

EU4OCEAN SPOW – **PLASTIC POLLUTION AND WORKING WITH OCEAN TECHNOLOGY**



March 11th, 2024


This SPOW has received funding from the EU4Ocean Coalition of the Directorate General of Maritime Affairs and Fisheries of the European Commission and is co-branded with Scientix, an initiative of European Schoolnet. The content included in this document is the sole responsibility of the authors, and it does not represent the opinion of the European Commission (EC), and the EC is not responsible for any use that might be made of information contained.



The European Atlas of the Seas

www.european-atlas-of-the-seas.eu





How do we know what we know about the ocean?

Is plastic pollution also affecting the sea floor?

Let's find out with the Atlas...

What is the European Atlas of the Seas?



Tourism



Nature



Sea life



Transport



Sea bottom



Energy



Security



Fishing stocks and quota



Aquaculture



Employment

- Interactive learning tool
- Initiative of the European Commission
- More than 270 interactive map layers
- Identified data sources
- Custom maps
- Easily accessible
- 24 official languages
- Print & embed tools



How does it work?

www.european-atlas-of-the-seas.eu

24 languages

The screenshot shows the website's header and main content area. A red dashed circle highlights the menu icon (three horizontal lines) on the left. Another red dashed circle highlights the language selector, which shows 'English' and 'EN', with a red arrow pointing to the text '24 languages'. A third red dashed circle highlights the 'Give feedback' button, which includes a smiley face icon. The main content area features a blue background with the text 'European Commission > Maritime Affairs > European Atlas of the Seas' and a large heading 'European Atlas of the Seas'. Below the heading is a description: 'Explore, collate and create your own sea map. Learn more about Europe's seas and coasts, their environment, related human activities and European policies.' At the bottom, there are several blue buttons with icons: 'Do you need help?' (with a question mark and a yellow starburst icon labeled 'v7'), 'Advanced features' (with a gear icon), 'Atlas overview' (with a globe icon), 'Teachers corner' (with a person and speech bubble icon), and 'Legal notice' (with a speech bubble icon).

Looking for map layers...

the map
ature info

English EN Follow us Give feedback

Add layers to the map

Search for layers

Predefined maps (19) Layers Map stories My maps ^{NEW}

Algae production

- Macroalgae production facilities
- Microalgae production facilities

Aquaculture

- Aquaculture production
- Aquaculture production by species
- Freshwater finfish farms
- Seawater finfish farms
- Shellfish farms

Blue indicators Climate change

Select one or several map layers

Finding information about the map layer ...


Click on the map to get feature info

Layers (2) Legend

Macroalgae production facilities

Clear all layers

Link to the Data Provider



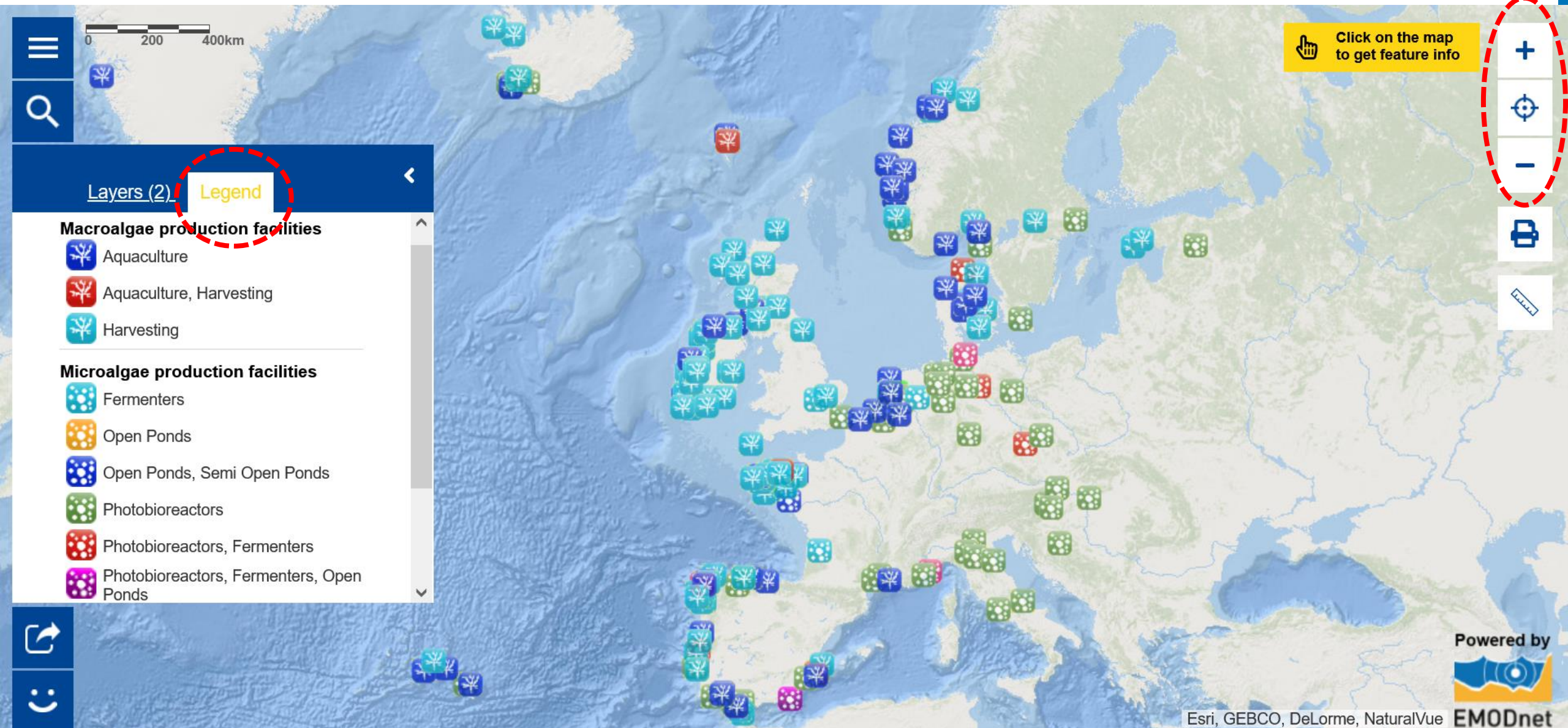
This map shows macroalgae-producing facilities by production methods (land-based, offshore and coastal aquaculture or harvesting). Data have been collected in the following countries: Belgium, Denmark, Estonia, France, Germany, Ireland, Italy, Norway, Portugal, Spain, Sweden, and UK. Macroalgae, also commonly known as seaweeds, have been part of East and South-East Asian citizens' daily diet for centuries. Nowadays, they are becoming increasingly popular in Europe too for many purposes other than food, as a source material for use in pharmaceuticals, cosmetics, nutrition or energy (biofuel). Companies across Europe are now harvesting, cultivating, or processing them to create high-value products.

Powered by
EMODnet

Esri, GEBCO, DeLorme, NaturalVue

Reading the legend, zooming in and out ...

Zoom in /out

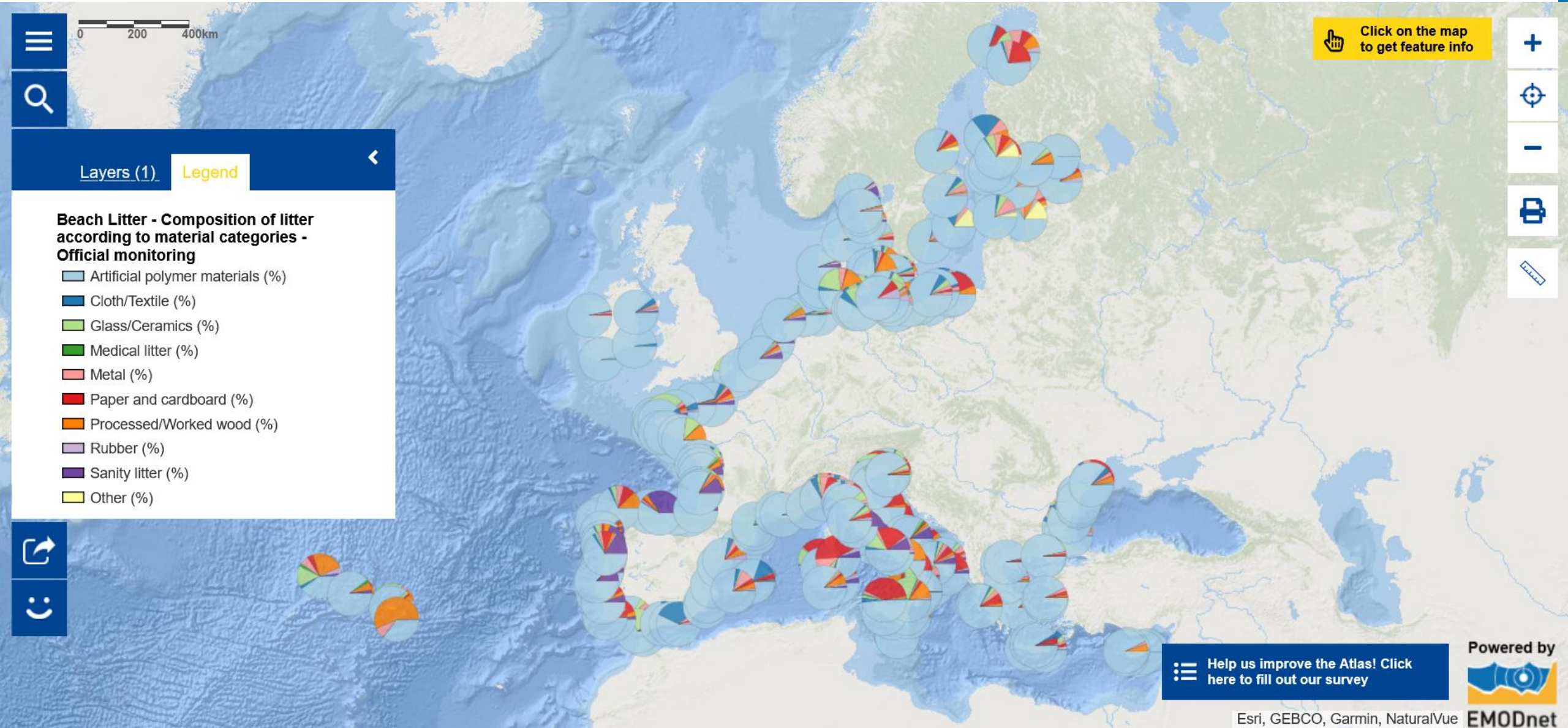


Looking for map layers on marine litter...

