



atlas

UNDERSTANDING DEEP ATLANTIC ECOSYSTEMS



Valorisation of H2020 ATLAS data and data products using EMODnet, EAS and related open source data platforms

ATLAS project GA, 1-4 April 2019

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seascope
BELGIUM



EMODnet

European Marine
Observation and
Data Network





Talk overview

I. Why does open access to marine data matter?

II. What is EMODnet?

III. Highlights from EMODnet Phase III

- Data products, use cases, data ingestion;
- European Atlas of the Seas.

IV. Valorisation of H2020 ATLAS data and data products:

- EMODnet – Atlantic developments
- Enabling transfer of ATLAS knowledge: data ingestion to EMODnet
- Online community page: EMODnet Central Portal

V. H2020 ATLAS GIS platform:

- Choosing an open source GIS staging environment;
- Technical development and visualizing data + data products.

VI. Next steps: Within and beyond H2020 ATLAS

I. Why does open access to marine data matter?



Sound ocean data is indispensable if we want to tackle major global issues such as climate change, marine litter, illegal fishing or marine protection. It is also a bare necessity if we want to develop the blue economy and create sustainable economic growth in the EU.

Karmenu Vella, European Commissioner for Environment, Maritime Affairs and Fisheries

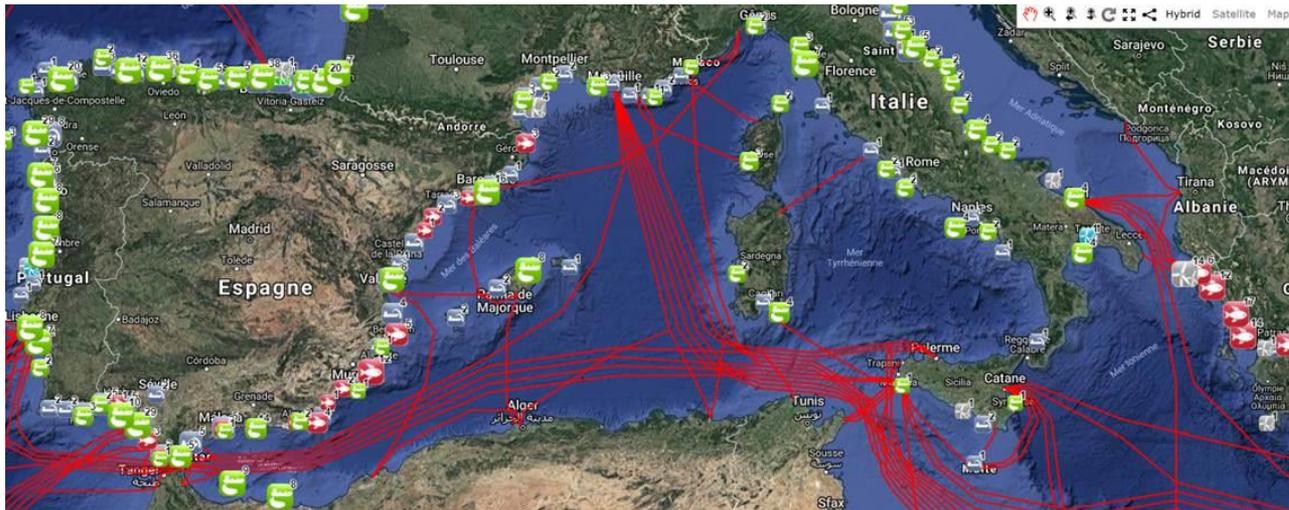
#E00SConference18



I. Why does open access to marine data matter?

Marine data should be Findable, Accessible, Interoperable and Reusable (FAIR) across multiple parameters, spatial scales and resolutions:

- To promote a knowledge-driven, ocean literate society;
- To enable the blue economy and to set appropriate, evidence-based management plans to achieve good environmental status

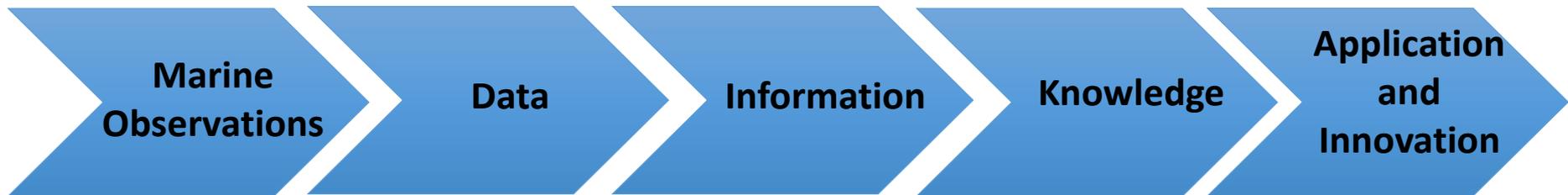


Map from EMODnet Human Activities portal

II. What is the European Marine Observation and Data Network (EMODnet)?



Unlocking the knowledge in marine data and observations



- Industry (marine/maritime)
- Research
- Informed policy and environmental management
- Assessing, forecasting and risk prevention
- Informed society



Users feedback on needs and requirements to improve ocean observation, data collection and products
And they are often data providers too.....

II. What is the European Marine Observation and Data Network (EMODnet)? Evolution

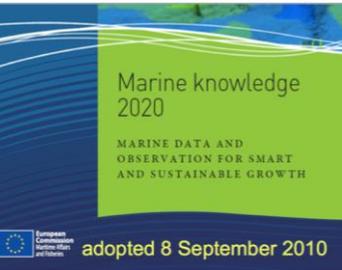
A long-term initiative of the European Commission (DG MARE) from 2009 onwards

2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Phase I – Limited sea basins					Phase II – Low resolution all basins		Phase III – Multi-resolution				

- 
Phase 1 — 59 institutions, budget €6.45 million
 Prototype of Thematic data portals
 Limited selection of parameters and sea-basins
 Low-resolution data products

- 
Phase 2 — 120 institutions, budget €16.3 million
 More parameters, and coverage of all European sea-basins
 Medium-resolution data products
 Establishment Central Portal & Sea-basin Checkpoints
 Launch Secretariat

- 
Phase 3 — >150 institutions, budget €20 million
 Multi-resolution digital map of entire European seabed by 2020
 EU Atlas of the Seas and contribution to EOOS



