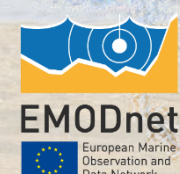


The European Atlas of the Seas

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

Bringing Ocean and Climate to
the classroom - 27/09/2021

0 300 600km



Sea surface temperature

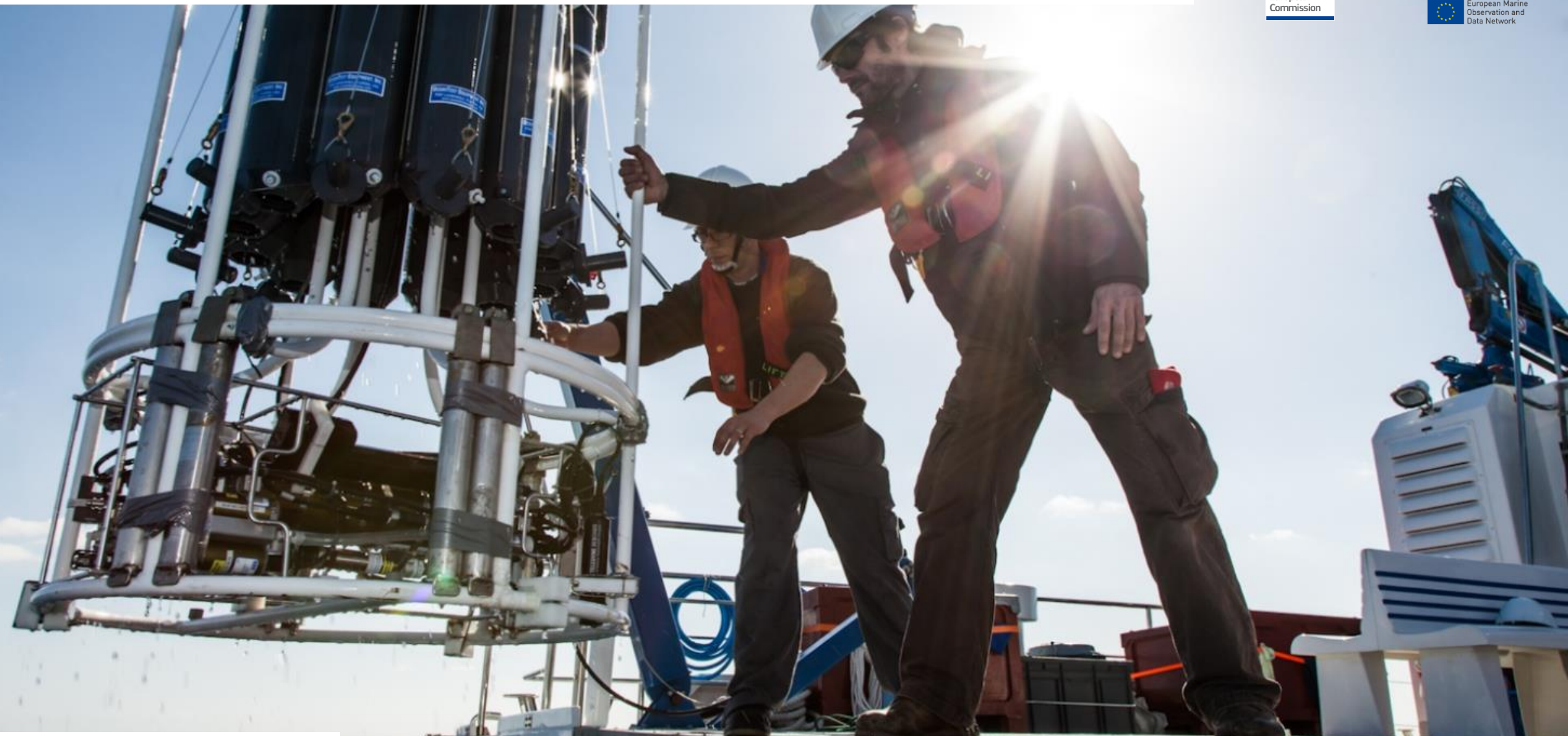
Sea level rise

Coastal erosion

Impacts on marine life

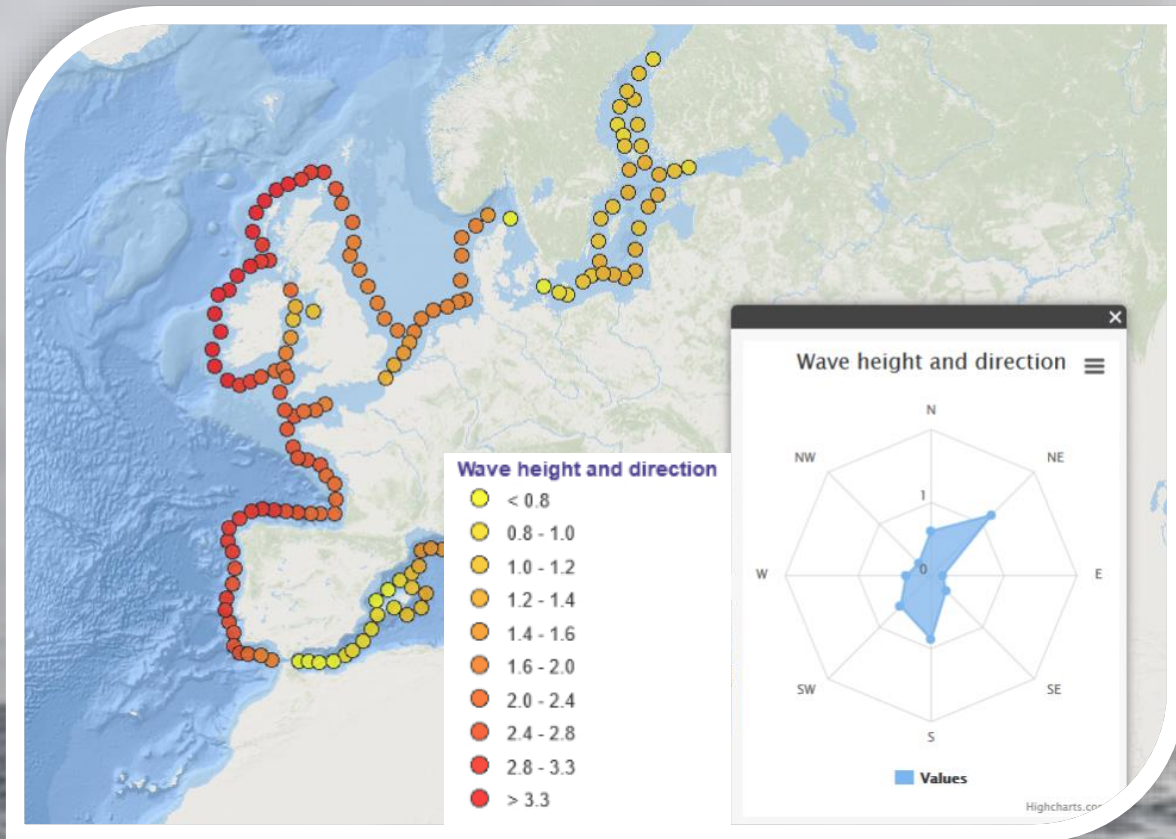
How do we know what we know about the ocean and seas ?
What kind of instruments are used to collect information at sea?
Where are they deployed?

European Marine Observation and Data Network



www.emodnet.eu

© SOCIB



EMODnet
European Marine
Observation and
Data Network

What is the European Atlas of the Seas?