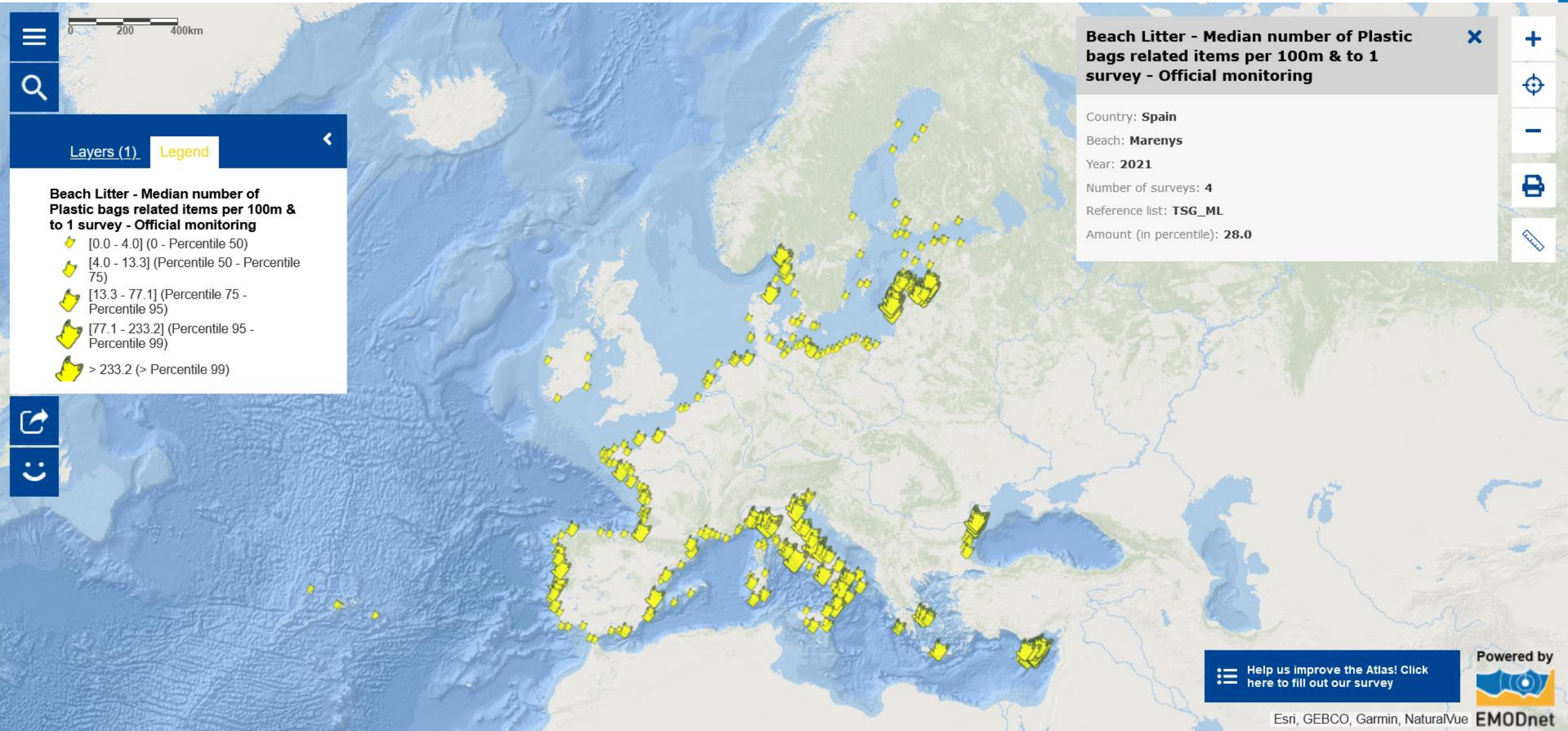
The screenshot shows the EMODnet map interface with the 'Add layers to the map' panel open. The panel has a search bar at the top and navigation tabs for 'Predefined maps (24)', 'Layers', 'Map stories', and 'My maps'. The 'Layers' tab is active, showing two columns of layer options: 'Litter' and 'Nature'. Each layer has a checkbox, an information icon, and some have additional icons representing data sources. A red dashed circle highlights the layer 'Beach Litter - Composition of litter according to material' in the 'Litter' column.

Category	Layer Name	Info Icon	Source Icons
Litter	Beach Clean Up Events	Yes	Information, University, Book
	Beach Litter - Composition of litter according to material...	Yes	Information, University
	Beach Litter - Median number of Cigarette related items...	Yes	Information, Book
	Beach Litter - Median number of Plastic bags related items p...	Yes	Information
	Beach Litter - Median number of fishing and aquaculture relat...	Yes	Information
	Beach Litter - Median total number of litter items per 100m & ...	Yes	Information
	Dredge spoil dumping (points)	Yes	Information
Dredge spoil dumping sites (polygons)	Yes	Information	
Nature	Coasts affected by tsunamis	Yes	Information
	Global sea-basins	Yes	Information
	Land cover	Yes	Information
	Relative sea level trends	Yes	Information
	River basins	Yes	Information
	River runoff trends	Yes	Information
Rivers and lakes	Yes	Information	
Sea level anomalies	Yes	Information	