II. What is EMODnet? 5 strands by >160 organisations



EMODnet

 European Marine
Observation and
Data Network

7 thematic data portals

Central Portal www.emodnet.eu

6 Sea-basin Checkpoints

Data Ingestion Facility

Secretariat



BIOLOGY



CHEMISTRY



PHYSICS



HUMAN ACTIVITIES



GEOLOGY



BATHYMETRY



SEABED HABITATS

II. What is EMODnet? Secretariat



WP0 - Project management
Jan-Bart Calewaert & Kate Larkin



WP1 - Promote coherence
J-B Calewaert

Tim Collart, starting 1 May 2019



Core Secretariat (Oostende, Belgium)

WP4 - EOOS
Kate Larkin



WP2 - Monitoring output
Nathalie Tonné



WP3 - Communication and outreach
Andrée-Anne Marsan



WP5 - European Atlas of the Seas
Pascal Derycke (Technical Coordinator)

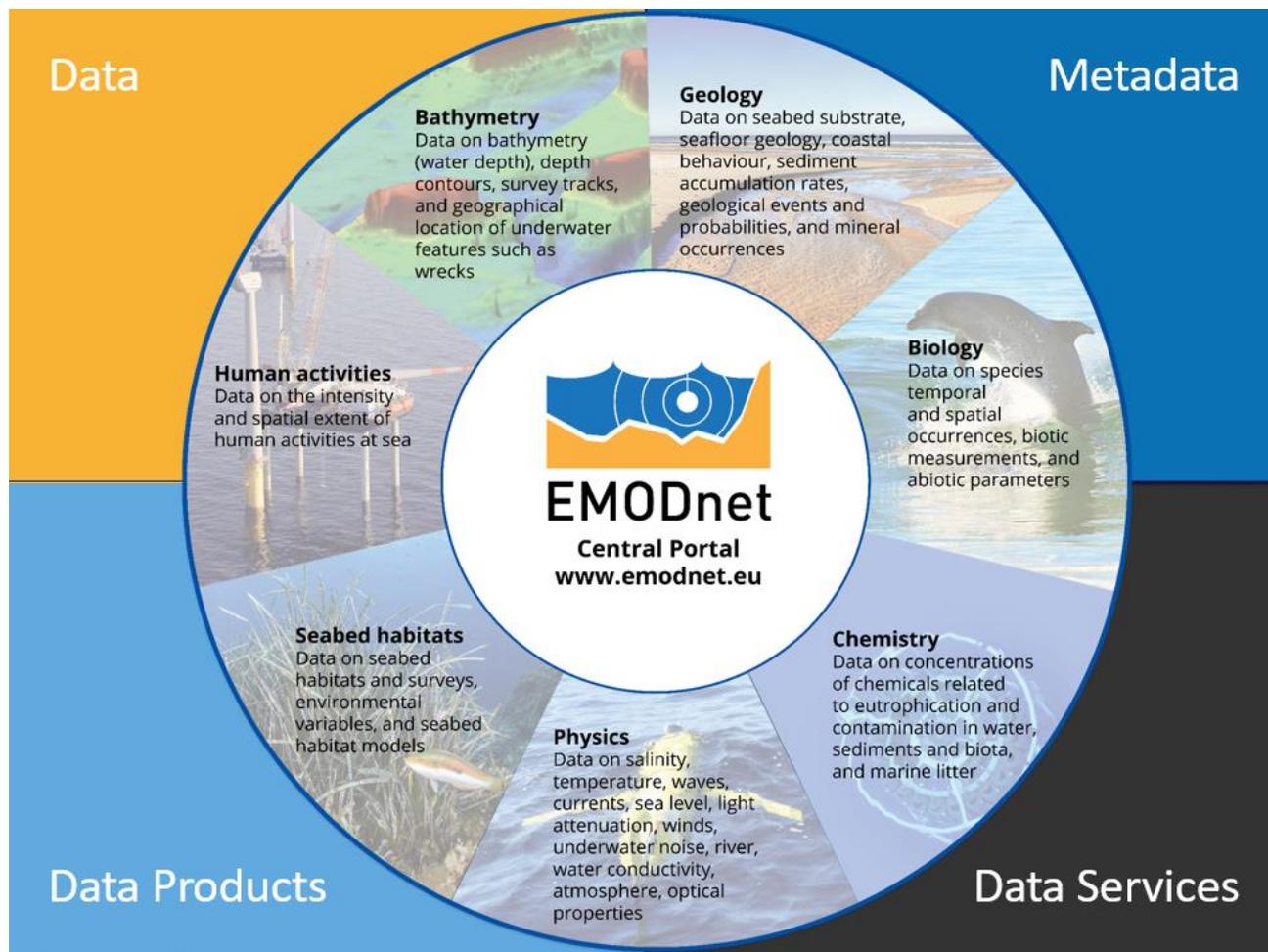


Remote support (Romsey, UK)



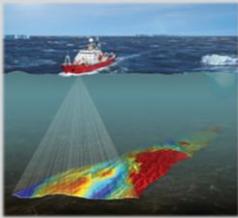
II. What is EMODnet?

