 | Created by L'Institut Agro Rennes-Angers for FISATUR
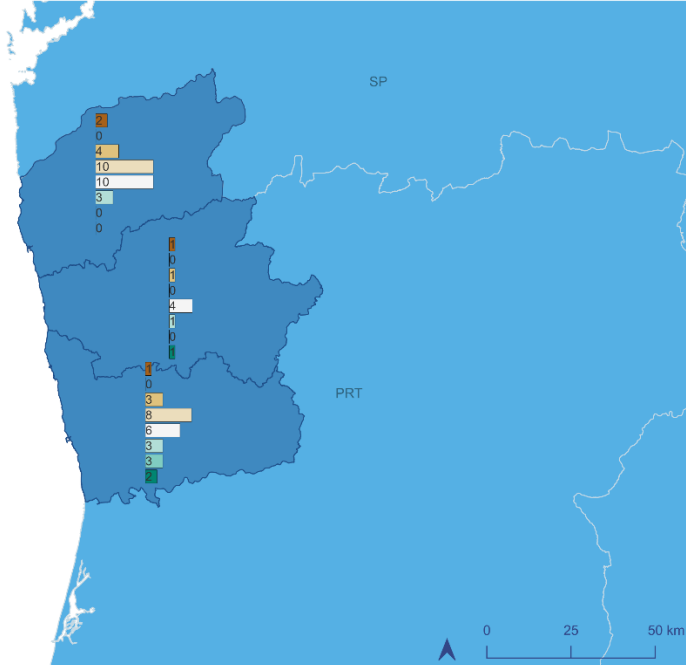
Annexe 7

NUMBER OF STRUCTURE BY STRUCTURE TYPE - SPAIN

Type of structure:

- ■ Association
- ■ Cooperative
- ■ Sole proprietorship
- ■ Company
- ■ Local authority
- ■ Public institution
- ■ Other private
- ■ Other public

Data source :
- Spain : Minicipio Spain. (2017). Centro de Descargas.
https://cartographyvectors.com/map/1518-spain-with-regions

Inventory conducted for the WP2 in FISATUR project.
Projection: EPSG:3395 | Map dated 02/07/24 | Created by L'Institut Agro Rennes-Angers for FISATUR

14

Annexe 8

NOMBRE DE STRUCTURE PAR TYPE DE TOURISME - FRANCE

Annexe 9

NUMBER OF STRUCTURE BY VALUE CHAIN - PORTUGAL

NUMBER OF STRUCTURE BY VALUE CHAIN - SPAIN