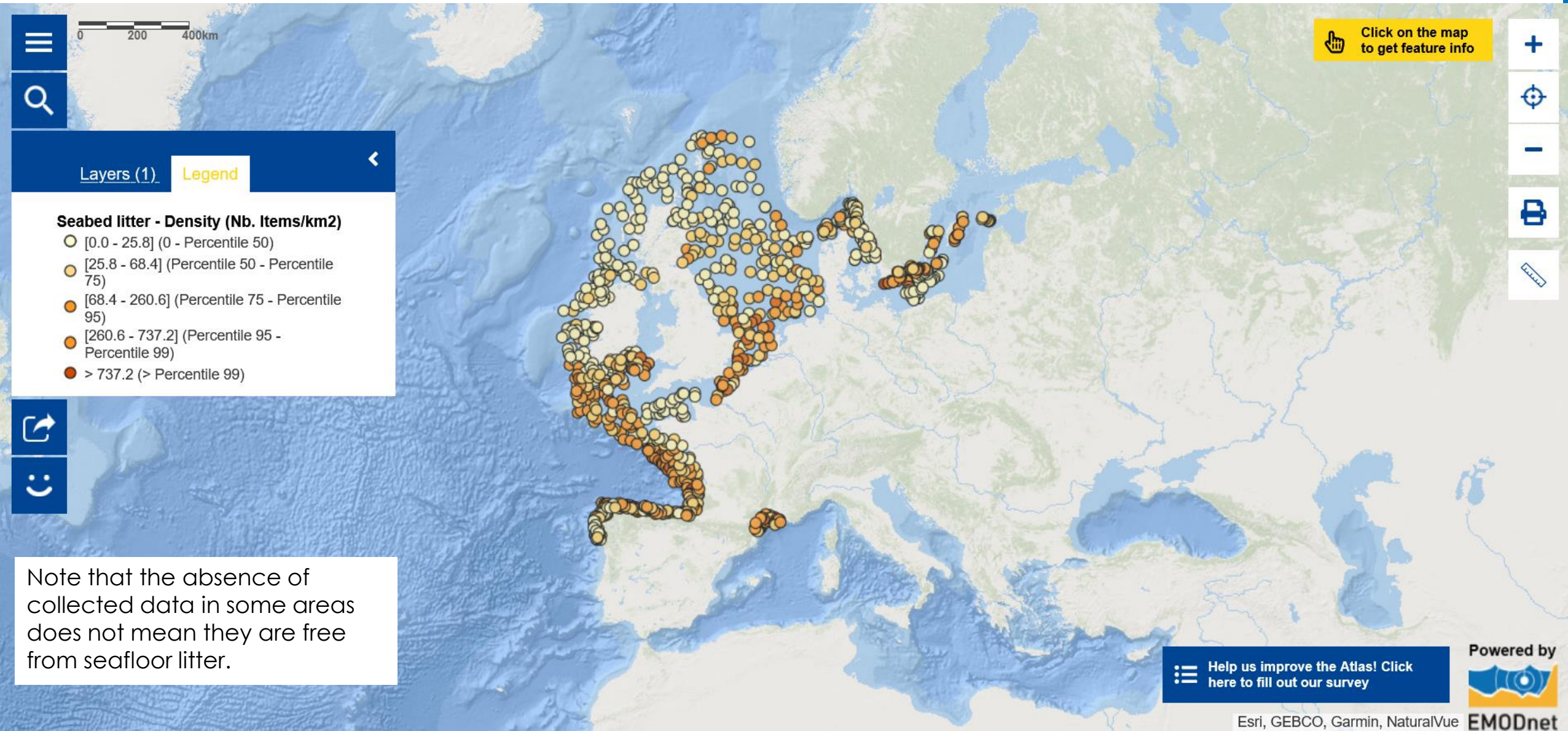
Litter on beaches



Litter on beaches

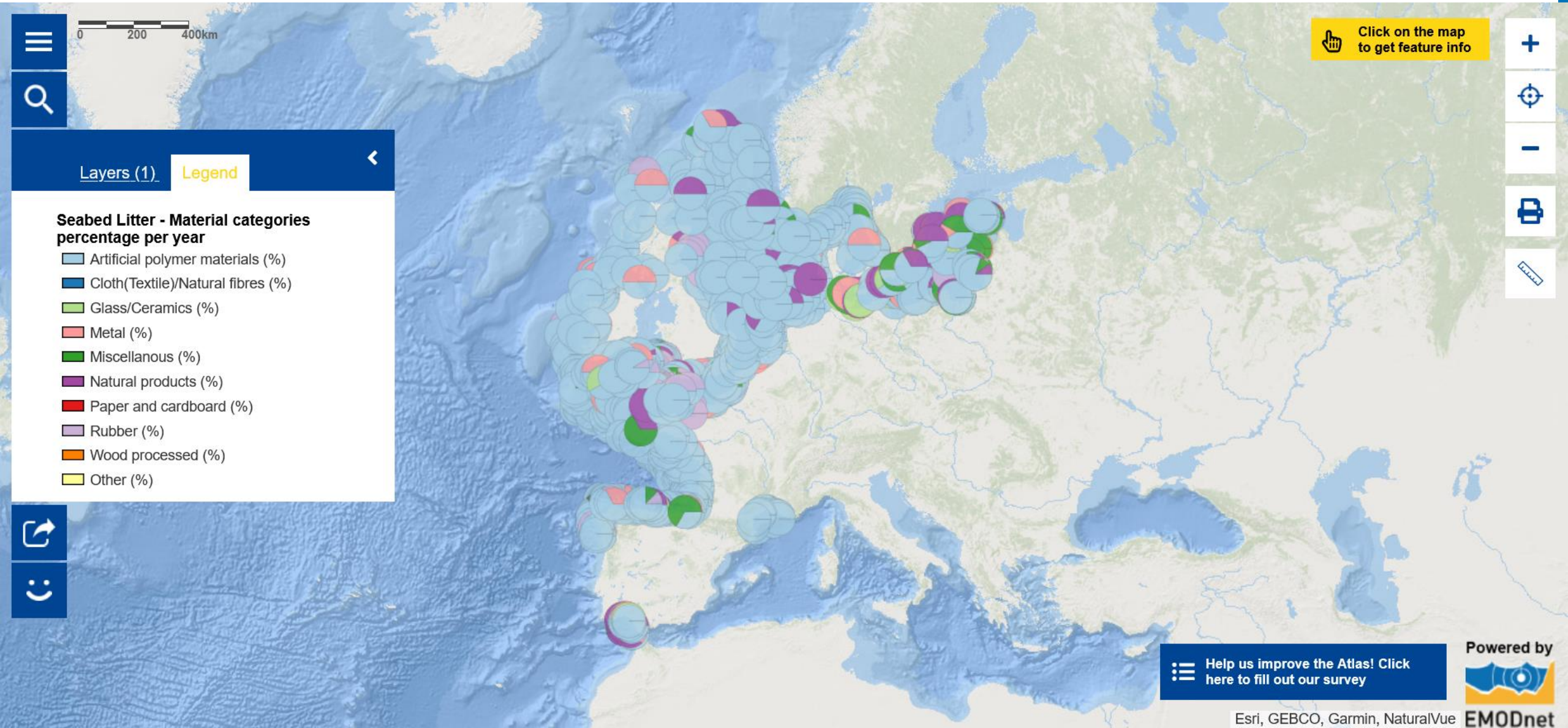


... and on the seabed

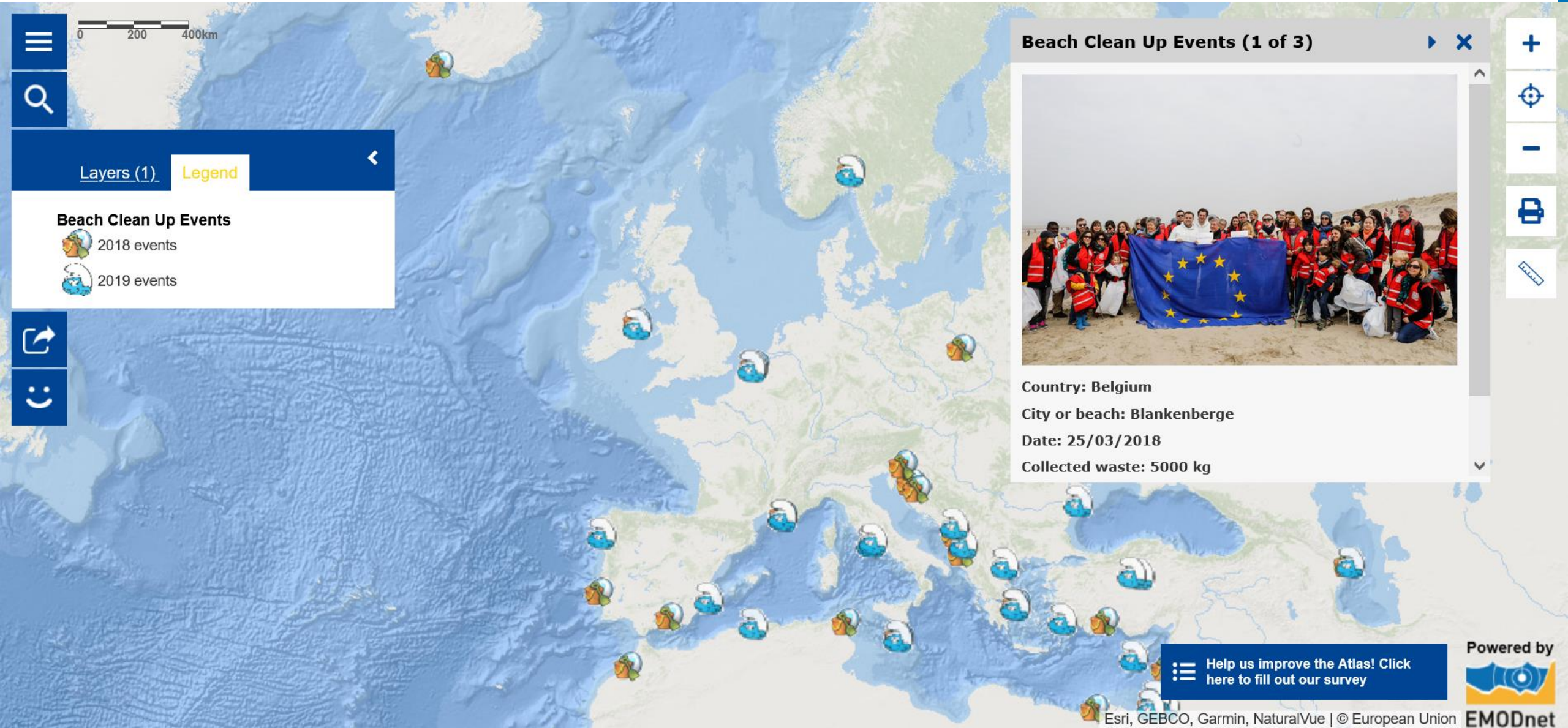


Note that the absence of collected data in some areas does not mean they are free from seafloor litter.

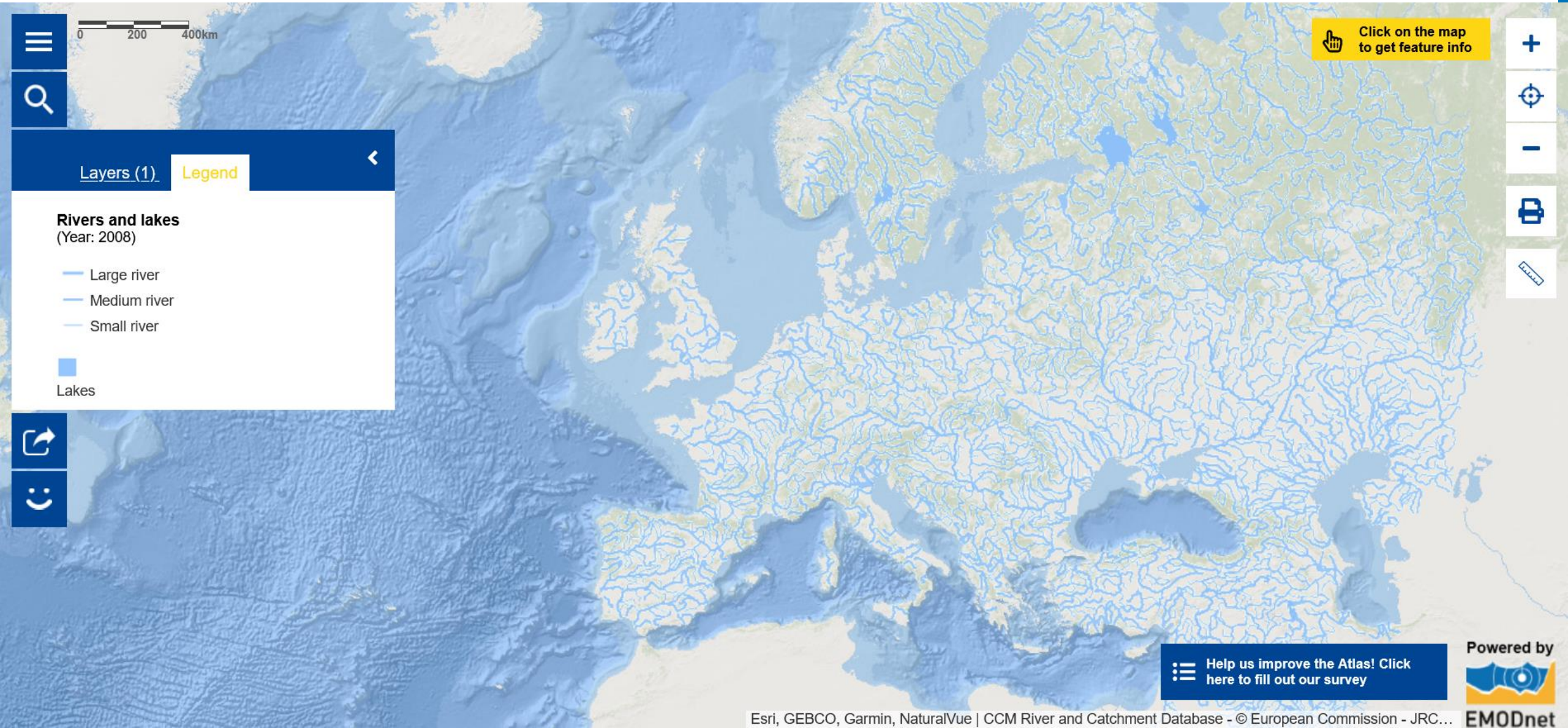
... and on the seabed



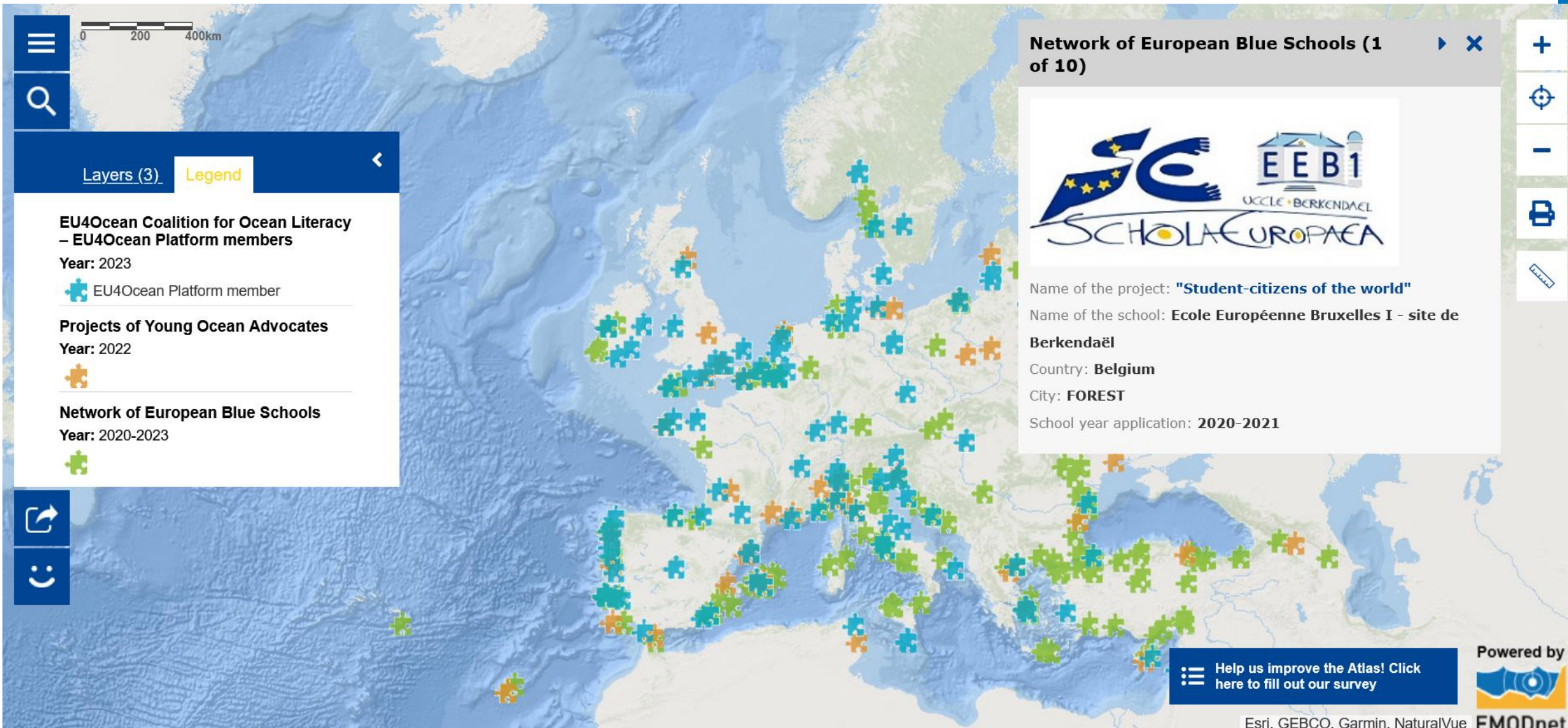
Working together: #EUBeachCleanup



Reducing marine litter starts on land



Working together: #MakeEUBlue with #EU4Ocean



Examples: EU4Ocean Platform



Surfrider Foundation Europe

<http://www.surfrider.eu>

France

Type of member : NGO

Expert(s) : Yann Leymarie

Sea basin : Arctic Ocean, Atlantic Ocean (including North Sea), Baltic Sea, Black Sea, Mediterranean Sea, International (other sea-basins / ocean)



Erasmus Maris

<http://erasmusmaris.eu>

Belgium

Type of member : Network

Expert(s) : Kamel Labibes; John Seghers; Silvia Ruiz Garcia; Emmy Pequeur; Håkan Emteborg

Sea basin : Atlantic Ocean (including North Sea), Mediterranean



ENALEIA

<https://enaleia.com/>

Greece

Type of member : NGO

Expert(s) : Lefteris Arapakis

Sea basin : Mediterranean Sea, International (other sea-basins / ocean)



UTOPIA

<https://utopia-earth.org/>

France

Type of member : NGO

Expert(s) : Baptiste de La Gournerie

Sea basin : Atlantic Ocean (including North Sea), International (other sea-basins / ocean)

Examples: Youth4Ocean Forum

Clean Boating

Christian Esteva



Country: Spain

Sea basin: Mediterranean Sea

Topics: Healthy and clean ocean

Stage of project: Stage 4: Growth

4P SHORE & SEAS

Edgar Dusacre



Country: France

Sea basin: Atlantic Ocean (including North Sea)

Topics: Climate and the ocean, Healthy and clean ocean

Stage of project: Stage 4: Growth

River Cleaner

Martino Kuntze



Country: Italy

Sea basin: Mediterranean Sea

Topics: Healthy and clean ocean

Stage of project: Stage 2: R&D

Refill Cyprus

Eleni Kazelas

Country: Cyprus

Sea basin: Mediterranean Sea

Topics: Climate and the ocean, Healthy and clean ocean, Human health

Stage of project: Stage 4: Growth

Examples: European Blue Schools



"Student-citizens of the world"

City & Country: FOREST, Belgium

Level of education: Primary school

School name: Ecole Européenne Bruxelles I - site de Berkendaël

Thematic categories: Healthy Ocean



RAISE AWARENESS ABOUT THE PLASTIC WASTE IN THE BALTIC SEA.