- A digital **interactive learning tool**
- Stunning **marine maps** and interactive **oceanic information** covering a wide range of popular **marine topics**
- **285 interactive map** layers and possibility to create **custom maps**
- All information and maps are **easily accessible**: no need to create an account
- Maps are available in the **24 official languages of the European Union**
- Maps can be quickly **printed, shared and embedded** in presentations



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

What topics are covered in the European Atlas of the Seas?



Tourism



Nature



Sea life



Transport



Sea bottom



Energy



Security



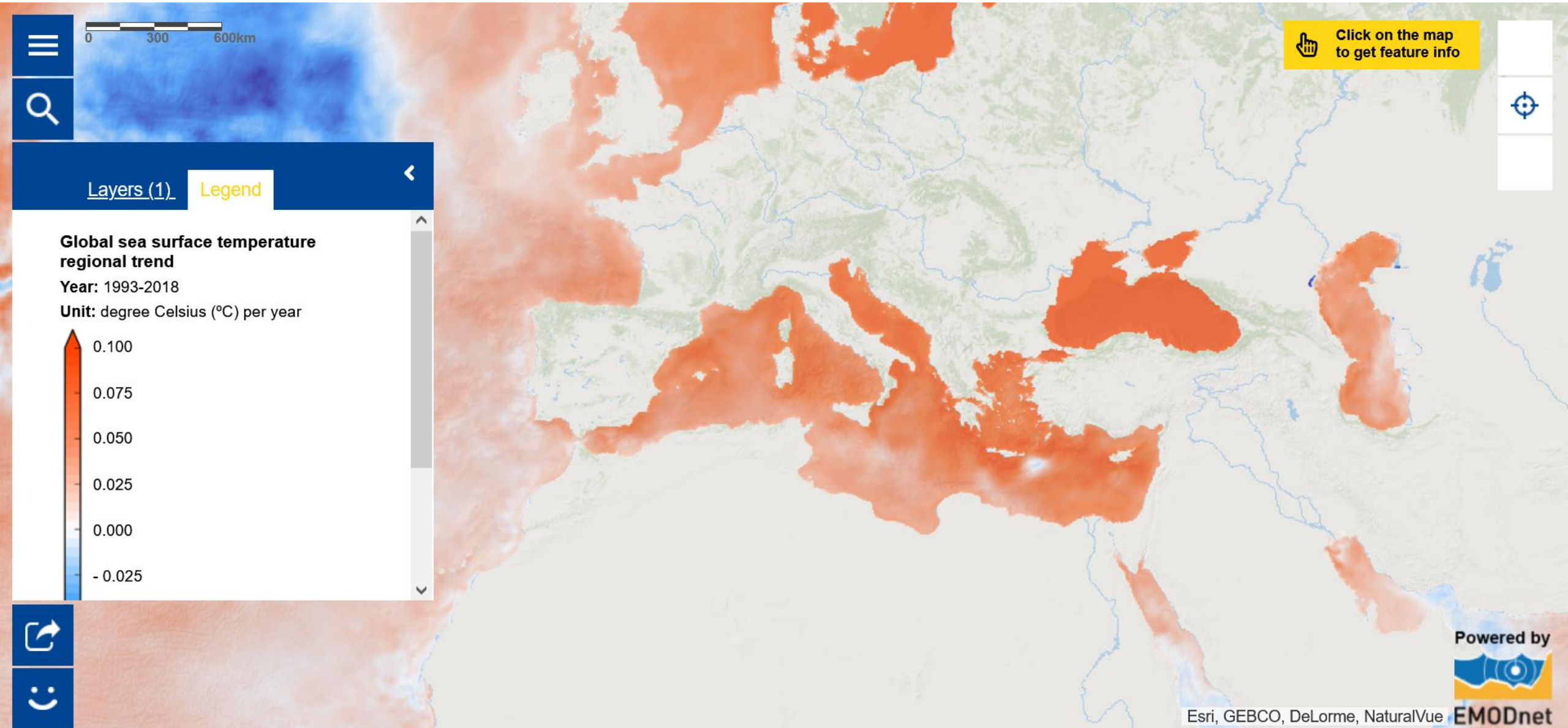
Employment

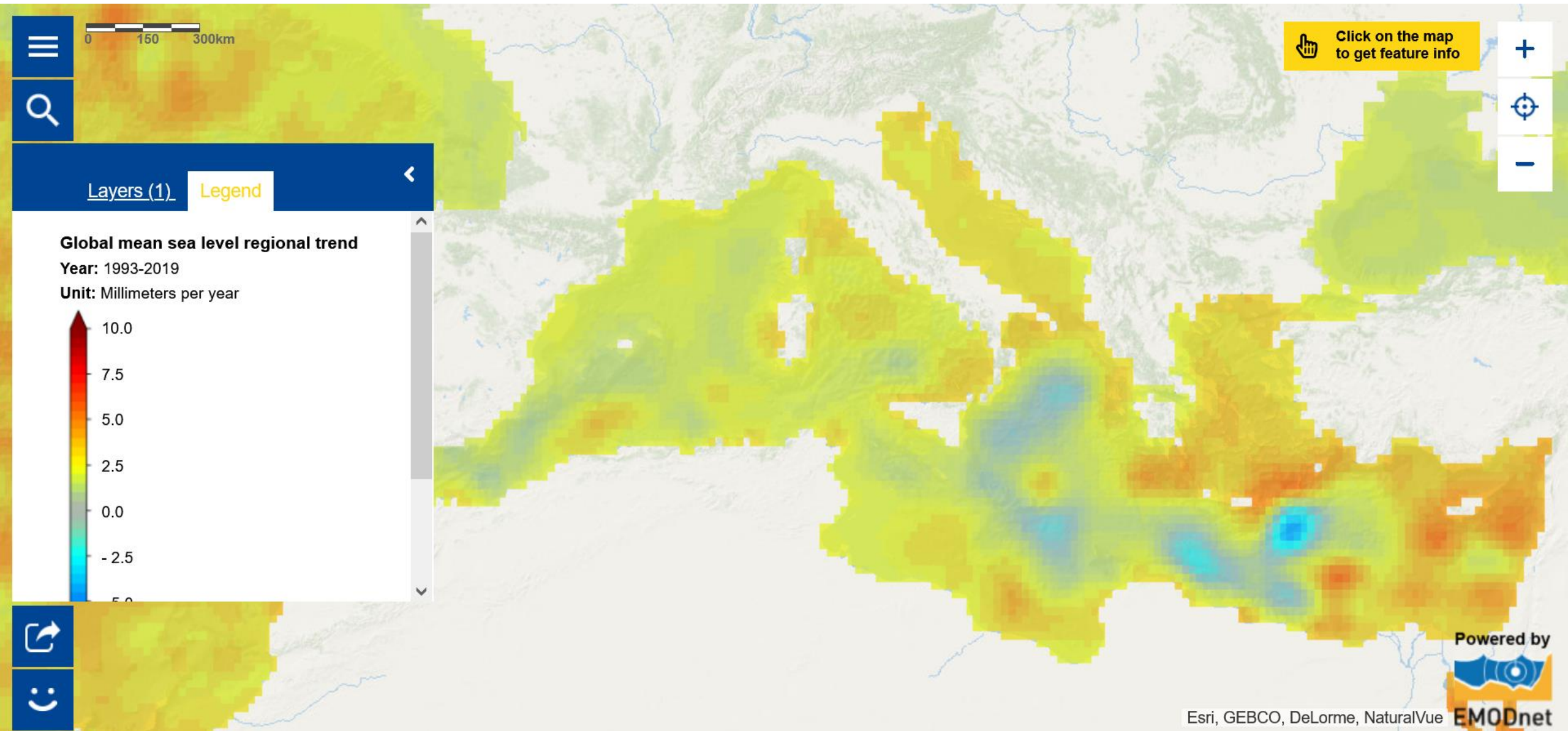


Fishing stocks and quota

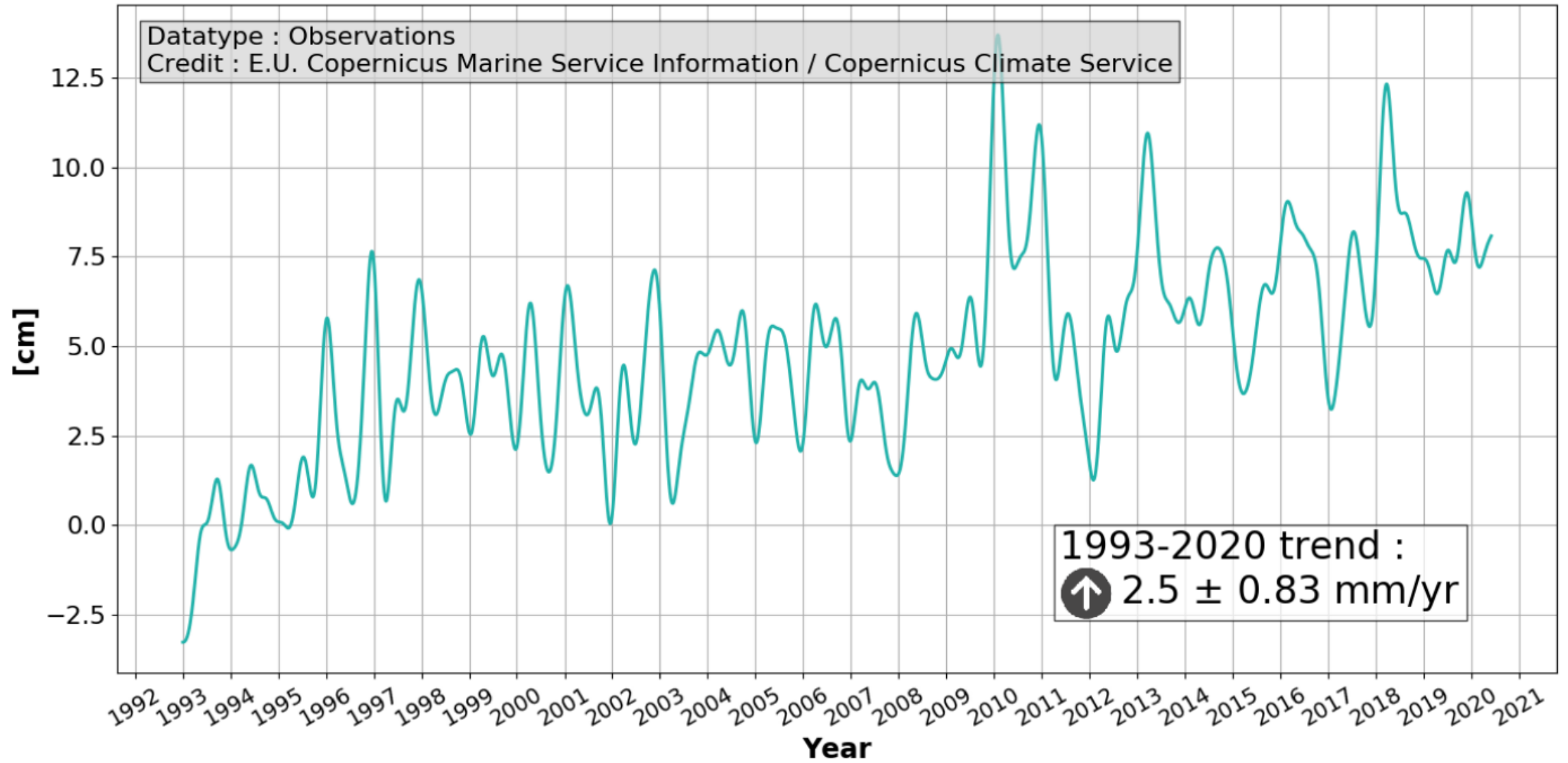


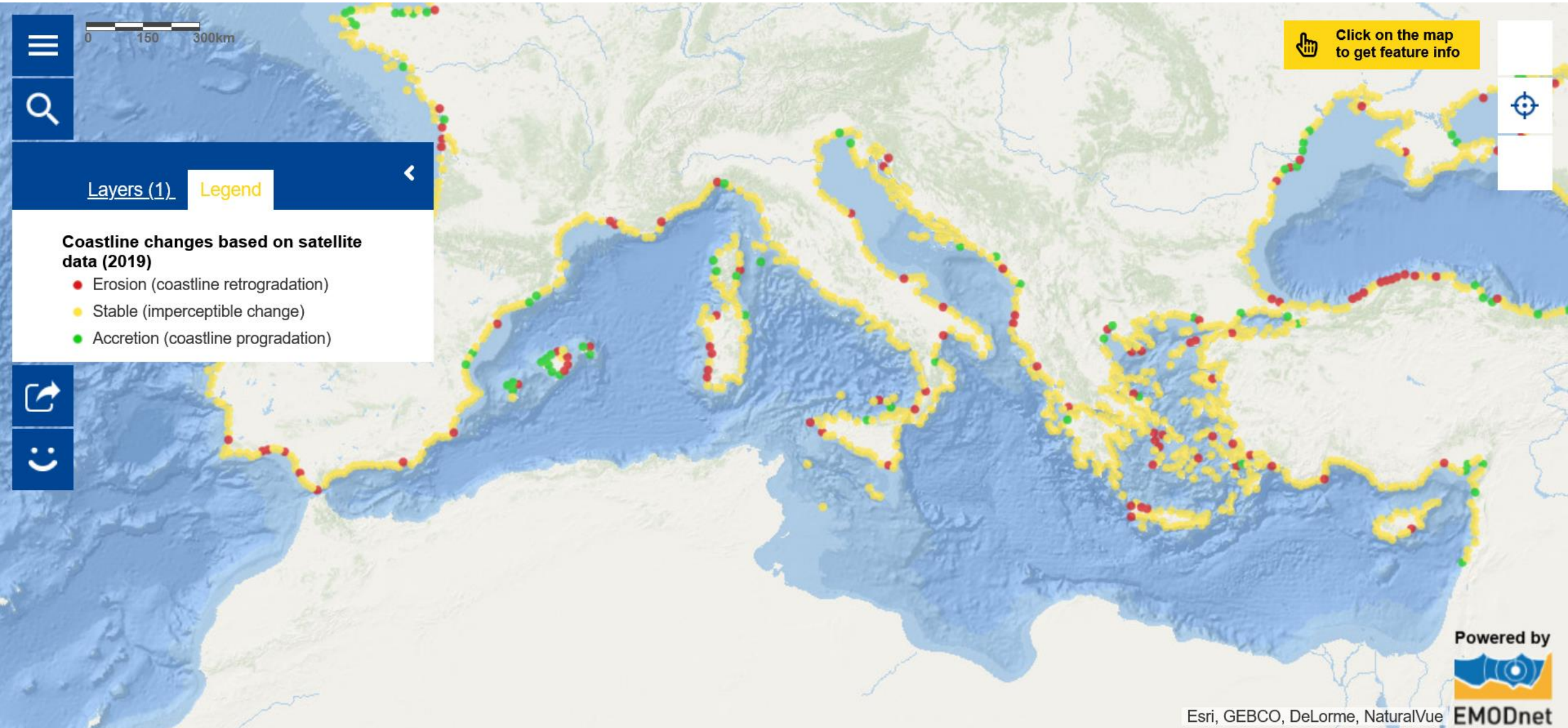
Aquaculture

