

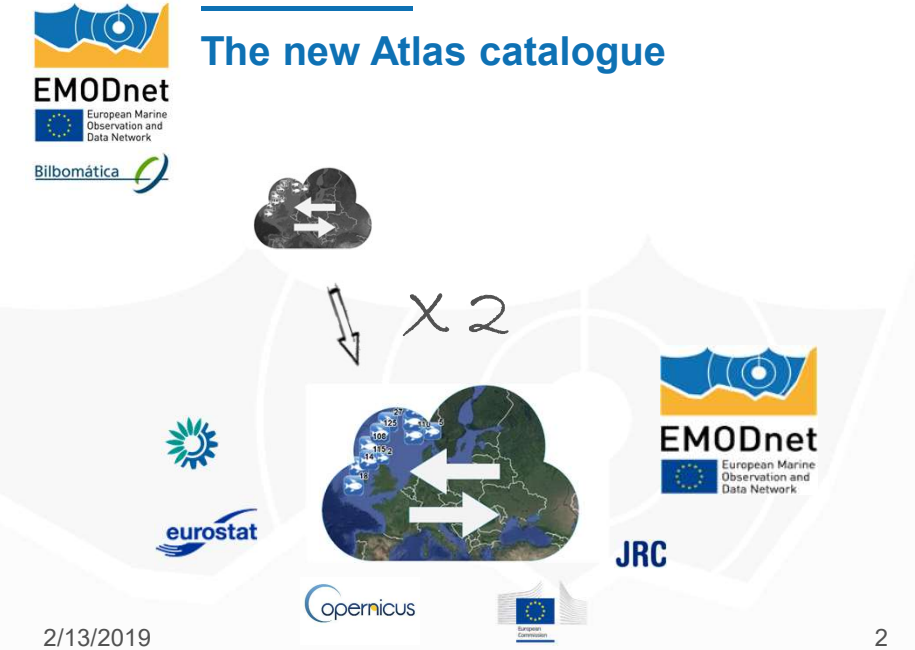
EMODnet
European Marine Observation and Data Network
Your gateway to marine data in Europe

The European Atlas of the Seas

http://ec.europa.eu/maritimeaffairs/atlas/maritime_atlas/

Pascal Derycke | EMODnet Secretariat
Raúl García Quiñones | Bilbomática

The European Marine Observation and Data Network (EMODnet) is financed by the European Union under Regulation (EU) No 509/2014 of the European Parliament and of the Council of 15 May 2014 on the European Maritime and Fisheries Fund.



The new Atlas catalogue

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Bilbomática

eurostat


Copernicus

JRC

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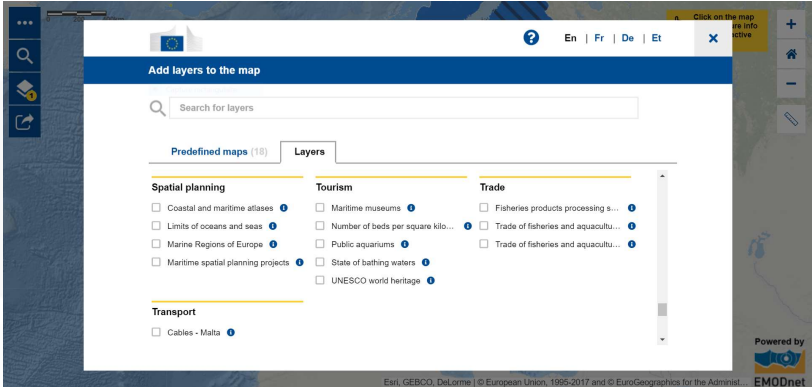
2




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A comprehensive catalogue of +/- 200 marine map layers



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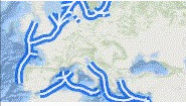

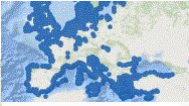


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22 themes

- Aquaculture
- Chemistry
- Employment
- Energy
- Environment


- Europe
- Organisations and councils
- Population
- Satellite images
- Sea bottom
- Sea life
- Seabed habitats

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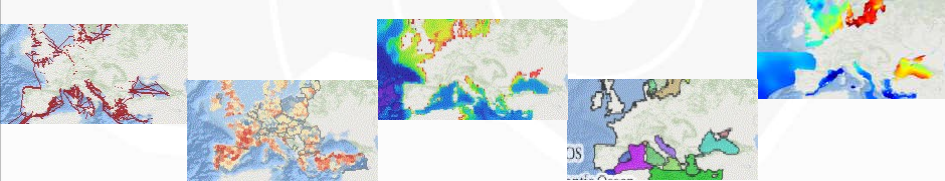