City & Country: Alytus, Lithuania

Level of education: Secondary school

School name: Alytus Jotvingiai gymnasium

Thematic categories: Healthy Ocean. Ocean and Climate

Coastwatch

City & Country: Den Helder, Netherlands

Level of education: junior

School name: Scholen aan Zee

Thematic categories: Healthy Ocean, Ocean and Climate, biodiversity, Maritime Culture

Let's clean up Europe

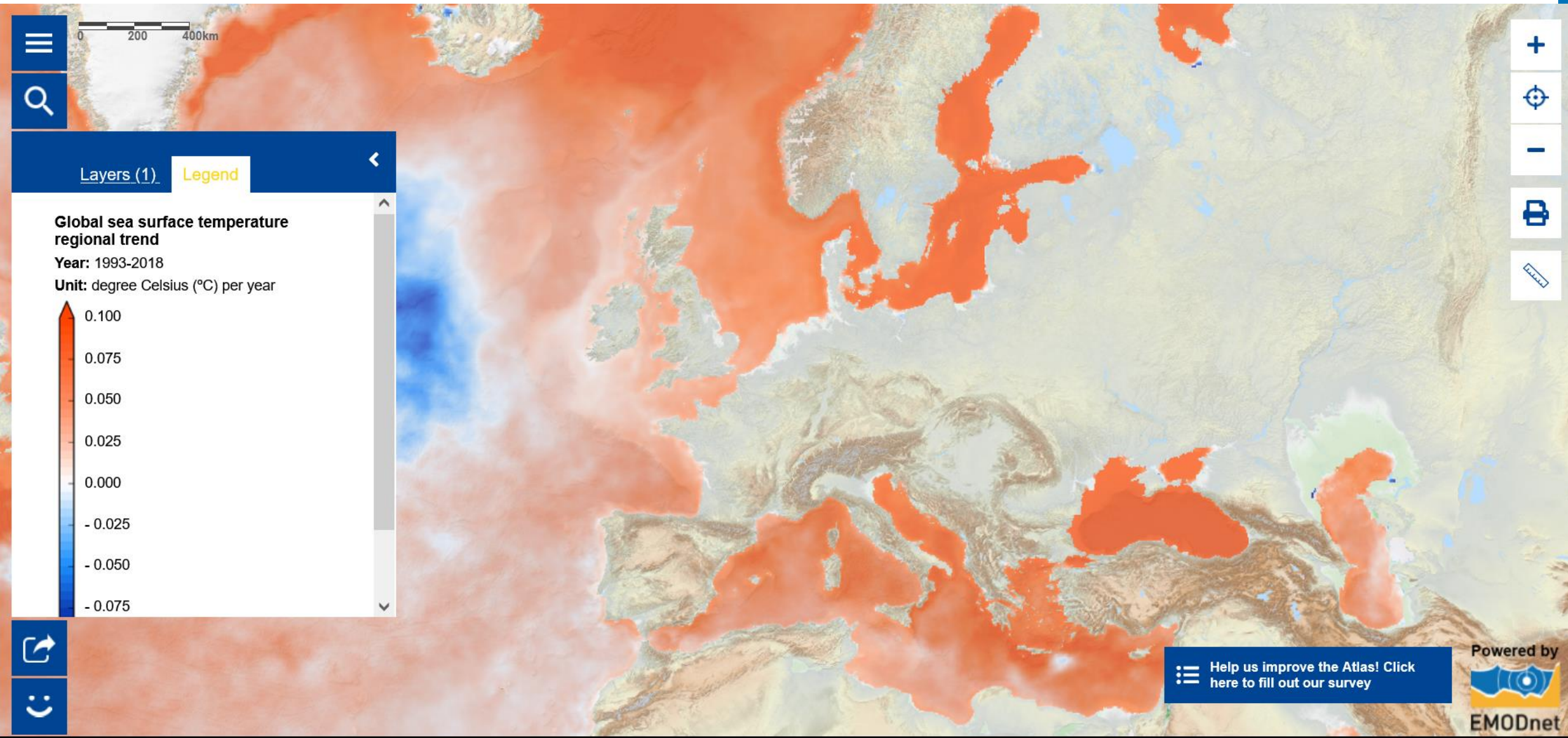
City & Country: PALMA DE MALLORCA, Spain

Level of education: junior

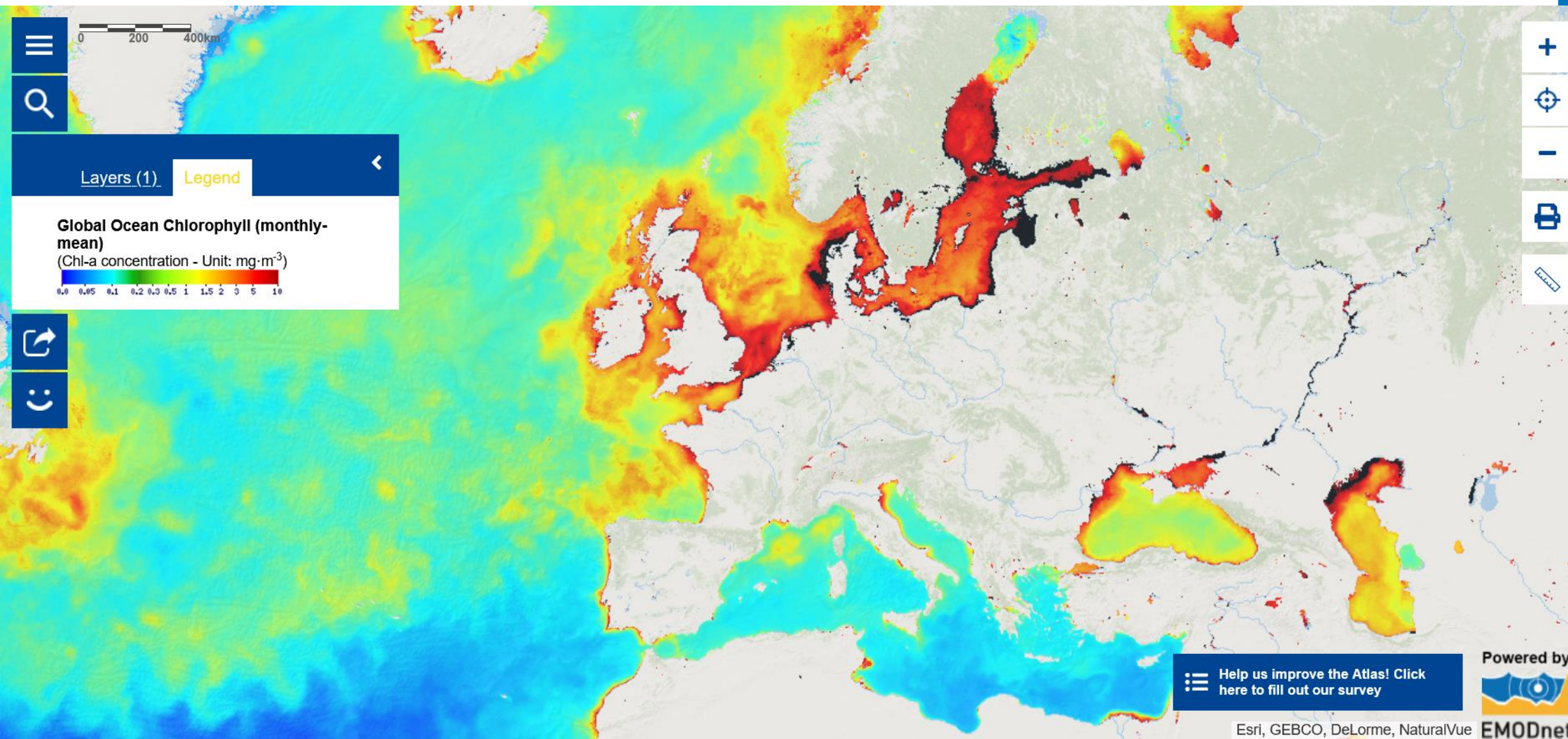
School name: COL·LEGI PEDRO POVEDA

Thematic categories: Healthy Ocean, biodiversity, Maritime Culture

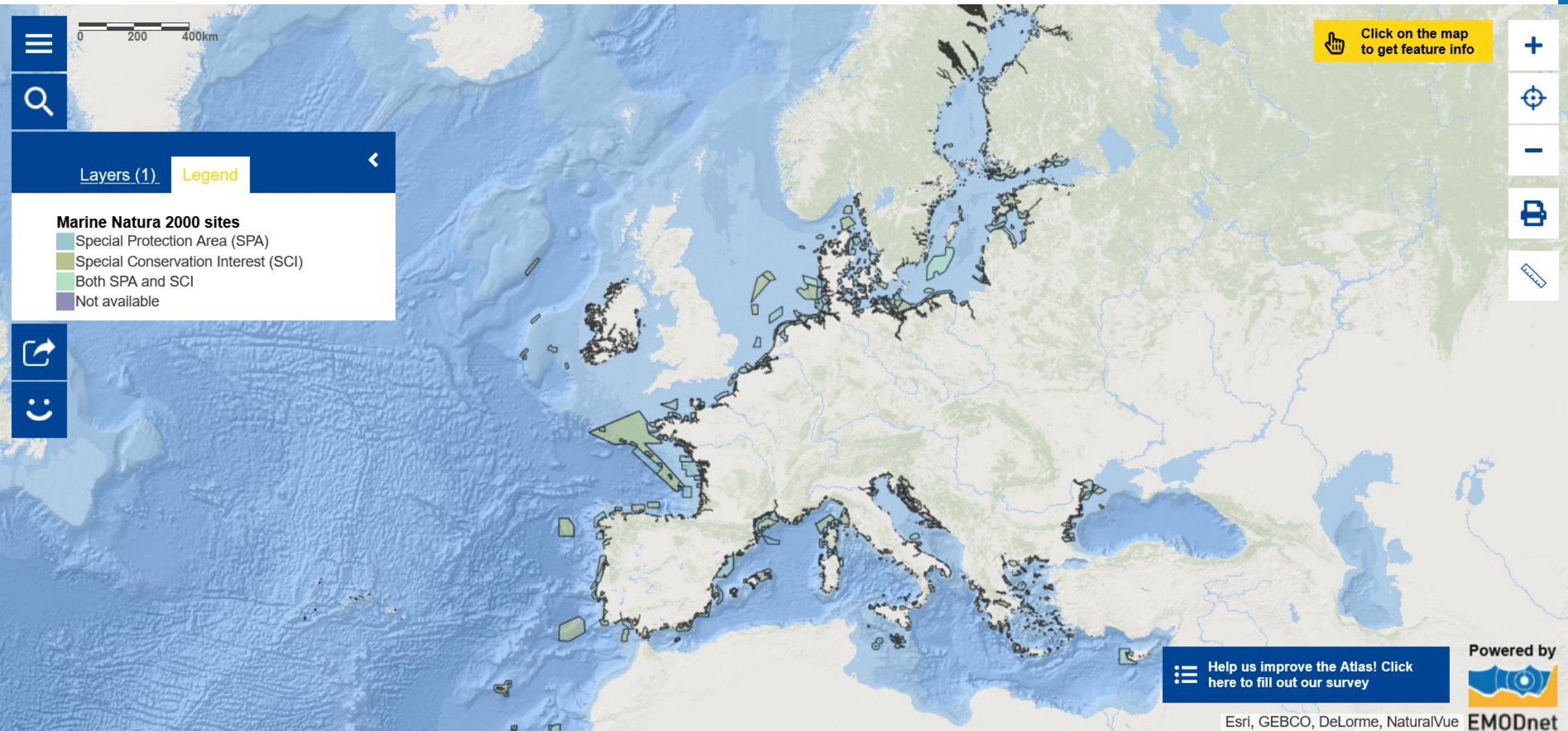
Some other examples of maps ...