An open access marine data and knowledge broker



III. EMODnet Phase III: Data



Bathymetry	Geology	Seabed habitats	Physics	Chemistry	Biology	Human activities
						
<p>Survey tracks</p> <p>Water depth and depth profiles</p> <p>Undersea features</p> <p>Wrecks</p> <p>High resolution bathymetry in coastal areas</p>	<p>Seabed substrate</p> <p>Sediment accumulation rates</p> <p>Seafloor lithology</p> <p>Seafloor stratigraphy</p> <p>Coastal behaviour</p> <p>Geological events and probabilities</p> <p>Mineral occurrences</p>	<p>Seabed habitat maps (broad-scale and specific per basin)</p> <p>Individual seabed habitat maps from surveys</p> <p>Environmental variables influencing habitat type (depth, salinity, currents, light, ...)</p>	<p>Wave height and duration</p> <p>Sea temperature</p> <p>Wind speed and direction</p> <p>Salinity</p> <p>Horizontal speed of the water column</p> <p>Water clarity</p> <p>Changes in sea level</p> <p>Inflow from rivers</p> <p>Water conductivity / biochemical parameters</p> <p>Atmospheric parameters</p> <p>Underwater noise</p>	<p>Acidity</p> <p>Antifoulants</p> <p>Chlorophyll</p> <p>Dissolved gases</p> <p>Fertilisers</p> <p>Hydrocarbons</p> <p>Marine litter</p> <p>Heavy metals</p> <p>Organic matter</p> <p>Polychlorinated biphenyls</p> <p>Pesticides and biocides</p> <p>Radionuclides</p> <p>Silicates</p>	<p>Occurrences and abundances of species of:</p> <p>Phytoplankton</p> <p>Zooplankton</p> <p>Macro-algae</p> <p>Angiosperm</p> <p>Fish</p> <p>Reptile</p> <p>Benthos</p> <p>Bird</p> <p>Sea mammal</p>	<p>Aggregate extraction</p> <p>Aquaculture</p> <p>Cultural heritage</p> <p>Dredging</p> <p>Fisheries</p> <p>Hydrocarbon extraction</p> <p>Traffic in main ports</p> <p>Ocean energy facilities</p> <p>Pipelines and cables</p> <p>Protected areas</p> <p>Status of bathing sites</p> <p>Vessel density</p> <p>Waste disposal (solids)</p> <p>Wind farms</p> <p>Other forms of area management/ designation</p>

III. EMODnet Phase III: Data products



Bathymetry

Geology

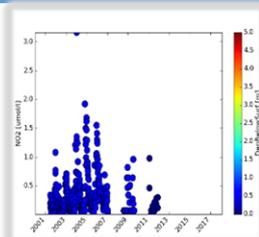
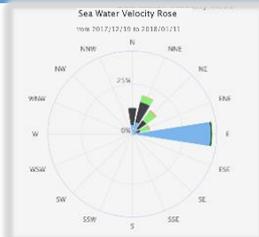
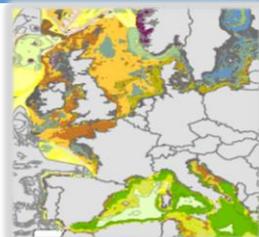
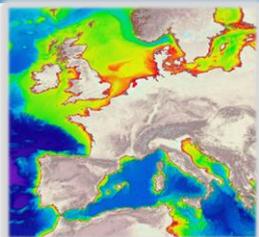
Seabed habitats

Physics

Chemistry

Biology

Human activities



Digital Terrain Model of:

Maps of:

EMODnet broad-scale seabed habitat map for Europe (EUSeaMap)

Time series
Dynamic plots

Concentration maps using DIVA software
Dynamics plots
Profiles of:

Map viewer of:
Phytoplankton

Map viewer of:
Aggregate extraction

Survey tracks

Multiscale Seabed substrate

Confidence maps

Statistics (trends, max, min, average, ...)

Acidity

Zooplankton

Aquaculture

Water depth and depth profiles

Sediment accumulation rates

Maps of:

Maps of:
Wave height and duration
Sea temperature
Wind speed and direction

Antifoulants
Chlorophyll

Macro-algae

Cultural heritage

Undersea features

Seafloor lithology

Seabed habitat maps (broad-scale and specific per basin)

Salinity
Horizontal speed of the water column

Dissolved gases
Fertilisers

Fish

Dredging

Wrecks

Seafloor stratigraphy

Individual seabed habitat maps from surveys

Water clarity
Changes in sea level
Inflow from rivers

Hydrocarbons
Heavy metals

Reptile

Hydrocarbon extraction

High resolution bathymetry in coastal areas

Coastal behaviour and coastline migration

Environmental variables influencing habitat type (depth, salinity, currents, light, ...)

Water conductivity/biogeochemical parameters

Organic matter
Polychlorinated biphenyls

Benthos

Traffic in main ports

Geological events and probabilities

Mineral occurrences

Submerged landscapes

Atmospheric parameters

Marine litter (micro, beach, seafloor)

Dynamic gridded abundance plots showing geographical variability of species:

Benthos
Birds

Ocean energy facilities

Protected areas

Status of bathing sites

Vessel density

Waste disposal (solids)

Wind farms

Sea mammals
Micro-organisms

Other forms of area management/designation

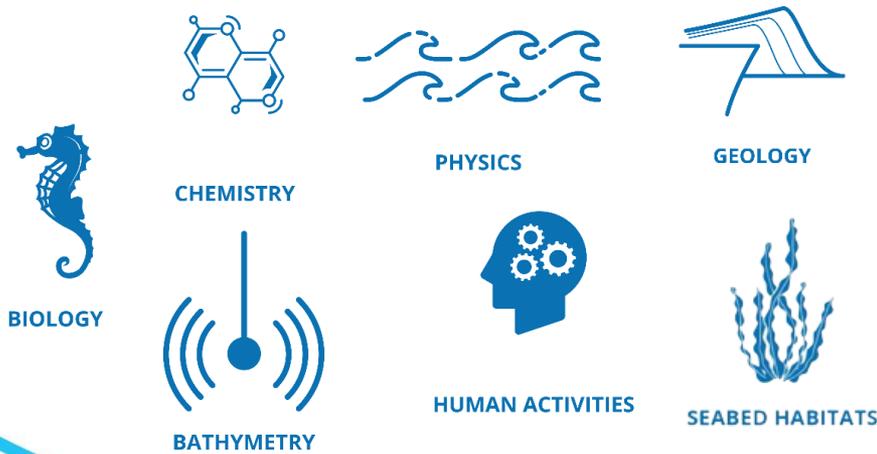
Physoplankton
Reptiles

Zooplankton

III. Highlights from EMODnet Phase III



Data and data products: Portfolio catalogue



<http://www.emodnet.eu/data-portfolio>

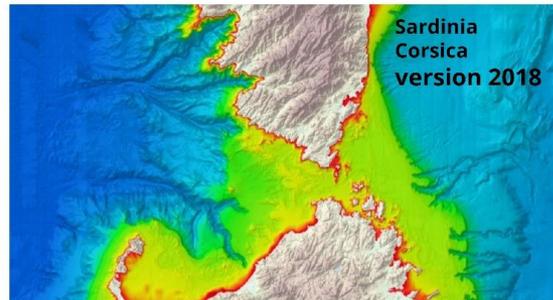
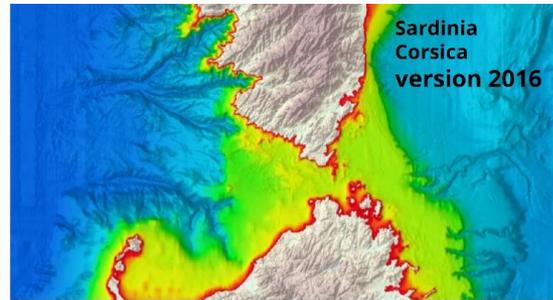
Key | Data and data products categories