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A wide range of marine topics


- Fisheries
- Governance
- Litter
- Nature
- Oceanographic instruments
- Security
- Spatial planning
- Tourism
- Trade
- Transport




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The main new source provider is




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+/- new 100 layers
WMS 1.1.0




Atlas catalogue


EMODnet Seabed habitats




EMODnet Physics




EMODnet Chemistry




EMODnet bathymetry




EMODnet Biology



EMODnet Human activities



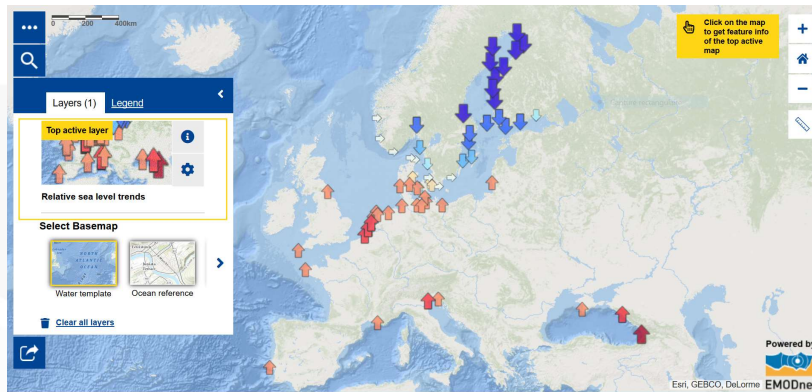
EMODnet Geology



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Example of new layer: relative sea level trends (EMODnet Physics)

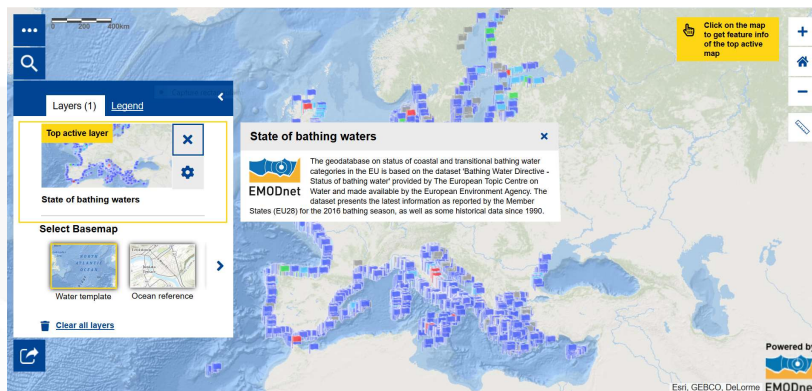


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Example of updated layer: state of the bathing waters (EMODnet Human activities)

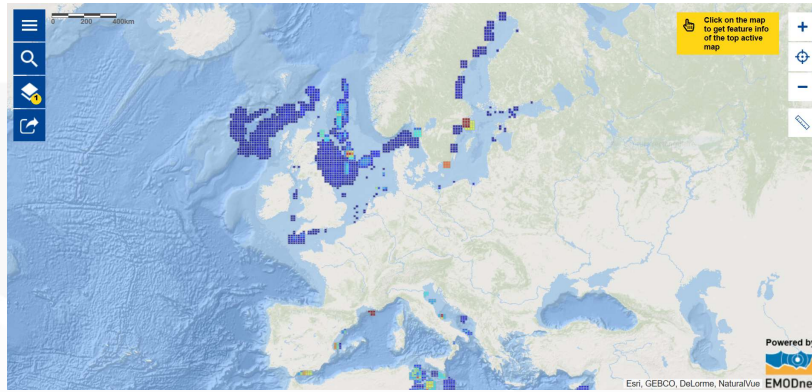


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Example of updated layer: underwater noise (EMODnet Physics)