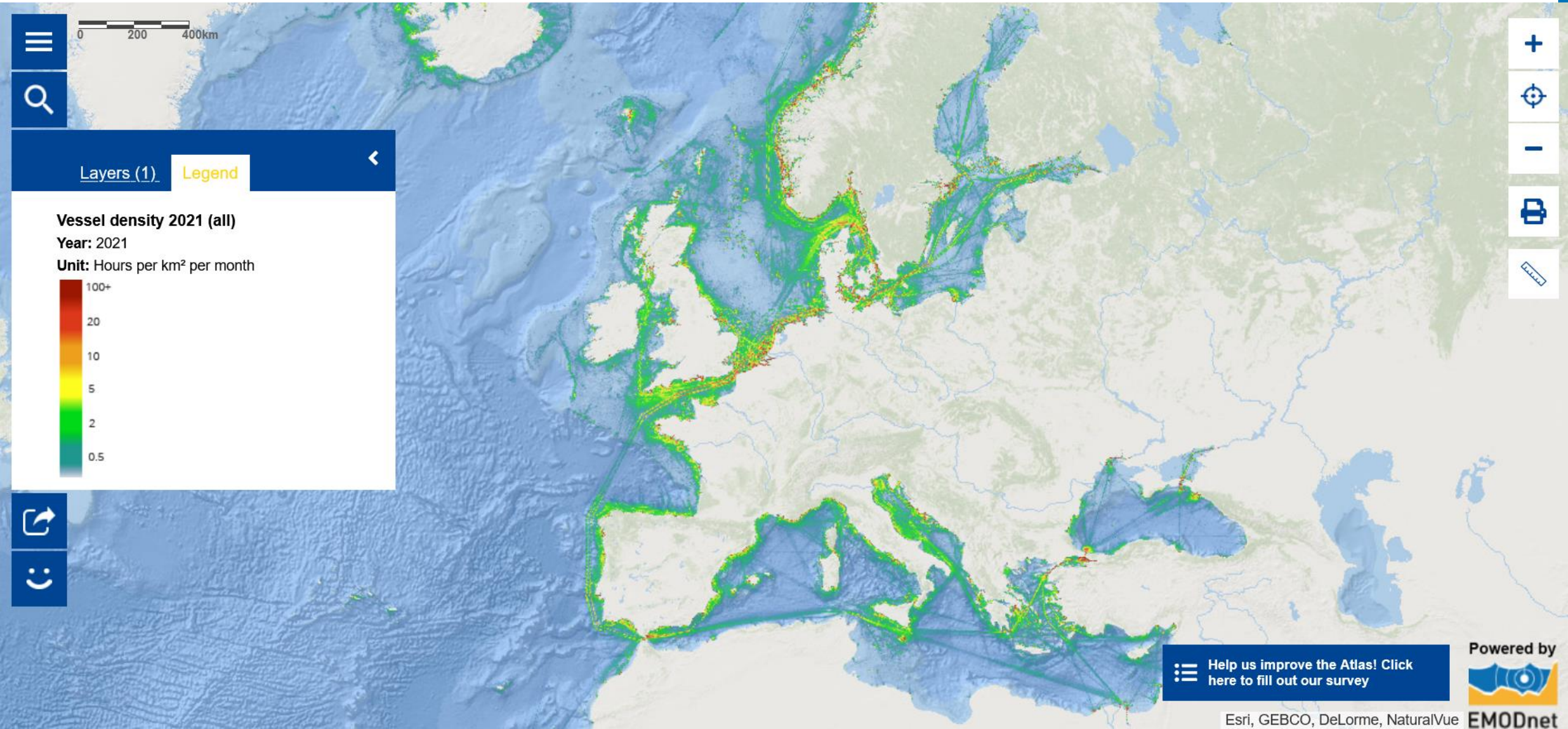
Some other examples of maps ...



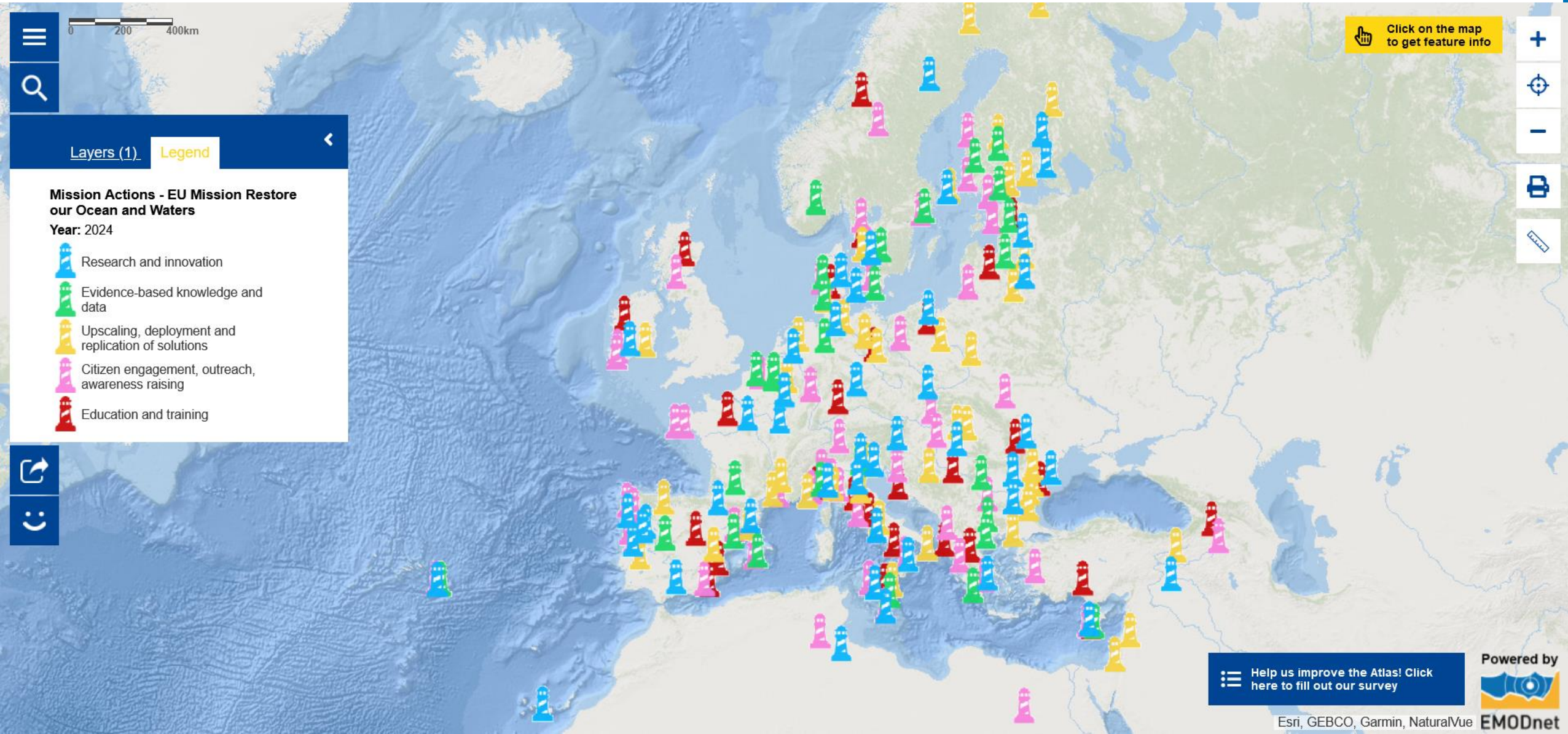
Some other examples of maps ...



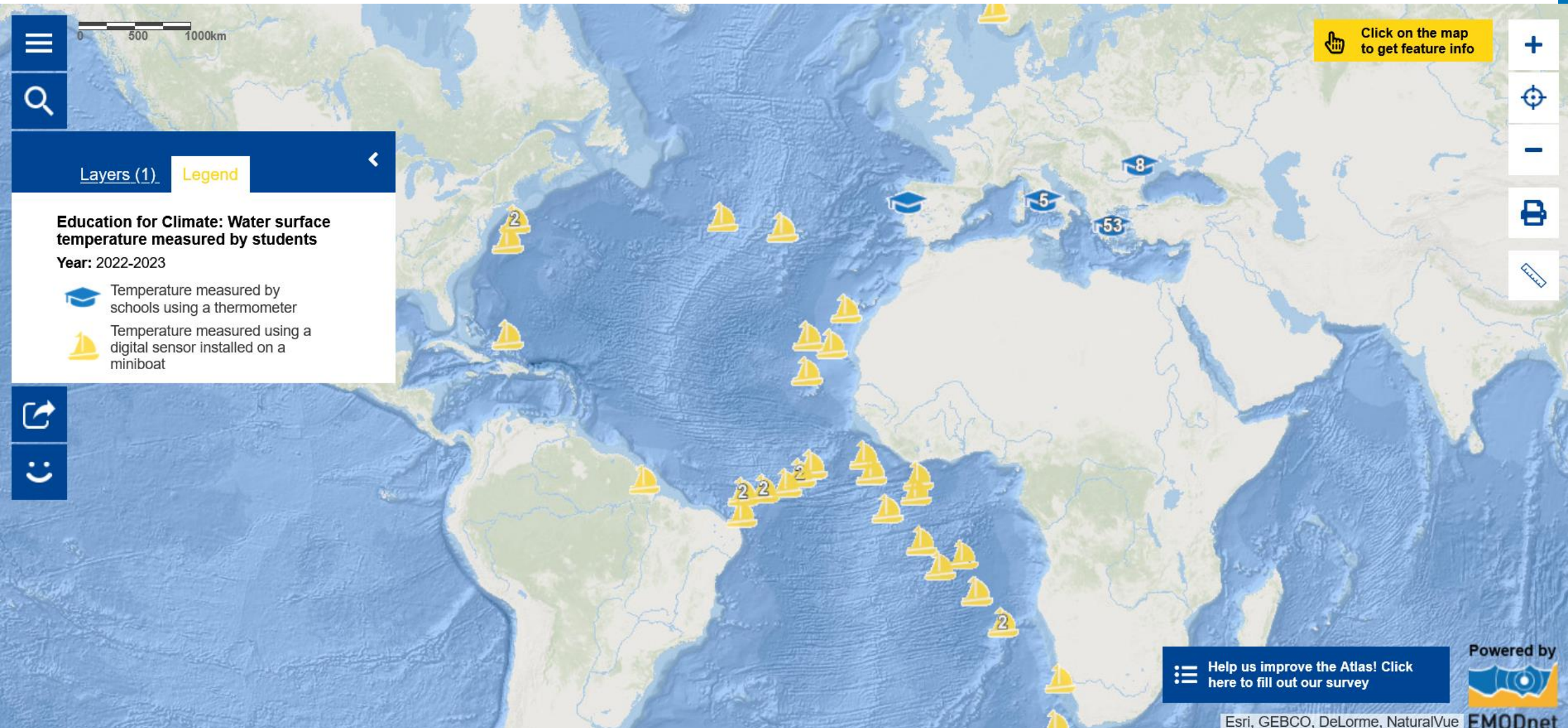
Some other examples of maps ...