- L0** Raw data. Unprocessed instrument data at full resolution, including synchronisation methods (e.g. elimination of CTD up-down duplicates) and excluding communication artifacts.
- L1** Full resolution data reconstructed with calibration coefficients, geo- and time-referenced.
- L2** Geo- and time-referenced processed (derived) data with a minimum QC. Near-real time (NRT) with full spatial and/or temporal resolution.
- L3** Delayed mode data with further QC, usually with some completeness, consistency and space/time uniformity. Data QC checks may include comparison with historical data and/or Level 5 products such as climatologies or gridded data.
- L4** Collated data from different measurements, samples and/or sources that have been integrated in a data system by means of standardisation and/or categorisation, and subset or otherwise selected or derived to fulfil a specific requirement. Data can represent numerical values and presence/absence of a category or entity. Integration of datasets at this level enables further QC based on parameter to parameter relationships (e.g. TS diagrams).
- L5** Model or analysis output that uses data of Level 2 and/or 3 as input. Data products of this level represent the spatial distribution of a single parameter derived from multiple measurements. Data are aggregated and undergo some level of geo-processing and spatial interpolation to cover data gaps and/or solve data discrepancies.
 - L5A.** Spatial (two-dimensional) distribution of a specific parameter, without variations on the temporal or depth dimensions.
 - L5B.** Spatial distribution of a specific parameter, with variations on the temporal and/or depth dimensions.
- L6** Derived information from multi-variable model or analysis that has Level 5 data products and/or Level 2-3 data as input. These input data and data products might have been gathered or developed by the thematic lot itself, by other thematic lots or third parties.

Data

Data products

III. EMODnet Phase III: EMODnet Bathymetry



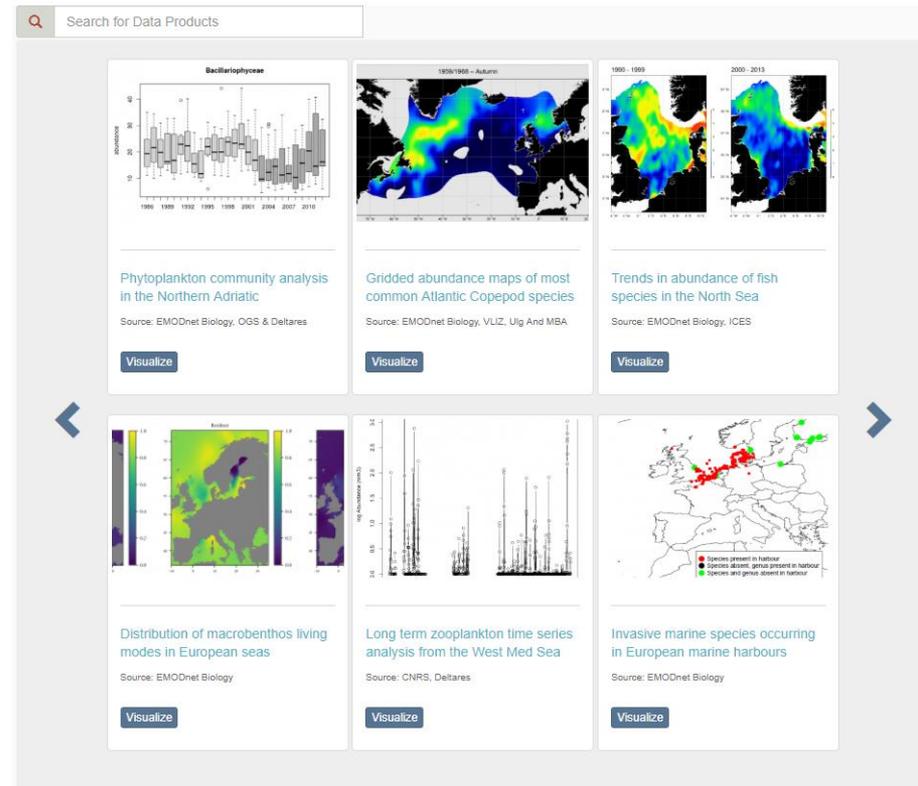
The advanced EMODnet DTM offers **many benefits** to users:

- resolution increased to $1/16 * 1/16$ arc minutes (circa $115*115m$);
- powerful 3D visualisation functionality;
- faster representation of the complexity of the map;
- expanded coverage: European seas + European part of the Arctic Ocean and Barents Sea;
- inclusion of Satellite Derived Bathymetry data products, in particular for coastal stretches of Spain and Greece.

III. EMODnet Phase III: EMODnet Biology



- Launched on 19 December 2018
- Range of demand-led data products including tools, models and maps, illustrating the diverse range of outputs that can be generated from EMODnet Biology hosted data.
- Underpinned by EurOBIS data infrastructure
- International contribution and relevance: EMODnet Biology supply >50% of global datasets to OBIS: Fundamental pillar to UN WOA, IPBES etc



www.emodnet-biology.eu/about-atlas

III. EMODnet Phase III

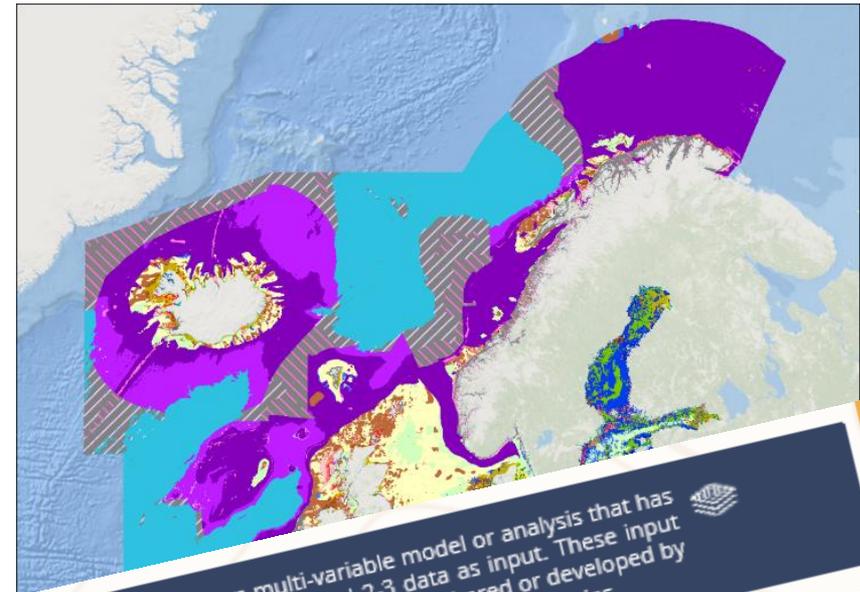


EMODnet Seabed Habitats Broad-scale Map (EUSeaMap)