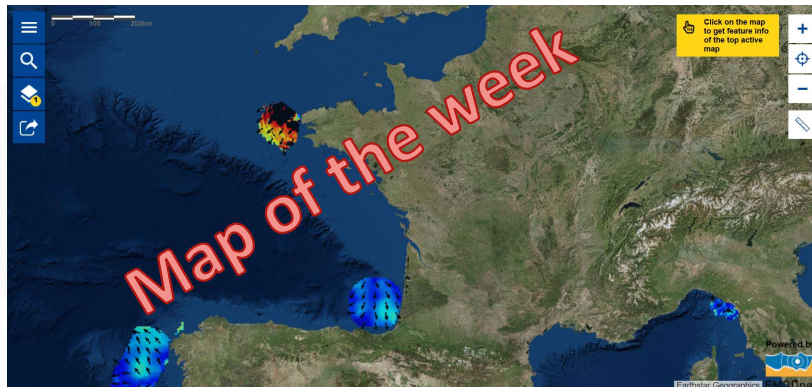


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Example of map layer: sea water velocity (EMODnet Physics) – nearest time!




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Coming new EMODnet map layers

- Marine Litter (EMODnet Chemistry)
- Vessel density map (EMODnet Human Activities)

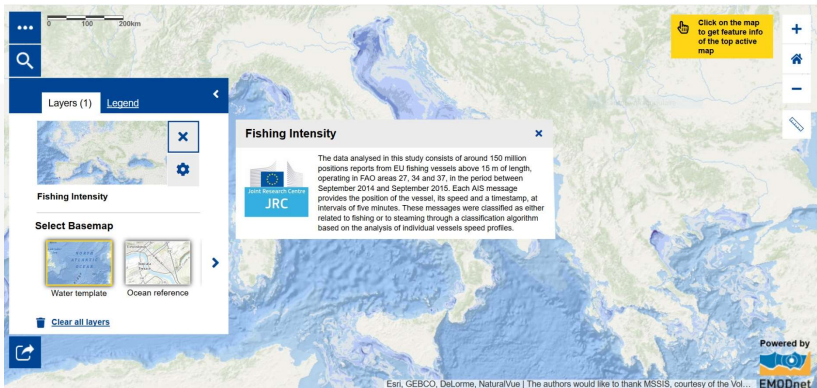
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EMODnet can host new layers: example of Fishing Intensity (JRC)

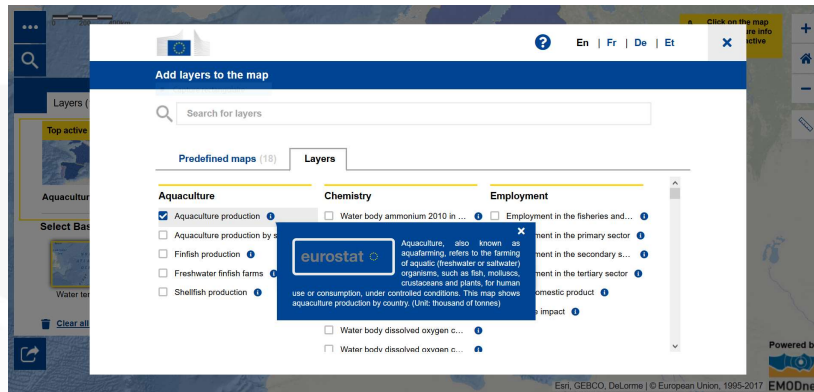


The screenshot shows a map interface with a 'Layers (1)' panel on the left containing 'Fishing Intensity' and 'Select Basemap' (with options for 'Water template' and 'Ocean reference'). A legend box for 'Fishing Intensity' is open, featuring the JRC logo and text: 'The data analysed in this study consists of around 150 million positions reports from EU fishing vessels above 15 m of length, operating in FAO areas 27, 34 and 37, in the period between September 2014 and September 2015. Each AIS message provides the position of the vessel, its speed and a timestamp, at intervals of five minutes. These messages were classified as either related to fishing or to steaming through a classification algorithm based on the analysis of individual vessels speed profiles.'

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The second major source provider is Eurostat

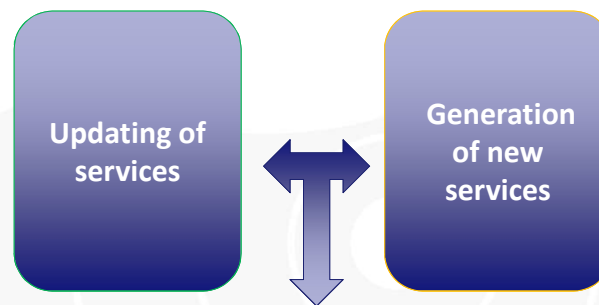


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EAS content, the atlas heart