Some other examples of maps ...



First citizen science map in the Atlas ...





Test your knowledge!



European Atlas of the Seas

Climate

Sea level is rising as a result of ocean heating and land ice mass loss.


By how much does the sea level rise per year (1993 -2019 trend)?

3,3 mm

50 mm

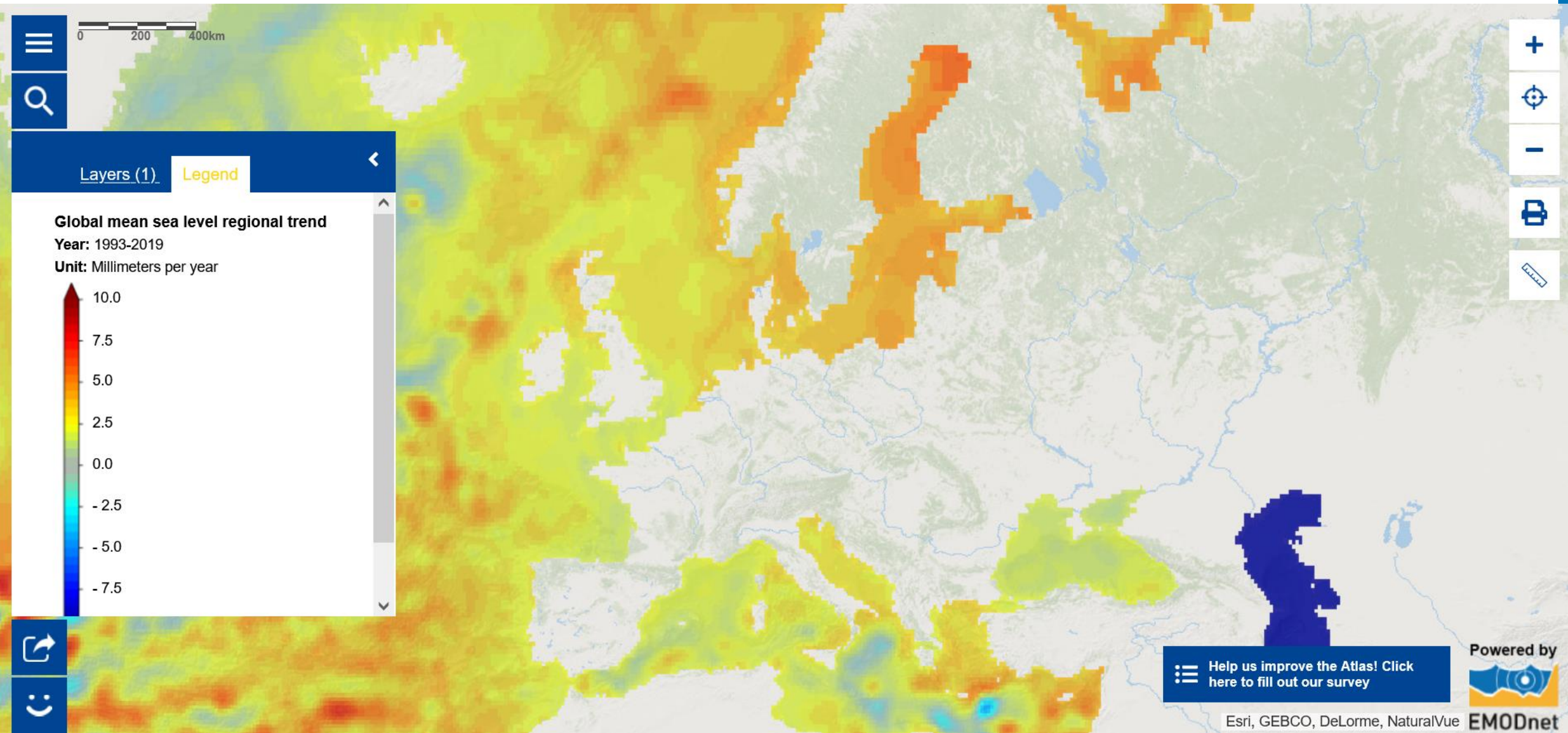
30 cm



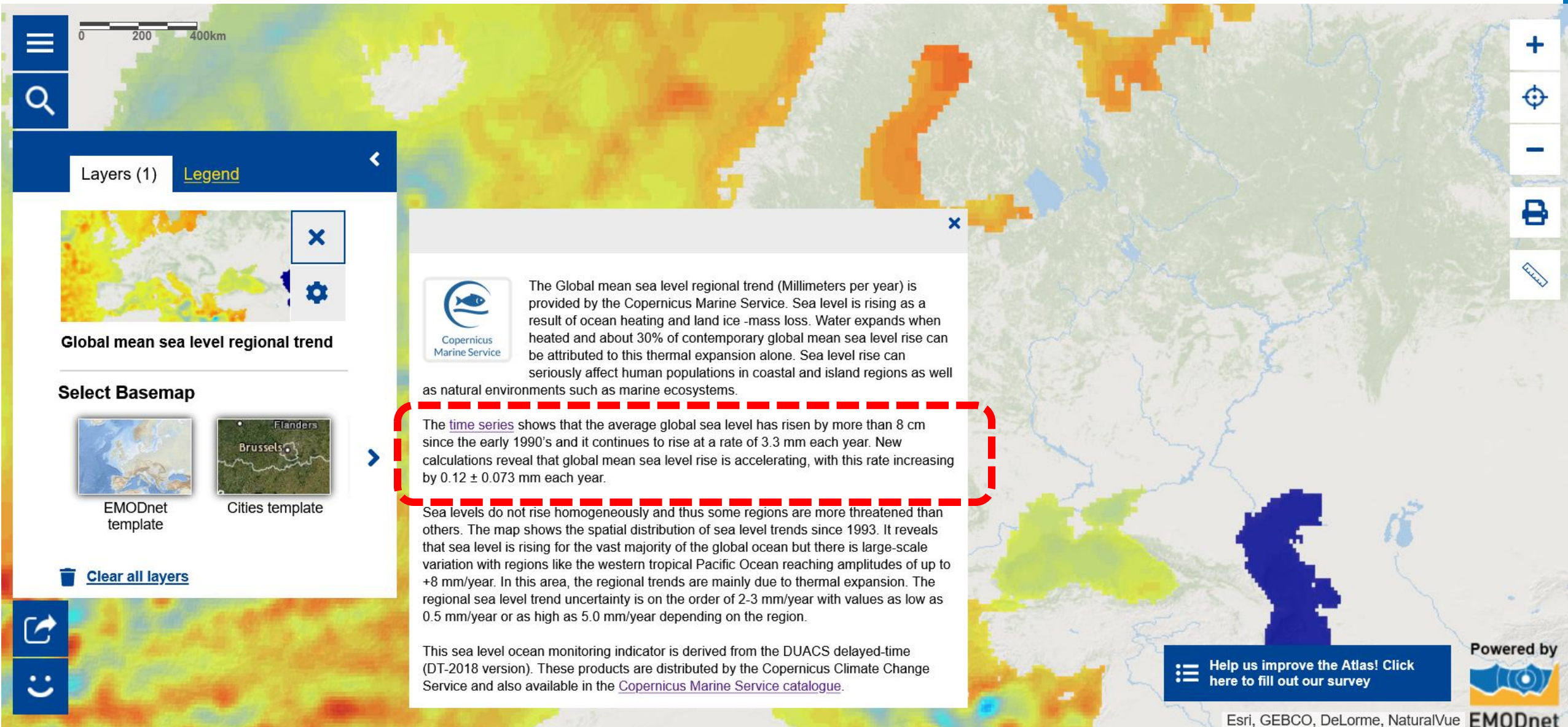
A photograph of a seagull standing in a shallow, greenish-brown wetland. The seagull is white with grey wings and is looking towards the right. A large, white, cloud-like thought bubble is superimposed over the image, containing the text "That is not the answer... Let's try again!". The background shows a vast, flat expanse of water and mudflats under a clear sky.

That is not the answer...
Let's try again!

Climate: 3,3 mm per year



Climate: 3,3 mm per year



Mean underwater depth


What is the greatest depth on the European map showing mean underwater depth?

1,000 m

6,000 m

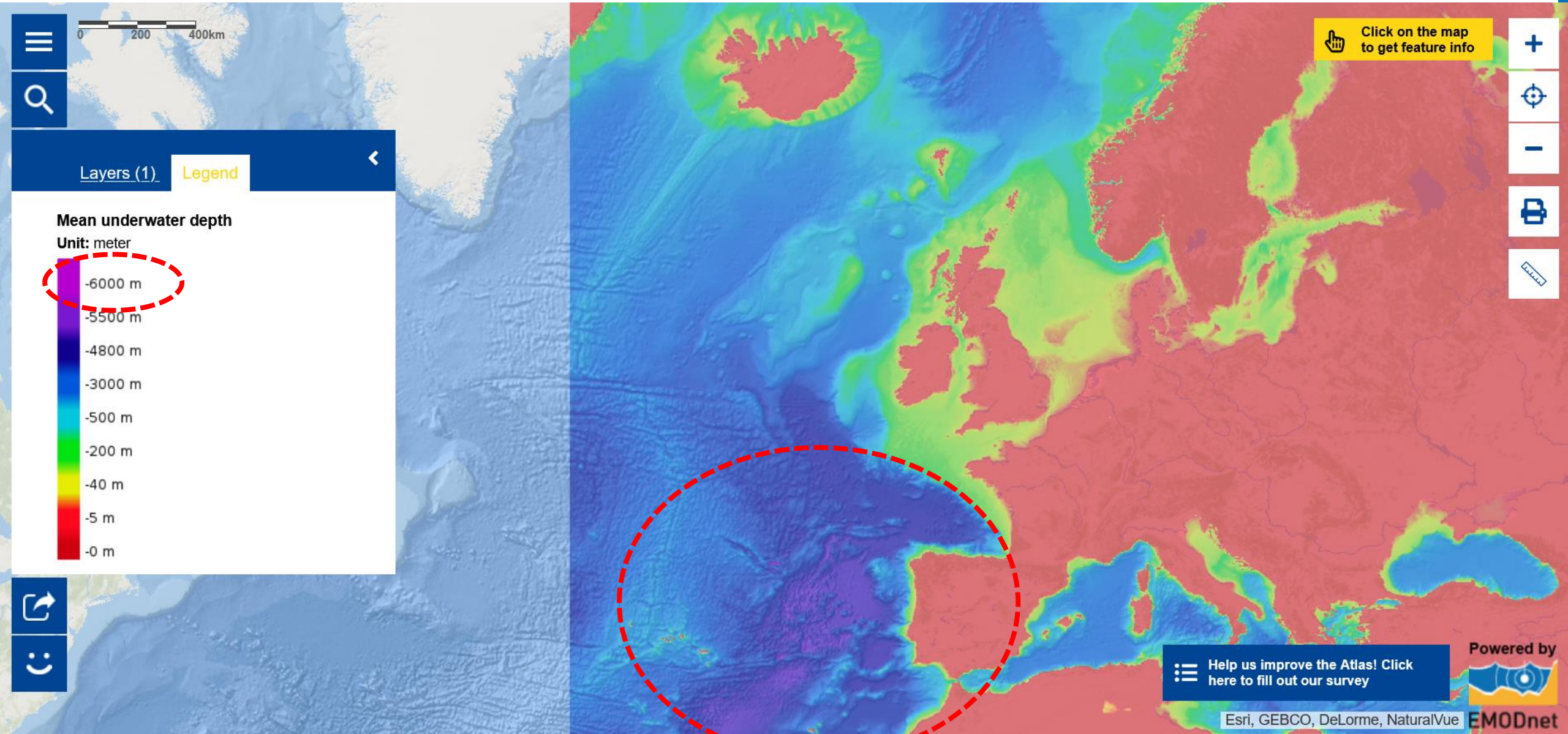
11,000 m



A photograph of a seagull standing in a shallow, greenish-brown wetland. The seagull is white with grey wings and is looking towards the right. A large, white, cloud-like thought bubble is superimposed over the image, containing the text "That is not the answer... Let's try again!". The background shows a vast, flat expanse of water and mudflats under a clear sky.