- Broad-scale European seabed habitat map
- Full coverage of all EU seas
- Time and cost efficient
- Common EUNIS European language for habitat types
- Spatial confidence assessment available

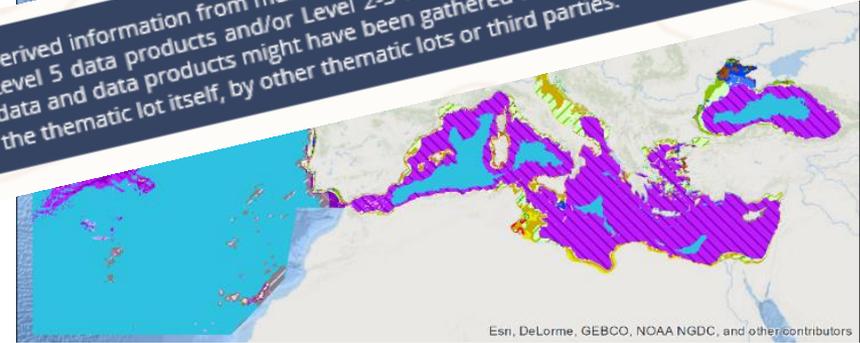
Phase III:

JNCC (lead); 12 partners



Derived information from multi-variable model or analysis that has Level 5 data products and/or Level 2-3 data as input. These input data and data products might have been gathered or developed by the thematic lot itself, by other thematic lots or third parties.

L6



Esri, DeLorme, GEBCO, NOAA NGDC, and other contributors





EMODnet



Making EMODnet EUSeaMap



GEOLOGY

+



PHYSICS

+



=



SEABED HABITATS

Substrate

E.g. Sand, Mud, Rock

Hydrodynamic Energy

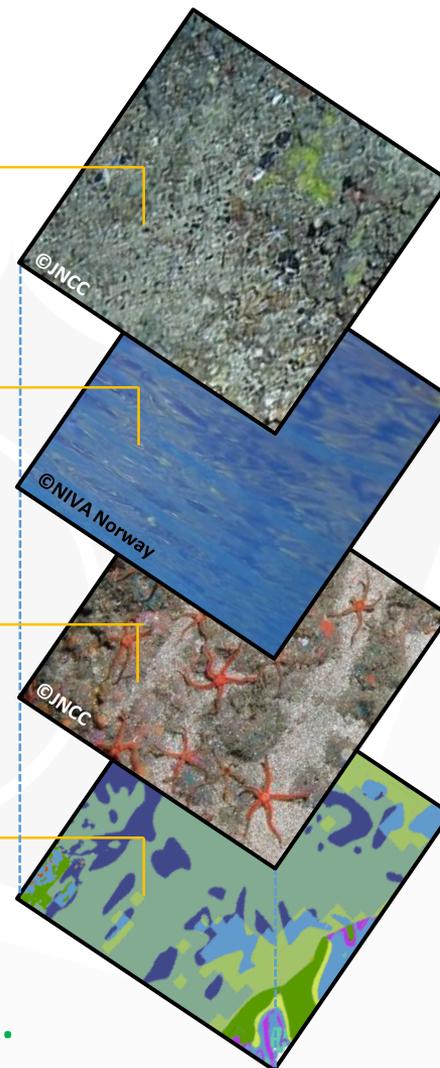
Wave and currents climate at the seabed

Biological Zone

Infralittoral, circalittoral etc

Predictive habitat maps

EUNIS A3.1: Atlantic and Mediterranean High Energy Infralittoral Rock



Phase III is increasing spatial coverage.

Could ATLAS case studies fill gaps in open ocean datasets?



EMODnet



European Marine
Observation and
Data Network



Data Ingestion Portal

To support all marine data holders to submit data to EMODnet in an easy way

<https://www.emodnet-ingestion.eu/>



DATA INGESTION PORTAL

Wake up your data - set them free for Blue Society



[CONTACT](#)

[ABOUT](#)

[DATA SUBMISSION](#)

[GUIDELINES](#)

[SUBMISSIONS](#)

[DATA WANTED](#)

[HELP](#)

[OPERATIONAL DATA](#)

[PROMOTION](#)

[CENTRAL PORTAL](#)

[Home](#)

Welcome to the EMODnet Data Ingestion portal

The European Marine Observation and Data Network (EMODnet) consists of more than 160 organisations that together work on assembling, harmonising and making marine data, products and metadata more available to public and private users. This Data Ingestion portal facilitates additional data managers to ingest their marine datasets for further processing, publishing as open data and contributing to applications for society.