The high quality of the content is key asset of the EAS

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Eurostat

Data converted into maps

- **Aquaculture**
 - [Aquaculture production](#)
 - [Aquaculture production by species](#)
- **Employment**
 - [Gross domestic product](#)
 - [Employment in the primary sector](#)
 - [Employment in the secondary sector](#)
 - [Employment in the tertiary sector](#)
 - [Employment in the fisheries and aquaculture sectors by country](#)
 - [Maritime impact](#)
- **Environment**
 - [Marine protected areas \(by country\)](#)
- **Tourism**
 - [Number of beds per square kilometre](#)

- **Fisheries**
 - [Fisheries and aquaculture product consumption](#)
 - [Catches by fishing zone](#)
 - [Catches by country](#)
 - [Fisheries and aquaculture production](#)
- **Population**
 - [Urban-rural typology](#)
 - [Population density](#)
 - [Population change](#)
 - [Population aged 65 years and more](#)
 - [Active population](#)
 - [Unemployment](#)
- **Transport**
 - [Ports](#)
 - [Traffic of passengers by port](#)
 - [Traffic of goods by port](#)

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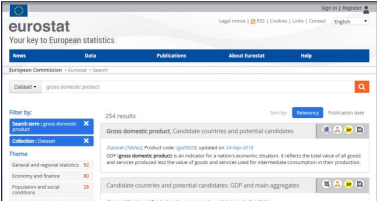
Updating Services

Eurostat (8 SERVICES)


- **Aquaculture**
 - Aquaculture production
 - Aquaculture production by species
- **Employment**
 - Gross domestic product
- **Environment**
 - Marine protected areas (by country)

- **Fisheries**
 - Catches by fishing zone
 - Catches by country
- **Transports**
 - Traffic of passengers by port
 - Traffic of goods by port


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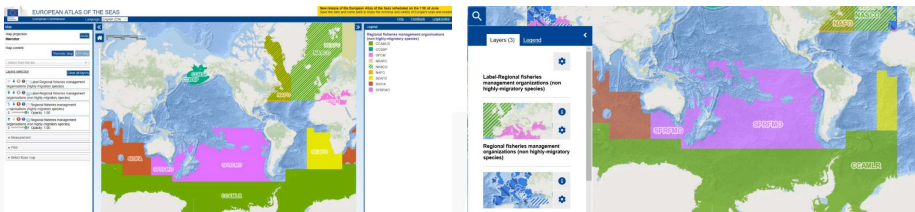


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Updating Services

SPRFMO (South Pacific Fisheries)




Service Geometry updating through the communication with data providers

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Updating Services


Updating Process

- Data sourcing selection/downloading:
 - Indicator/variable/units
- Data processing/formatting
- Data table/geometry Joining (at the required NUTS level)
- Publication through the EEA server
- Functionality/visualization checking through the EAS

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Generating new Services

Eurostat (6 SERVICES)


Indicators by coastal/ Non coastal regions

- Population density
- Demographic balance and crude rates
- Gross domestic product (GDP) at current market prices
- Employment by NACE Rev. 2 activity
- Gross value added at basic prices
- Business demography and high growth enterprise by NACE Rev. 2 activity

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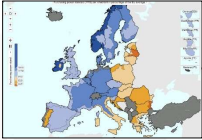
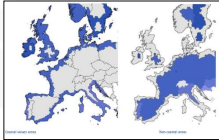
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Generation new Services

New service generation Process

- Requirements compilation
 - Geometry generation: Coastal/non coastal (Nuts 3 aggregates)

- Data sourcing selection/downloading

Dataset ID	Findings
Population density by other typologies	Just one variable
Demographic balance and crude rates by other typologies	CNSMIGRAIT and GROWRT
Gross domestic product (GDP) at current market prices by other typologies	Just one unit/ Euro per inhabitant in percentage of the EU average
Employment by NACE Rev. 2 activity and other typologies	Represented EMP / Employed persons
Gross value added at basic prices by other typologies	Represented MO_FUR / Million euro
Business demography and high growth enterprise by NACE Rev. 2 activity and other typologies	Industry and Accommodation and food service activities