That is not the answer...
Let's try again!

Underwater depth: 6,000 m



Underwater depth in the world...

- The estimate of the **average depth of the ocean basins** is **3,682 m**.
- The deepest known spot on the planet is **Challenger Deep** in the Mariana Trench, east of the Philippines, at **11,034 m**.

(Bron: <https://oceanliteracy.unesco.org/how-deep-is-the-ocean/>)




Marine litter

In 2019, a beach cleaning event was organised in Blankenberge (Belgium).
How much waste was collected?

300 kg

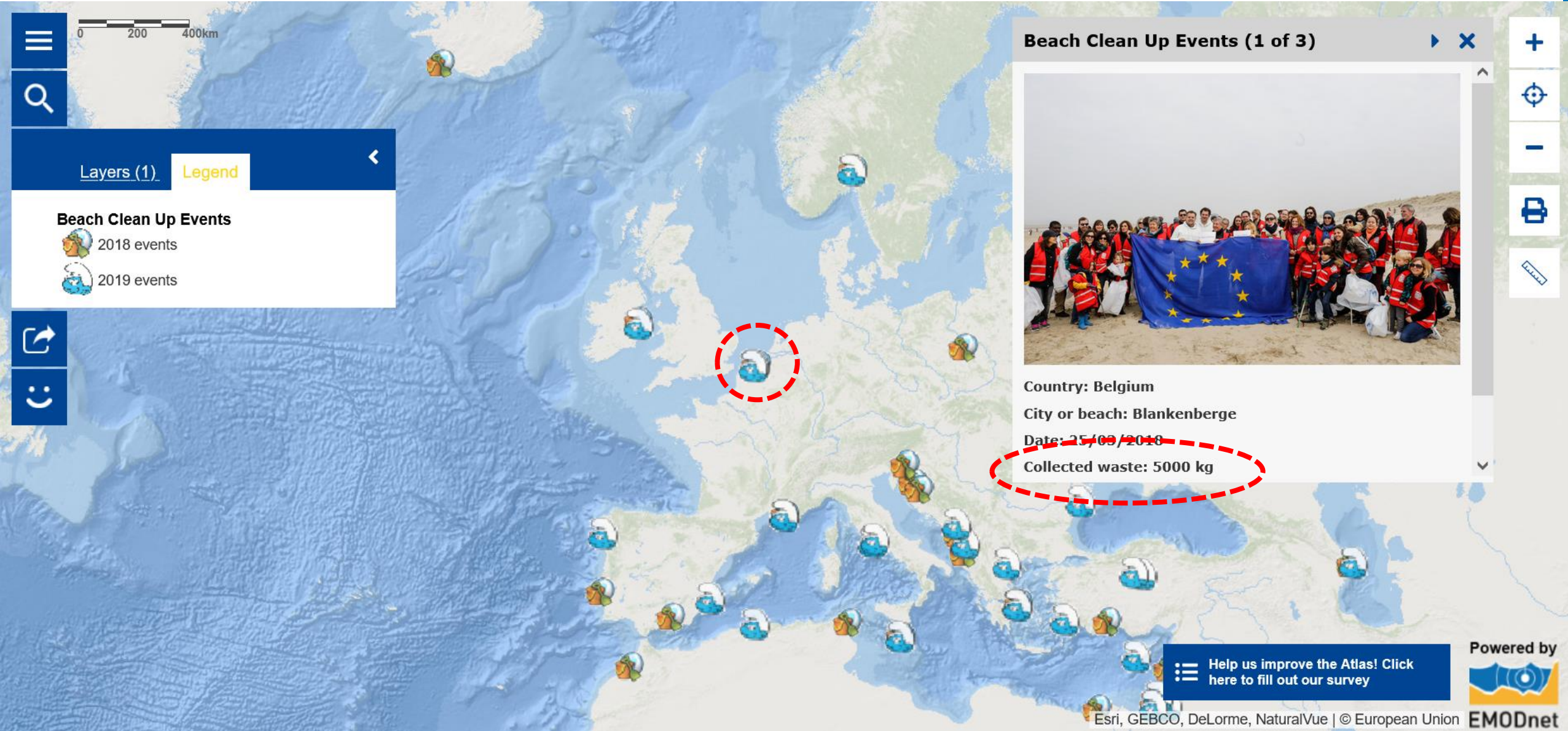
5,000 kg


9,000 kg

A photograph of a seagull standing in a shallow, greenish-brown wetland. The seagull is white with grey wings and is looking towards the right. A large, white, cloud-like thought bubble is superimposed over the image, containing the text "That is not the answer... Let's try again!". The thought bubble is connected to the seagull by three small circles of increasing size. In the background, another white bird is visible, standing in the water. The overall scene is a natural, outdoor setting with a mix of water and mudflats.

That is not the answer...
Let's try again!

Marine litter: 5,000 kg





Well done!

EMODnet Secretariat, , CC BY-NC-ND 4.0



www.european-atlas-of-the-seas.eu

Learning to use the Atlas' tools in 24 languages !

European Commission > Maritime Affairs > European Atlas of the Seas

European Atlas of the Seas

Explore, collate and create your own sea map. Learn more about Europe's seas and coasts, their environment, related human activities and European policies.

- Do you need help?**
- Advanced features
- Atlas overview
- Teachers corner
- Legal notice

European Atlas of the Seas help

About the European Atlas of the Seas, Atlas basics and how to create and share your map

- Change language
- Home page
- Map Navigation tool
- Measurement functionality
- Share this map
- Follow us

Note: Your selected layers are hidden and the countries map is activated to explain the functionalities of the Atlas. Your selection will appear again when closing the help.

European Atlas of the Seas: interactive help now available in 24 languages!

Published on: Wed, 07/09/2022 - 15:56 [View as pdf](#)

For the start of the new school year, the European Atlas of the Seas is releasing its interactive help tool in 24 languages! With a few clicks in any of the 24 official languages of the European Union, you can now become an Atlas expert and find out everything you wish to know about the ocean, seas and coasts! Use this multilingual tool to easily learn how to use the Atlas and discover all of its features! Send us your questions and your comments by completing the feedback form within the Atlas! Take this opportunity to learn who is behind the Atlas, who its partners are and how users are benefiting with the launch of the Atlas interviews series!

Integrating your map in your work with the Atlas' tools

EUROPEAN ATLAS OF THE SEAS

May 23, 2022

1:147.914.381

0 2000 4000km

Next >

Print

Layers (0)

- Macroalgae
 - Aquacu
 - Aquacu
 - Harvest
- Microalgae
 - Fermen
 - Open P
 - Open P
 - Photobi
 - Photobi
 - Photobi Ponds

Paper size: A3 Landscape

Format: PDF JPG

Include legend

Layers for print >

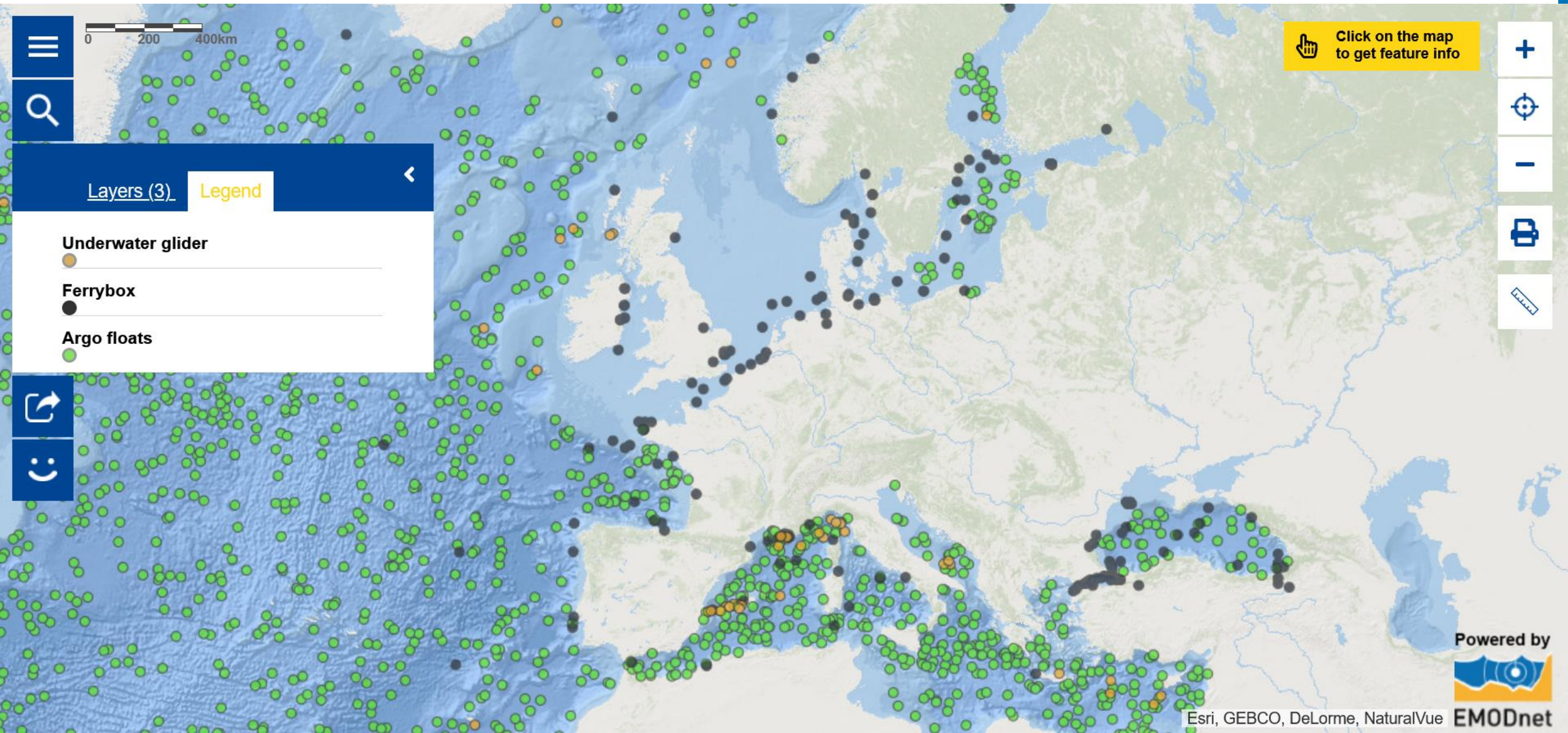
Map title: EUROPEAN ATLAS OF THE SEAS

Scale: 1 : 147.914.381

Share Embed

Powered by EMODnet

My Maps: Create your own working space in the Atlas and save your maps!



My Maps: Your working space in the Atlas!