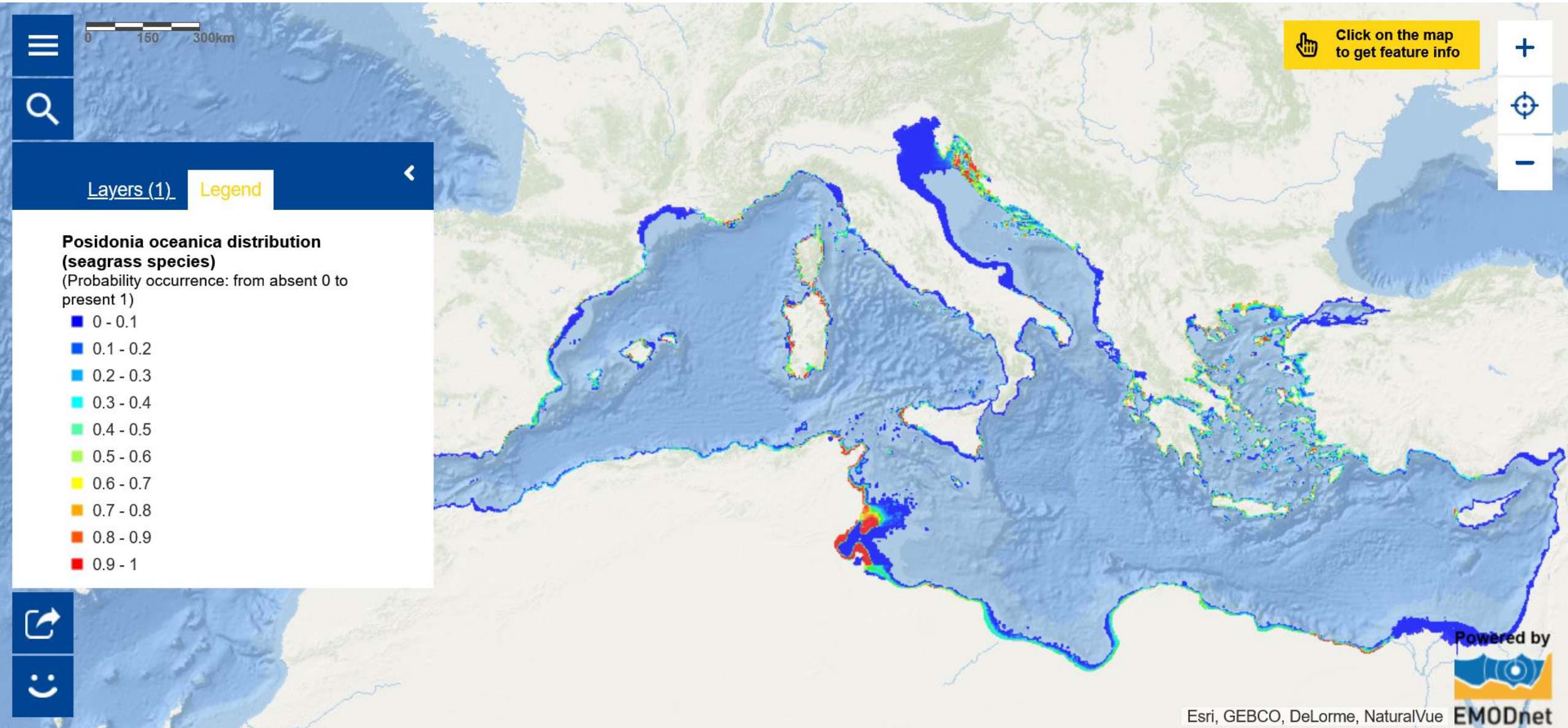


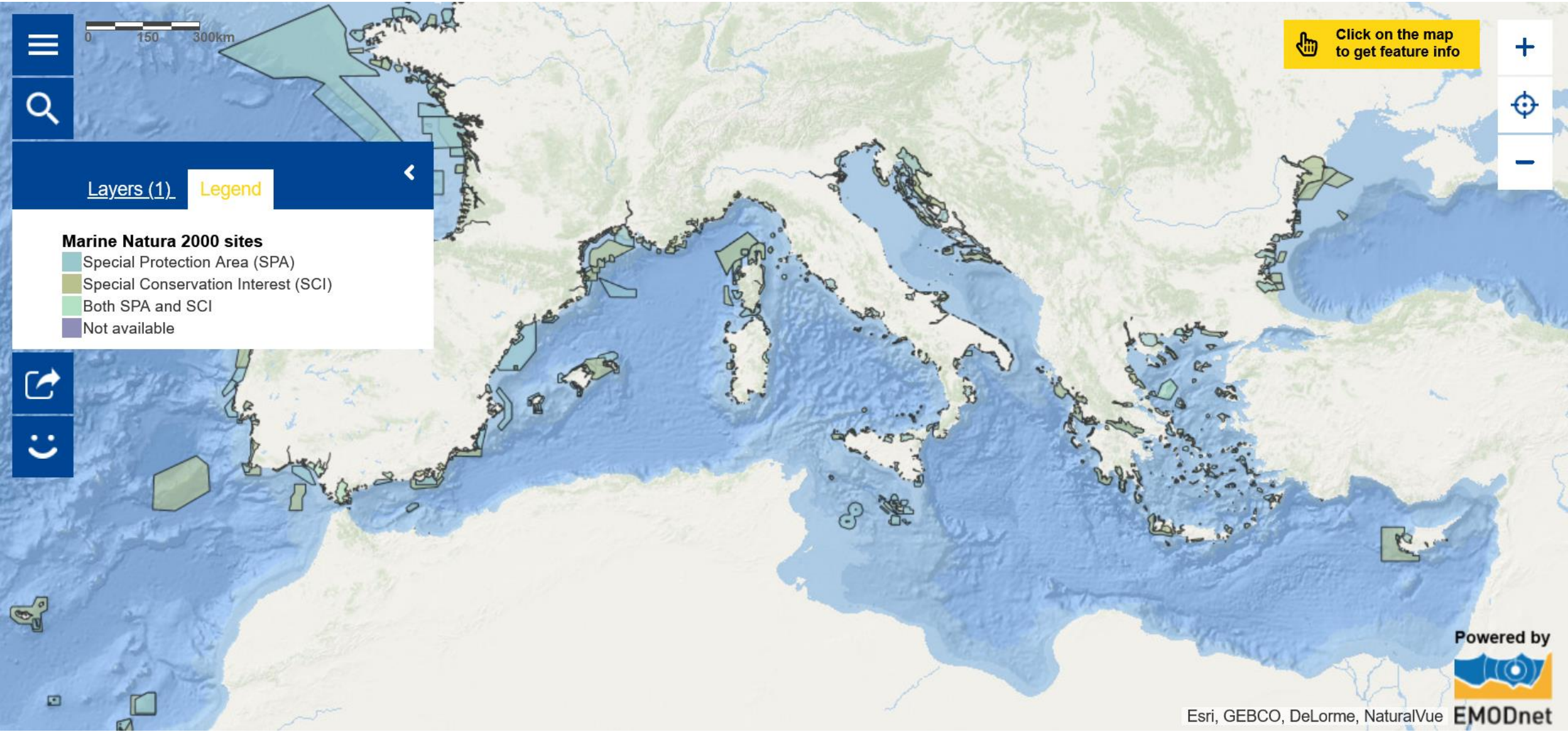


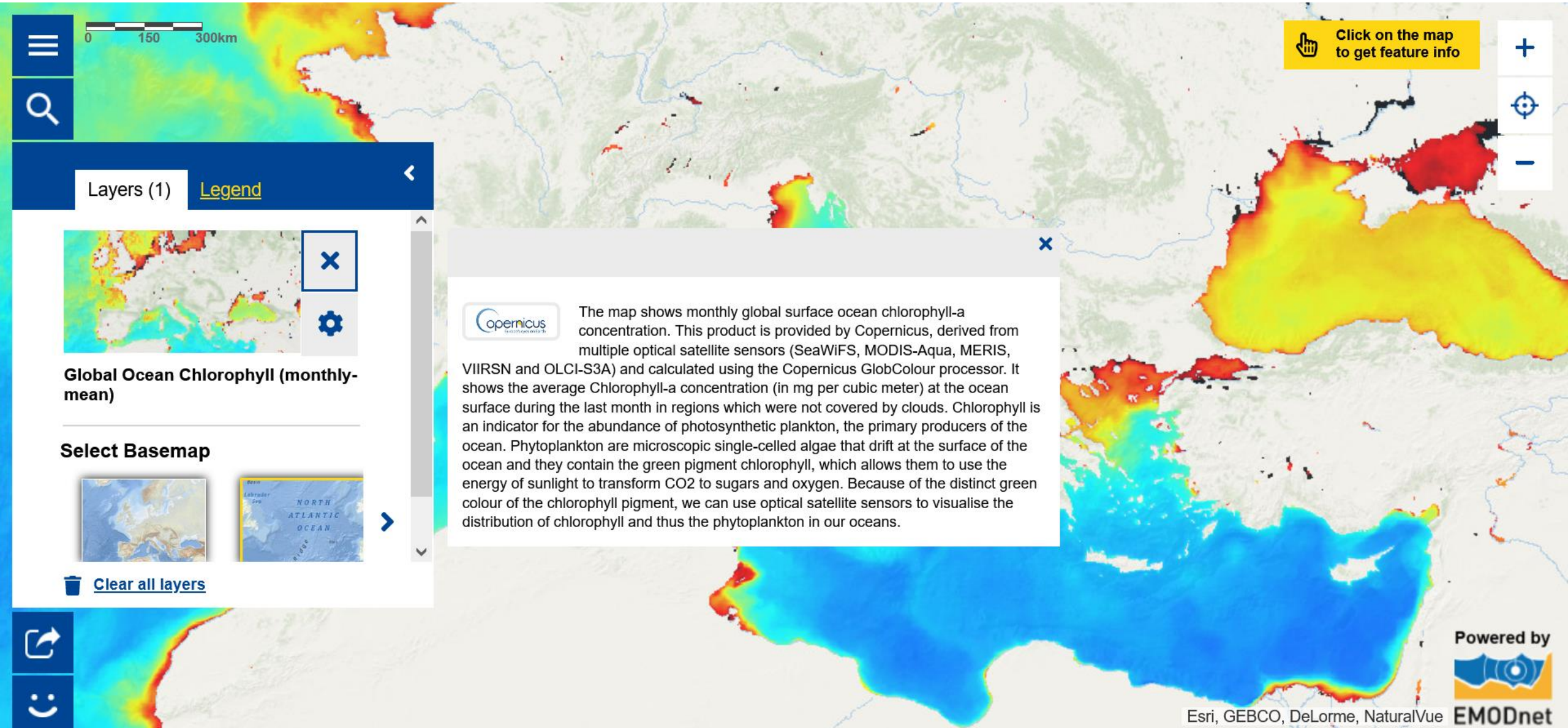
Mean Sea Level: Mediterranean Sea





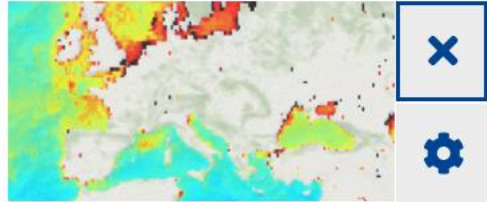






Layers (1)

[Legend](#)



Global Ocean Chlorophyll (monthly-mean)

Select Basemap



[Clear all layers](#)