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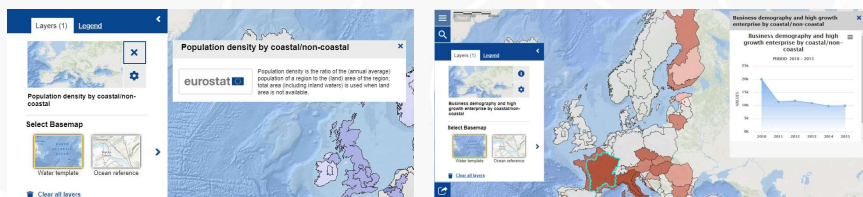
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Generation new Services

New service generation Process

- Data table/geometry (NUTS level) Joining
- Publication through EEA server
- Functionality/visualization checking through the EAS



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Generating new Services

3 Real cases

- GDP at current market prices
http://ec.europa.eu/maritimeaffairs/atlas/maritime_atlas/#lang=EN;p=w;bkgd=5;theme=2:0.75,855:0.8;c=1253866.2175874943,7033312.218247009;z=4
- Population density
http://ec.europa.eu/maritimeaffairs/atlas/maritime_atlas/#lang=EN;p=w;bkgd=5;theme=700:0.8;c=1253866.2175874943,7033312.218247009;z=4
- Gross value added at basic prices
http://ec.europa.eu/maritimeaffairs/atlas/maritime_atlas/#lang=EN;p=w;bkgd=5;theme=442:0.8;c=1253866.2175874943,7033312.218247009;z=4

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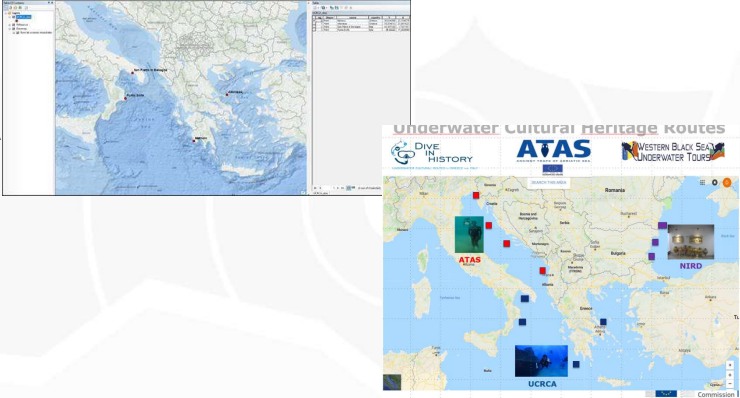

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Generating new Services



Ongoing Services

Underwater heritage-EC

- ATAS
- NIRD
- UCRCA



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Upcoming new Services


Ongoing Services

New EUSTAT Indicators

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Upcoming new Services

EEA services

- A relevant list of available services
- <https://maratlas.discomap.eea.europa.eu/arcgis/rest/services/Maratlas>
- Ocean boundaries (Name Limit Ocean Seas)
- <https://marine.discomap.eea.europa.eu/arcgis>
- Wise marine/MarineLitterWatch

Current Version: 10.6
View Footprints In: [ArcGIS Online Map Viewer](#)

Folders:

- BathingWater
- CoralReefWatch
- Ecrins
- flood_directive
- GroundwaterSoE
- MapServicesForMapViewers
- MapViewerForExperts
- Marine
- MarineLitterWatch
- nautical
- RiversLakesBiologicalElementsSoE
- RiversLakesSoE
- UrbanWasteWater
- Utilities
- UWWTD
- Water
- WaterExploitationIndex
- WaterQuantitySoE
- Wise

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A Web mapping application to support the EC policy



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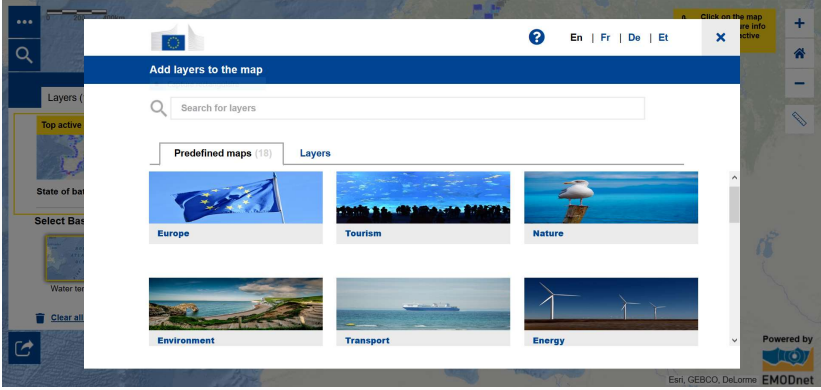