The image shows a screenshot of the Atlas interface. The top navigation bar includes a search icon (1), a language selector (English EN), social media links (Follow us, Give feedback), and a close button (X). Below this is a blue bar labeled 'Add layers to the map' with a search input field 'Search for layers'. A tabbed interface shows 'Predefined maps (19)', 'Layers', 'Map stories', and 'My maps' (2), with a 'NEW' badge on 'My maps'. Three map thumbnails are visible: 'Europe' (European Union flag), 'Tourism' (underwater scene), and 'Nature' (seagull). A bottom navigation bar contains a home icon, a share icon, and a smiley face icon. An inset window titled 'Advanced features' (1) shows three toggle switches: 'Print tool' (Printing service to allow the current map to print), 'Measures tool' (Tool to determine areas, distances and coordinates), and 'Save map' (Save the map settings), with a 'NEW' badge on 'Save map'.

1

2

2

1

Advanced features

Print tool

Printing service to allow the current map to print

Measures tool

Tool to determine areas, distances and coordinates

Save map

Save the map settings

My Maps: Your working space in the Atlas!

Save map

Map title: *
The role of oceanographic instruments

Description:
This map is composed of three map layers. It shows three types of oceanographic instruments.

- Can you identify each type of instruments on the map using the legend?
- How do these instruments work?
- Which parameters are measured?
- Can you find other map layers in the Atlas related to oceanographic instruments? Which ones?

List of layers: *

- Underwater glider
- Ferrybox
- Argo floats

Map image: *

Upload a new image

Save

Save

Powered by EMODnet
ESRI, GEBCO, DeLorme, NaturalVue

Video tutorials and EMODnet Virtual exhibition

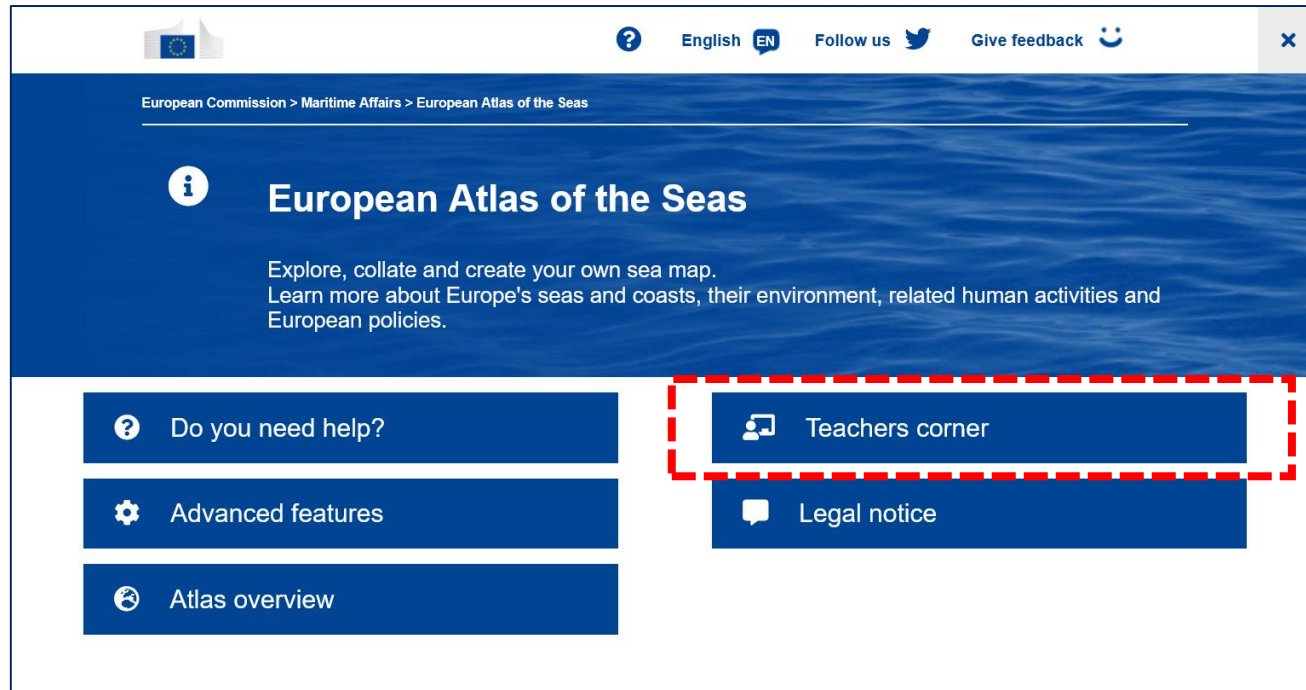


European Marine Observation and Data Network (EMODnet)
YouTube Channel - European Atlas of the Seas Playlist



www.european-atlas-of-the-seas.eu

The Teachers Corner: ready-to-use map-based activities



- ✓ Exercises
- ✓ Quiz
- ✓ Games
- ✓ Posters
- ✓ Past workshops -presentations



Up to 12



12 to 15

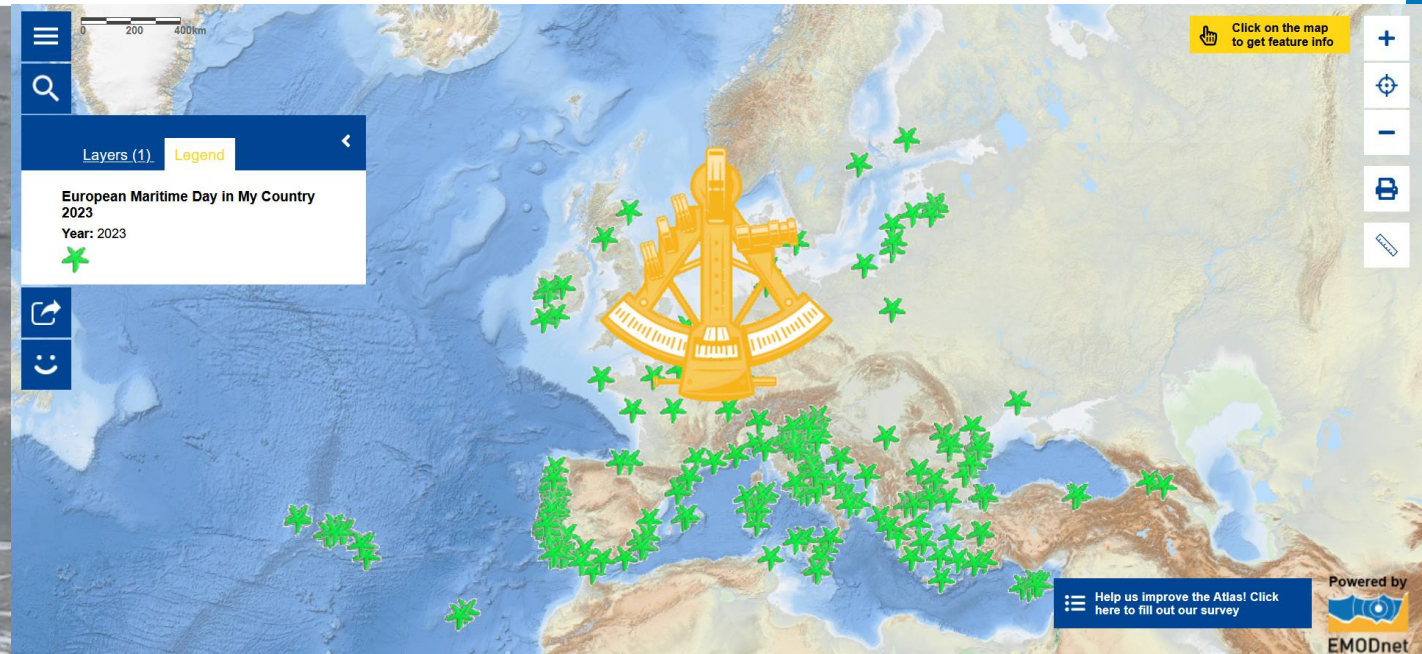


15 to 18

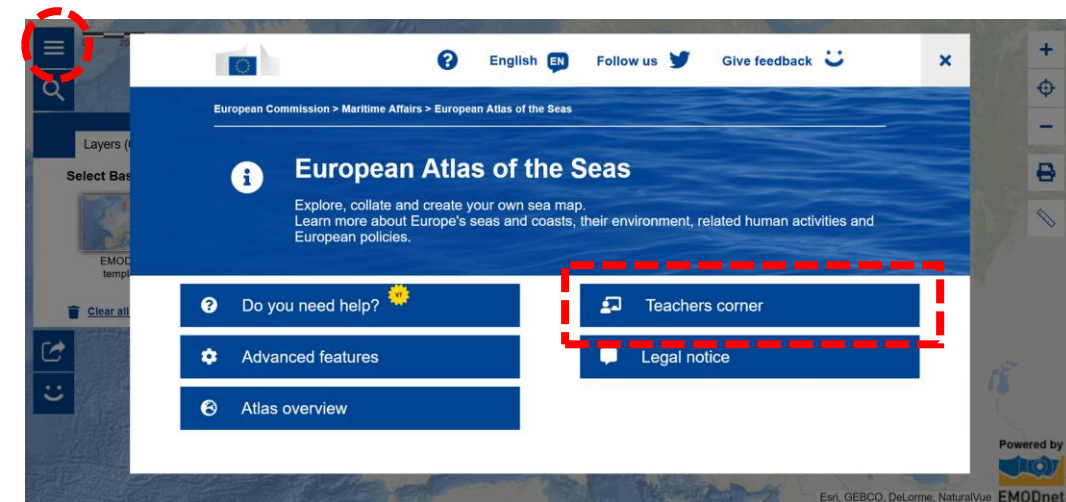


www.european-atlas-of-the-seas.eu

Play the Atlas Geocaching Game in the Teachers Corner!



Latitude	Longitude	Object found	Notes
53.430000	-7.930000		Country: Event:
40.63209851	22.72994803		Country: Event:
59.329444	18.068611		Country: Event:
Common theme to all objects			





European Atlas of the Seas
@EuropeAtlasSeas

@EU_Commission tool to explore, collate & create marine maps in 24 languages! Learn more about 🇪🇺 seas & coasts. Account managed in cooperation with @EU_MARE.

ec.europa.eu/maritimeaffair... Joined September 2013

1,444 Following 2,838 Followers

Follow



European Atlas of the Seas @EuropeAtlasSeas · 12 May

With the #MapOfTheWeek, learn about #EMDinMyCountry events that are being organised across 🇪🇺 & discover the new #Atlas #Geocaching game! 🗺️🔍 Have fun!

maritime-forum.ec.europa.eu/en/node/10413

#EMD2023 #OceanLiteracy #Geography #STEM



EU Maritime & Fish and 9 others

10 17 4,320



www.european-atlas-of-the-seas.eu

Dive in and explore the European Atlas of the Seas!

www.european-atlas-of-the-seas.eu



© European Union 2023

Unless otherwise noted the reuse of this presentation is authorised under the [CC BY 4.0](https://creativecommons.org/licenses/by/4.0/) license. For any use or reproduction of elements that are not owned by the EU, permission may need to be sought directly from the respective right holders.

Slides 2, 3, 26, 28, 32,36 and 38: EMODnet Secretariat, [CC BY 4.0](https://creativecommons.org/licenses/by/4.0/)



www.european-atlas-of-the-seas.eu

Thank you for
participating!



#EU4Ocean
#Youth4Ocean
#EUBlueSchools



March 11th, 2024

This SPOW has received funding from the EU4Ocean Coalition of the Directorate General of Maritime Affairs and Fisheries of the European Commission and is co-branded with Scientix, an initiative of European Schoolnet. The content included in this document is the sole responsibility of the authors, and it does not represent the opinion of the European Commission (EC), and the EC is not responsible for any use that might be made of information contained.