[READ MORE](#)

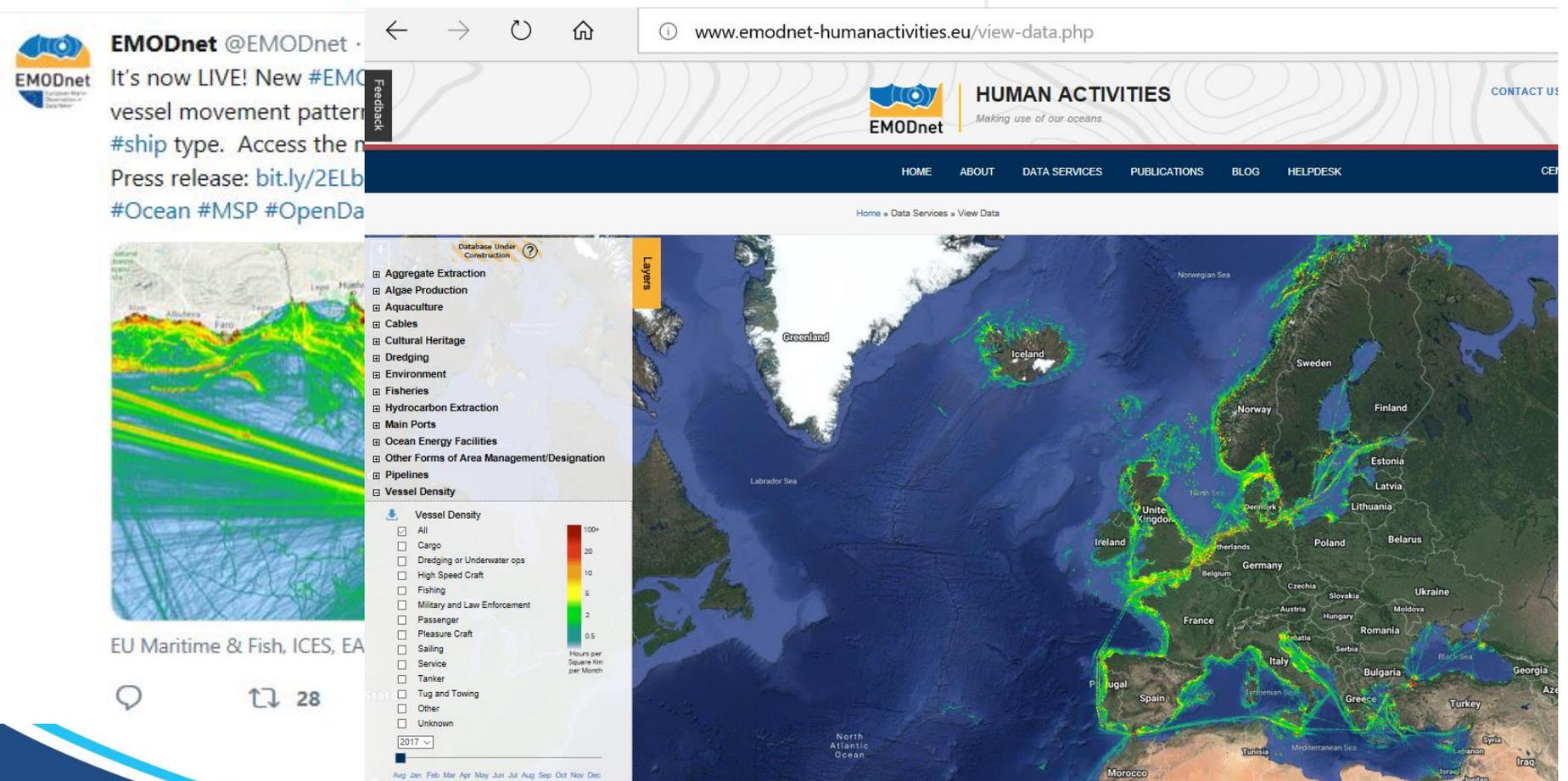
EMODNET INGESTION

CHECK OUT
THE MOVIE
3:30 MINUTES



III. EMODnet Phase III: Human Activities

NEW data product: Vessel density maps, March 2019



The screenshot displays the EMODnet Human Activities website interface. At the top, the EMODnet logo and the text "HUMAN ACTIVITIES Making use of our oceans." are visible. A navigation menu includes "HOME", "ABOUT", "DATA SERVICES", "PUBLICATIONS", "BLOG", and "HELPDESK". The main content area features a map of the North Atlantic and Mediterranean regions, overlaid with a vessel density heatmap. A legend on the left side of the map lists various human activities, with "Vessel Density" selected. The legend includes a color scale from 0.5 (blue) to 100+ (red) hours per square kilometer per month. The map shows high density (red/yellow) in the North Sea, English Channel, and Mediterranean Sea. A social media widget for EMODnet is visible on the left side of the page, with the text "EMODnet @EMODnet · It's now LIVE! New #EMODnet vessel movement patterns by #ship type. Access the new data product. Press release: bit.ly/2ELb... #Ocean #MSP #OpenData".

Database Under Construction ?

- Aggregate Extraction
- Algae Production
- Aquaculture
- Cables
- Cultural Heritage
- Dredging
- Environment
- Fisheries
- Hydrocarbon Extraction
- Main Ports
- Ocean Energy Facilities
- Other Forms of Area Management/Designation
- Pipelines
- Vessel Density

Vessel Density

- All
- Cargo
- Dredging or Underwater ops
- High Speed Craft
- Fishing
- Military and Law Enforcement
- Passenger
- Pleasure Craft
- Sailing
- Service
- Tanker
- Tug and Towing
- Other
- Unknown

2017

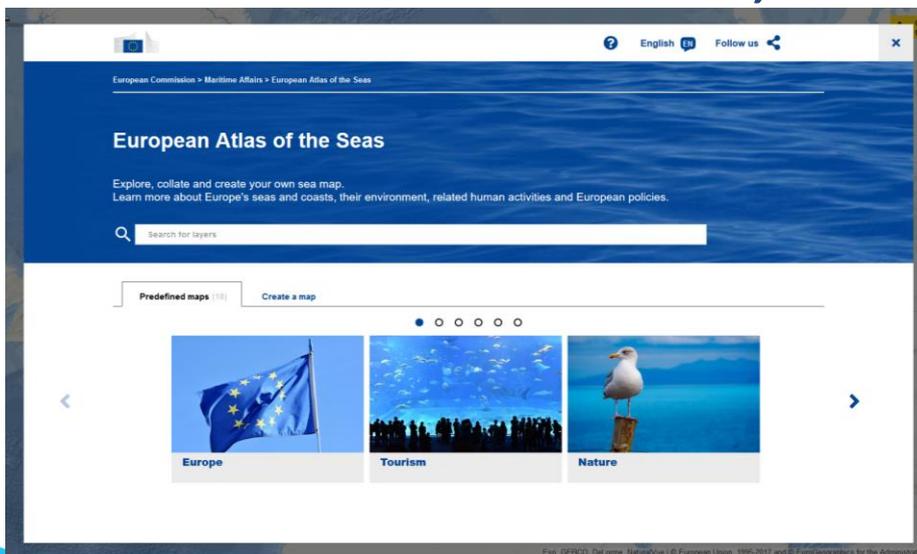
Avg Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec



III. EMODnet Phase III

The European Atlas of the Seas (EAS): A web mapping application for a more ocean literate society

- An educational Web mapping application published by EC/DG MARE;
- Attractive, easy to digest, interactive ocean and coastal maps;
- Communication tool for citizens, educators and marine professionals



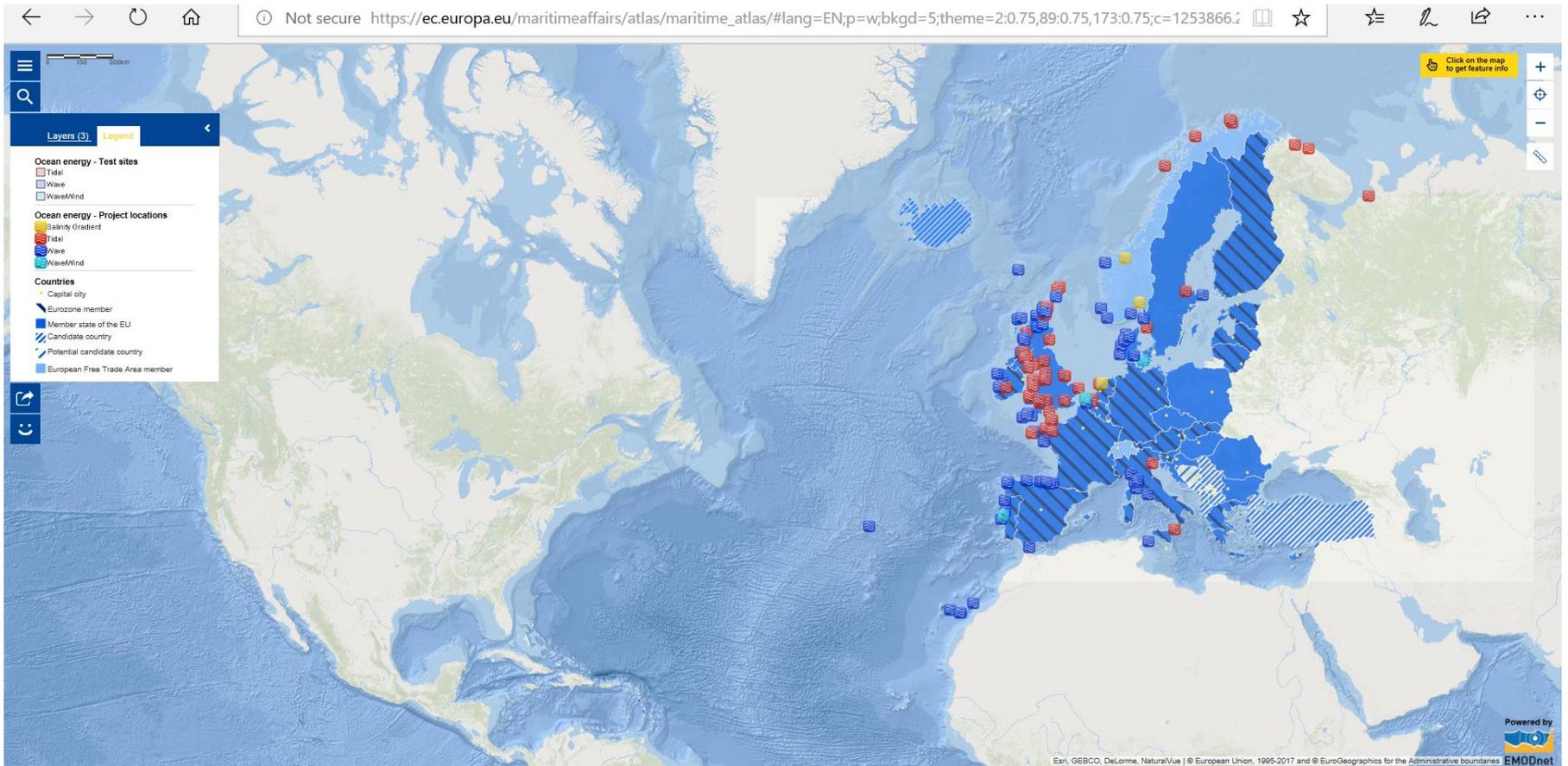


II. EMODnet Phase III: EAS

- EMODnet Secretariat management since October 2017
- Revamped June 2018
- 250 marine map layers, by theme
- 18 thematic pre-composed maps + a create / share/ export mode e.g. transport, energy
- 2500 to 5000 visitors/month
- 24 EU official languages *NEW in January 2019!*
- Open access data layers from many service providers: 50% (>100 map layers) by EMODnet
- Regular updates: EAS catalogue automatic updates through Web services provided by the data providers