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Bilbomática

18 predefined maps

- Europe
- Environment
- Tourism
- Transport
- Nature
- Energy



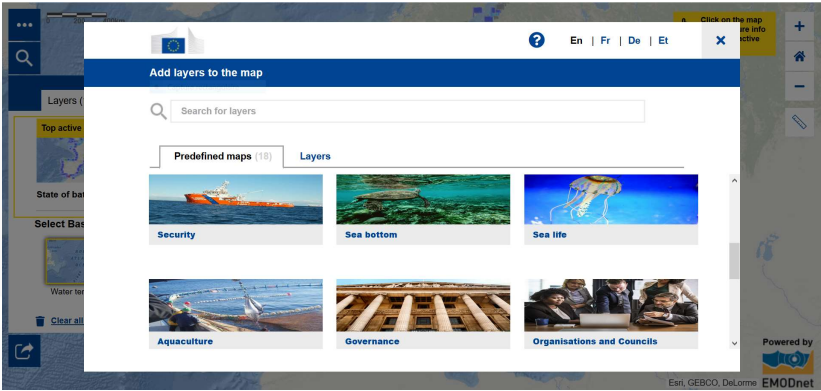
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Bilbomática

- Security
- Aquaculture
- Sea bottom
- Governance
- Sea life
- Organisations and councils

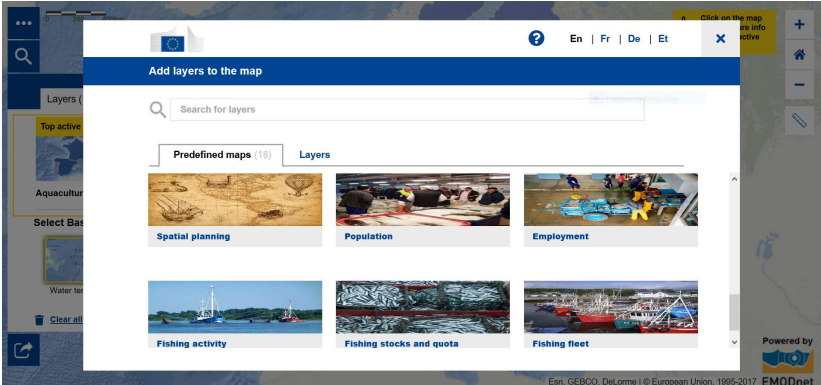


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- Spatial planning
- Population
- Employment


- Fishing activity
- Fishing stocks and quota
- Fishing fleet



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The pannel of predefined maps is a dynamic content



- DG MARE can create a new predefined map at any time
- DG MARE can share and embed Atlas maps in any Web pages of the Europa domain, other websites and social networks, etc...

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The embedding capacity is a smart function and an asset to improve the Atlas visibility

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A dynamic content in 26 languages

MAP ID 2
 Theme Tourism
 Base Map [5]
 List of Layers 25:0.75,24:0.75,76:0.75,26:0.75,17:0.75

Description

As part of EU's Blue Growth strategy, the coastal and maritime tourism sector has been identified as an area with special potential to foster a smart, sustainable and inclusive Europe. It is the biggest maritime sector in terms of gross value added and employment and, according to the **Blue Growth Study**, is expected to grow by 2-3% by 2020. In 2012, Cruise tourism alone represents 330,000 jobs and a direct turnover of €15.5 billion and is expected to grow.

EN	FR	DE	BG	CS	DA	EL	ES	ET	FI	GA	HR	HU
IS	IT	LT	LV	MT	NB	NL	PL	PT	RO	SK	SL	SV

Edit

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A Web 2.0 mapping application

- The new Atlas provides an unique service: create and share your map
- The number of available marine map layers is already impressive making the new Atlas appealing.
- The new Atlas is online with the EC Web visual identity
- It can promote EC Directives (MSFD, ...), Policies (Open data, ...), programs and projects, etc.

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Further developpement of the Atlas catalogue: « Communication and Educational purposes »

- What content for which strategy?
 - Identify EC communication needs
 - Beach clean up events*
 - EMD in MyCountry*
 - Number of inspectors per Member state*
 - ...
 - Better define the end-user profile(s) to be user-oriented
 - Ex: Problem with the map layer abstracts... « scientific »
- How to further develop the Atlas catalogue with quality criteria?
 - Selection of new source providers (ICES, ...)
 - Selection of new map layers

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