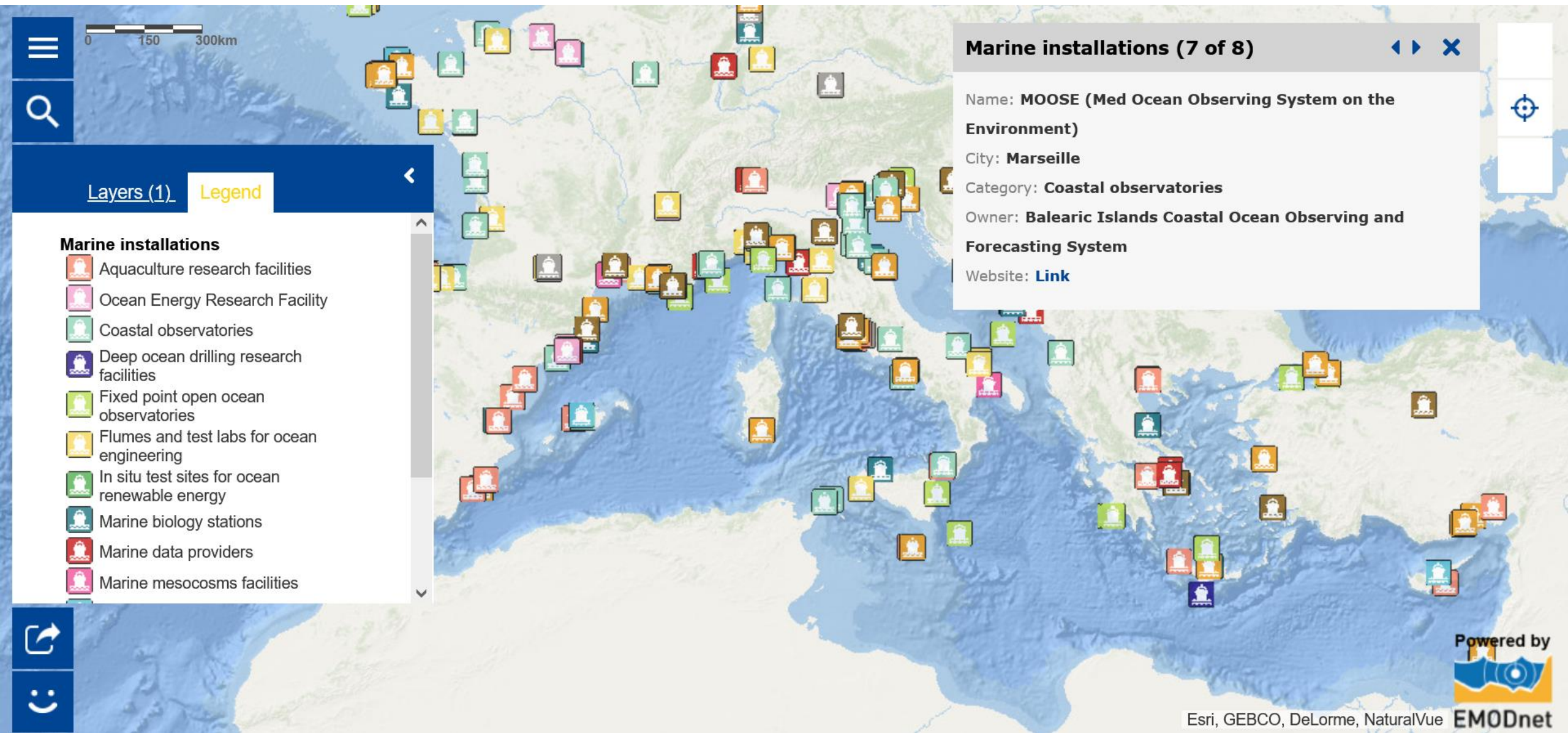


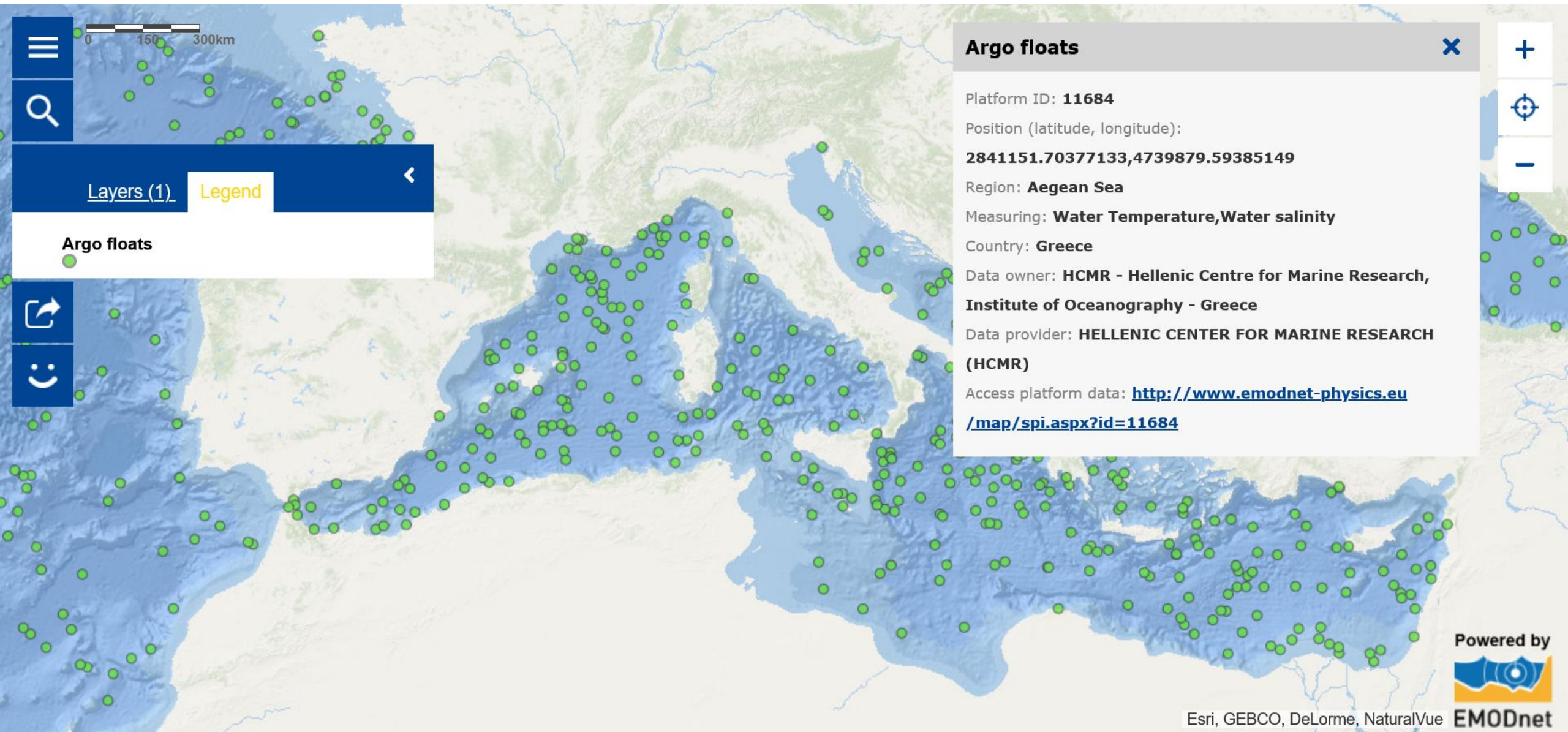
The map shows monthly global surface ocean chlorophyll-a concentration. This product is provided by Copernicus, derived from multiple optical satellite sensors (SeaWiFS, MODIS-Aqua, MERIS, VIIRS and OLCI-S3A) and calculated using the Copernicus GlobColour processor. It shows the average Chlorophyll-a concentration (in mg per cubic meter) at the ocean surface during the last month in regions which were not covered by clouds. Chlorophyll is an indicator for the abundance of photosynthetic plankton, the primary producers of the ocean. Phytoplankton are microscopic single-celled algae that drift at the surface of the ocean and they contain the green pigment chlorophyll, which allows them to use the energy of sunlight to transform CO₂ to sugars and oxygen. Because of the distinct green colour of the chlorophyll pigment, we can use optical satellite sensors to visualise the distribution of chlorophyll and thus the phytoplankton in our oceans.

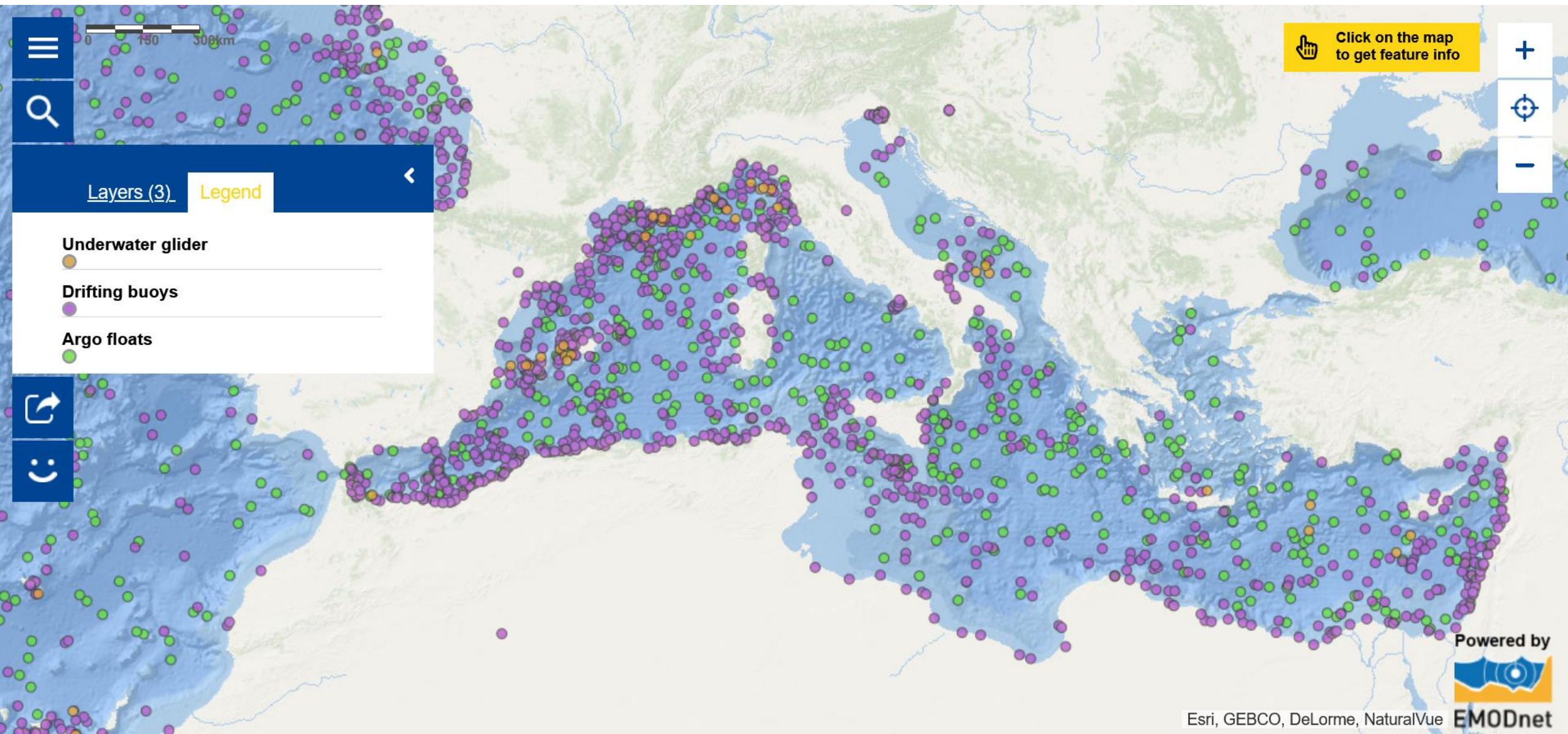
Click on the map to get feature info



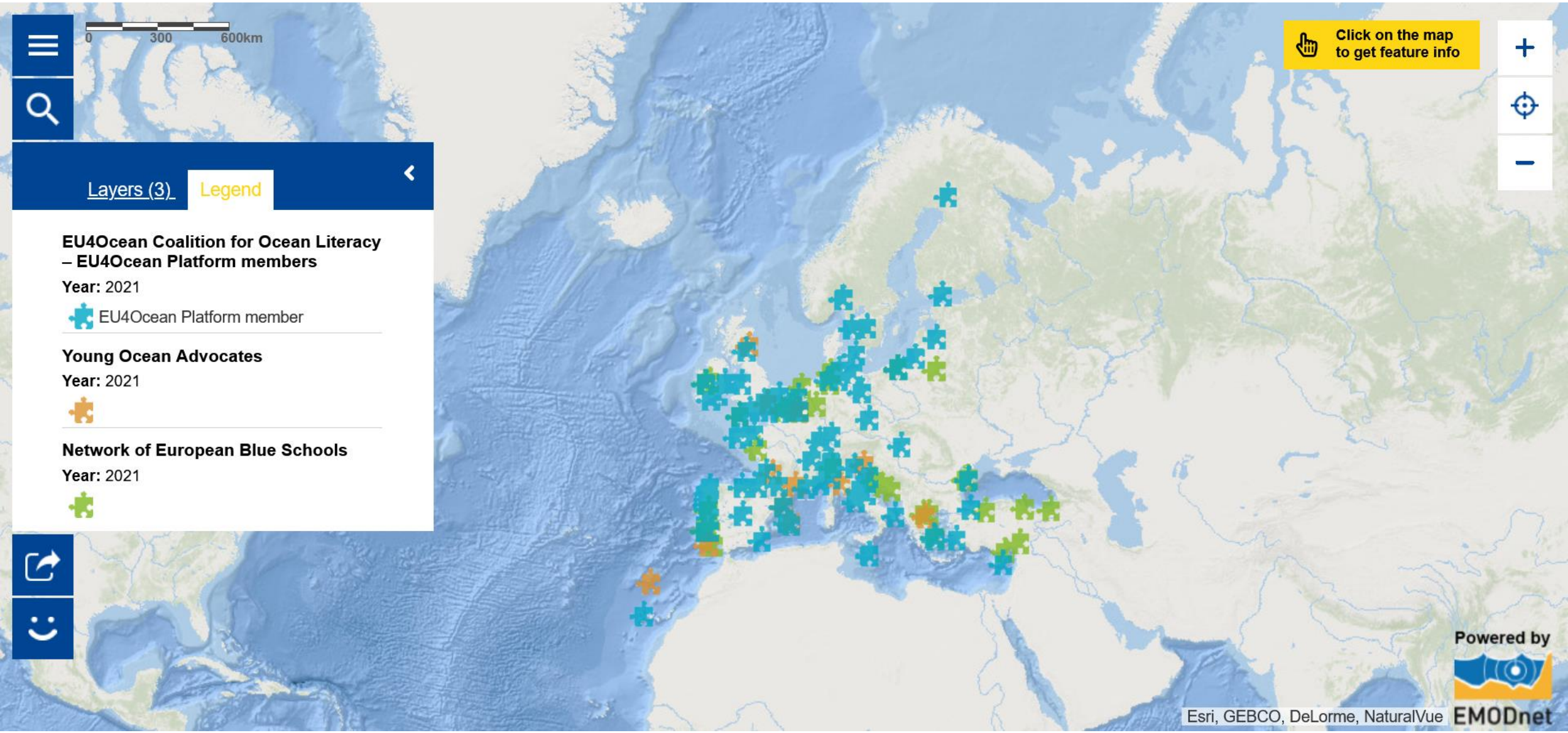
Powered by Esri, GEBCO, DeLorme, NaturalVue **EMODnet**



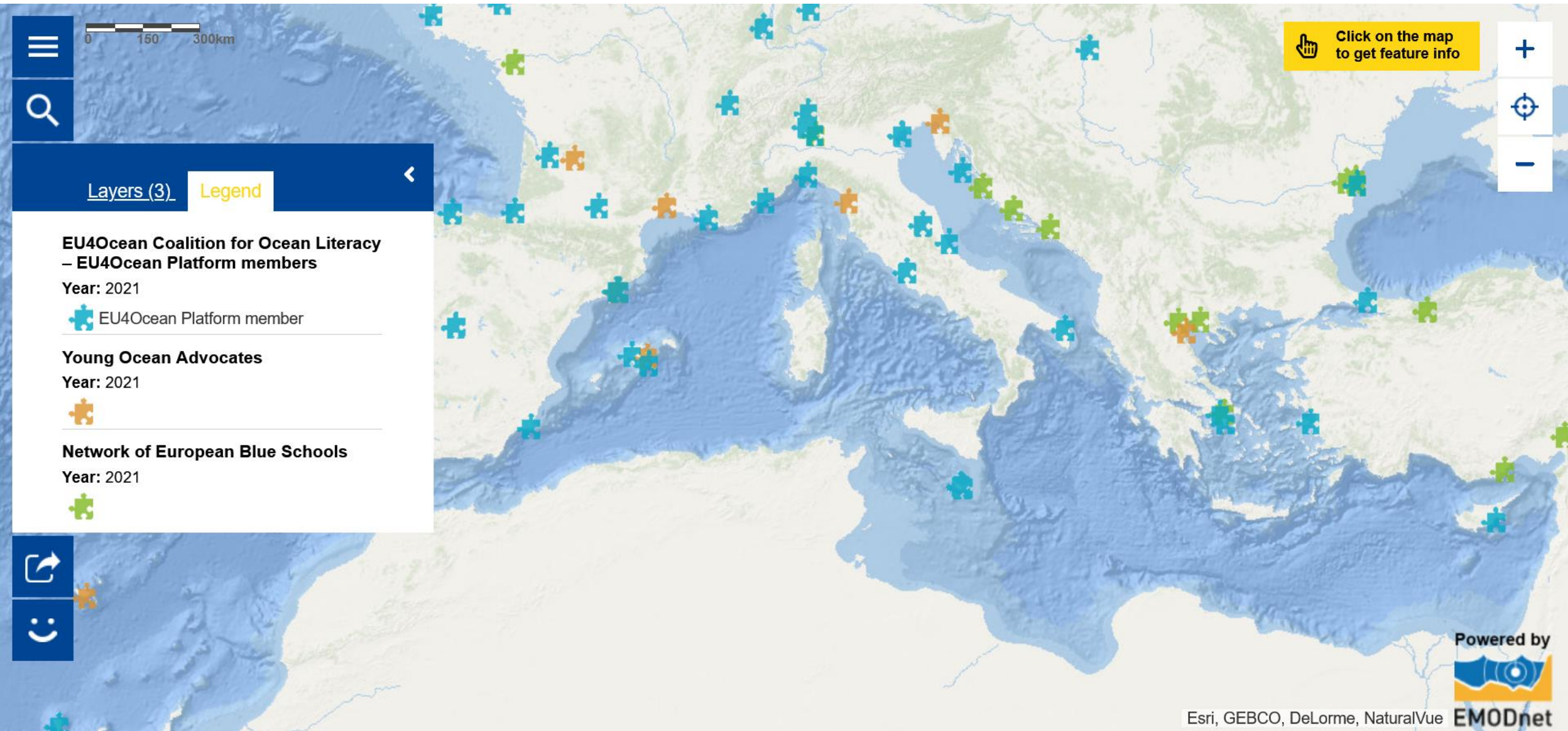




Ocean Literacy – EU4Ocean Coalition – www.eu-oceanliteracy.eu



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Behind the Atlas...

- The European Atlas of the Seas is an initiative of the Directorate General for Maritime Affairs and Fisheries (DG MARE) of the European Commission
- It is managed by the European Marine Observation and Data Network (EMODnet) Secretariat, which is financed by the European Union, since 2017. EMODnet is a network of organisations working together to observe the sea and to make the marine data collected freely available and interoperable.



Where does the data come from?

- European Commission, Directorate General for Maritime Affairs and Fisheries (DG MARE)
- Other services of the European Commission
- The European Marine Observation and Data Network (EMODnet)
- The European Environmental Agency
- Eurostat
- Copernicus Marine
- Joint Research Centre
- ...



How does it work?

The screenshot shows the user interface of the European Atlas of the Seas. A red dashed circle highlights the hamburger menu icon in the top-left corner. Another red dashed circle highlights the top navigation bar, which includes the European Commission logo, a help icon, the language 'English EN', a 'Follow us' link with a Twitter icon, and a 'Give feedback' link with a smiley face icon. The main content area features a blue header with the breadcrumb 'European Commission > Maritime Affairs > European Atlas of the Seas' and a large title 'European Atlas of the Seas' with an information icon. Below the title is a descriptive paragraph: 'Explore, collate and create your own sea map. Learn more about Europe's seas and coasts, their environment, related human activities and European policies.' A navigation menu at the bottom contains six items: 'Do you need help?' (with a question mark icon), 'Advanced features' (with a gear icon), 'Atlas overview' (with a globe icon), 'New Atlas functions' (with a lightbulb icon and a yellow starburst labeled 'v6'), 'Teachers corner' (with a person and screen icon), and 'Legal notice' (with a speech bubble icon). The 'Atlas overview' and 'Teachers corner' items are also circled with red dashed lines. The background is a satellite map, and the bottom right corner features the 'Powered by' logo for Esri, GEBCO, DeLorme, NaturalVue, and EMODnet.

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
- New Atlas functions ^{v6}
- Teachers corner
- Legal notice

Powered by Esri, GEBCO, DeLorme, NaturalVue, EMODnet

How does it work?

The screenshot displays the EMODnet map interface. At the top, there is a navigation bar with the European Union flag, a help icon, the language 'English EN', a 'Follow us' link with a Twitter icon, and a 'Give feedback' link with a smiley face icon. A red dashed circle highlights a close button (an 'X' icon) in the top right corner of the navigation bar. Below the navigation bar is a dark blue header for the 'Add layers to the map' panel. This panel contains a search bar labeled 'Search for layers'. Below the search bar are three tabs: 'Predefined maps (19)', 'Layers', and 'Map stories'. The 'Predefined maps (19)' tab is selected and circled in red. It lists several map layers with checkboxes and information icons:

- Argo floats *i*
- Drifting buoy tracks (Monthly) *i*
- Drifting buoys *i*
- Ferrybox *i*
- High Frequency Radar *i*
- Mooring platforms *i*
- River gauging stations *i*

On the left side of the map, there is a vertical sidebar with a search icon circled in red, a 'Layers (0)' section, and a 'Clear all' button. On the right side, there are map navigation controls: a yellow 'Share map' button, a 'More info' button, and zoom in (+) and zoom out (-) buttons. At the bottom right, the text 'Powered by' is followed by the EMODnet logo and the text 'Esri, GEBCO, DeLorme, NaturalVue EMODnet'.

How does it work?

The image shows a web-based map interface for tracking underwater gliders. The map displays numerous colored dots (purple, green, orange) representing glider positions across the Atlantic and Indian Oceans. A scale bar in the top left indicates 0, 150, and 300 km. A search icon is visible in the top left corner. A yellow callout box in the top right says "Click on the map to get feature info". A red dashed circle highlights a vertical toolbar on the right containing zoom in (+), home, and zoom out (-) buttons. On the left, a "Layers (3)" panel is open, with a red dashed circle around the "Legend" link. Below it, the "Underwater glider" layer is selected, showing a thumbnail map with a red dashed circle around a close (X) button and a settings gear icon. At the bottom of the layers panel, a "Clear all layers" button is also circled in red. A central information popup window features the EMODnet logo (circled in red) and a detailed description of the glider network. The bottom right corner includes the text "Powered by" above the EMODnet logo and the text "Esri, GEBCO, DeLorme, NaturalVue" above the EMODnet logo.

Click on the map to get feature info

Layers (3) [Legend](#)

Underwater glider

Clear all layers

EMODnet

This map shows the position of underwater gliders in the seas and oceans worldwide. This information is supplied in near real-time by EMODnet Physics. Underwater gliders are oceanographic instrument that automatically collect ocean data and monitor the seas. Gliders follow an up-and-down, sawtooth-like profile through the water. Gliders typically have a range of sensors taking measurements such as temperature, conductivity (to calculate salinity), currents, chlorophyll fluorescence (a proxy for phytoplankton), optical backscatter, bottom depth, and (occasionally) acoustic backscatter. They travel at various water depths and navigate with the help of Global Positioning System (GPS) communication at the surface, pressure sensors, tilt sensors, and magnetic compasses providing data on temporal and spatial scale.

Powered by

Esri, GEBCO, DeLorme, NaturalVue

EMODnet

How does it work?

The screenshot displays a web application interface with a top navigation bar and a main content area. The top bar includes a logo, a help icon, language selection (English EN), social media links (Follow us), and a feedback link (Give feedback). The main content area is titled "Advanced features" and contains two toggleable options:

- Print tool**: Printing service to allow the current map to print. The toggle switch is currently turned on.
- Measures tool**: Tool to determine areas, distances and coordinates. The toggle switch is currently turned on.

Red dashed circles highlight the menu icon in the top-left corner, the print and measure tool icons in the top-right corner, and the toggle switches for both the Print tool and Measures tool.



English EN Follow us Give feedback

European Commission > Maritime Affairs > European Atlas of the Seas

European Atlas of the Seas

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- Legal notice

Powered by EMODnet

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A screenshot of a web browser showing the European Atlas of the Seas interface. A red dashed circle highlights a question mark icon in the top navigation bar. The interface includes a header with the European Commission logo, a main title, a descriptive paragraph, and a grid of navigation buttons. A sidebar on the left contains map navigation icons.



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