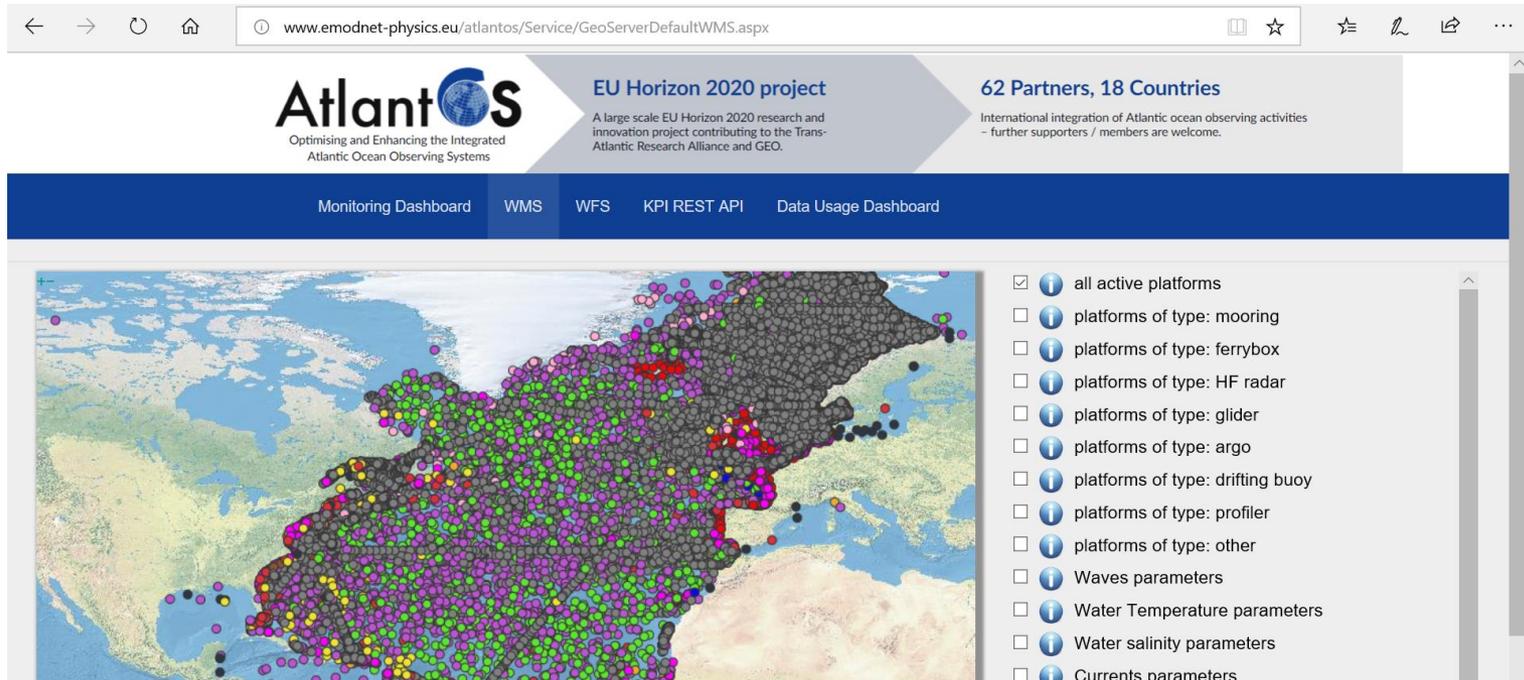
III. EMODnet Phase III: EAS Renewable Ocean energy



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

IV. Valorisation of Atlantic data + products atlas

EMODnet physics and the AtlantOS dashboard



The screenshot shows the AtlantOS dashboard interface. At the top, the AtlantOS logo is displayed with the tagline "Optimising and Enhancing the Integrated Atlantic Ocean Observing Systems". To the right, it states "EU Horizon 2020 project" and "62 Partners, 18 Countries". Below the logo, a navigation bar includes "Monitoring Dashboard", "WMS", "WFS", "KPI REST API", and "Data Usage Dashboard". The main content area features a map of the Atlantic Ocean with a dense distribution of colored dots representing observing platforms. A legend on the right side of the map lists the following items:

- all active platforms
- platforms of type: mooring
- platforms of type: ferrybox
- platforms of type: HF radar
- platforms of type: glider
- platforms of type: argo
- platforms of type: drifting buoy
- platforms of type: profiler
- platforms of type: other
- Waves parameters
- Water Temperature parameters
- Water salinity parameters
- Currents parameters

- View ocean observing platforms + key performance indicators (KPIs), including data use.
- Metadata gives link back to data originator and open source access e.g. EMODnet.

Developed for H2020 AtlantOS project by EMODnet physics, EuroGOOS, Copernicus Marine Service, JCOMM OPS.



IV. Valorisation of Atlantic data + products

For H2020 ATLAS: Central to the 4 ATLAS Objectives

- **Advance** our understanding of deep Atlantic marine ecosystems and populations
- **Improve** our capacity to monitor, model and predict shifts in deep-water ecosystems and populations
- **Transform** new data, tools and understanding into effective ocean governance
- **Scenario-test** and develop science-led, cost-effective adaptive management strategies that stimulate Blue Growth

EMODnet enables all 4 ATLAS objectives and enables:
- the access to, use of, and transformation of data and knowledge to wider stakeholders e.g. for conservation management, policy making, blue economy



IV. Valorisation of Atlantic data + products

H2020 ATLAS: Open access data and research outputs

Open access and long-term visibility to data:

- Open access to ATLAS data + data products via Pangaea + EMODnet (UniHB, BGS, Seascope Belgium; ALL)
- Scoping of data flow + methodology (UniHB; Seascope Belgium);

Online, open access ATLAS community tools and resources:

- H2020 ATLAS community page (Seascope Belgium, ALL);
- Embedded GIS platform (Seascope Belgium, BGS, UniHB)

Longer-term transfer of outputs for wider stakeholders:

- European Atlas of the Seas: EU tool for society (Seascope Belgium)
 - Industry: Data user (and provider): Link ATLAS with EMODnet for Business

IV. Valorisation of Atlantic data + products atlas

EMODnet Sea-basin Checkpoints: User perspective

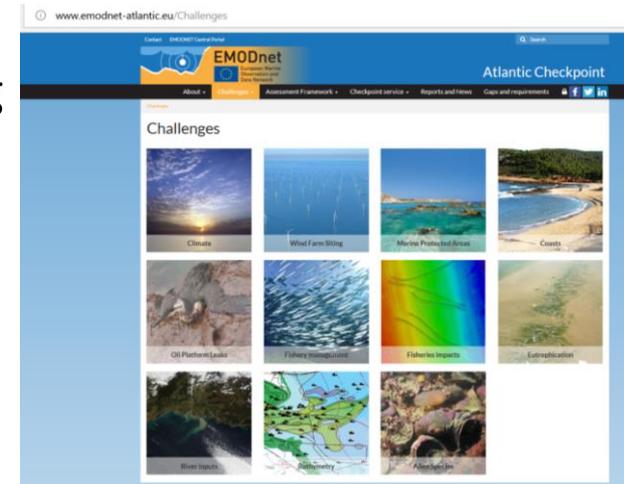
What? User perspective to stress-test data adequacy to address real-life situations and uses e.g. windfarm siting

Why? Get feedback from data users on needs and gaps; Develop EMODnet Checkpoint standard methodology.

What could ATLAS do? Assess case studies and propose new Challenge(s) specific to ATLAS objectives e.g. Marine Spatial Planning (MSP) needs, conservation management / wider for Atlantic Ocean;

Link to industry: ATLAS industry stakeholders; EMODnet for Business (Associated partners); EC Marine Knowledge Expert Group (MKEG).

Longer-term uptake of ATLAS recommendations by EMODnet, H2020 projects etc

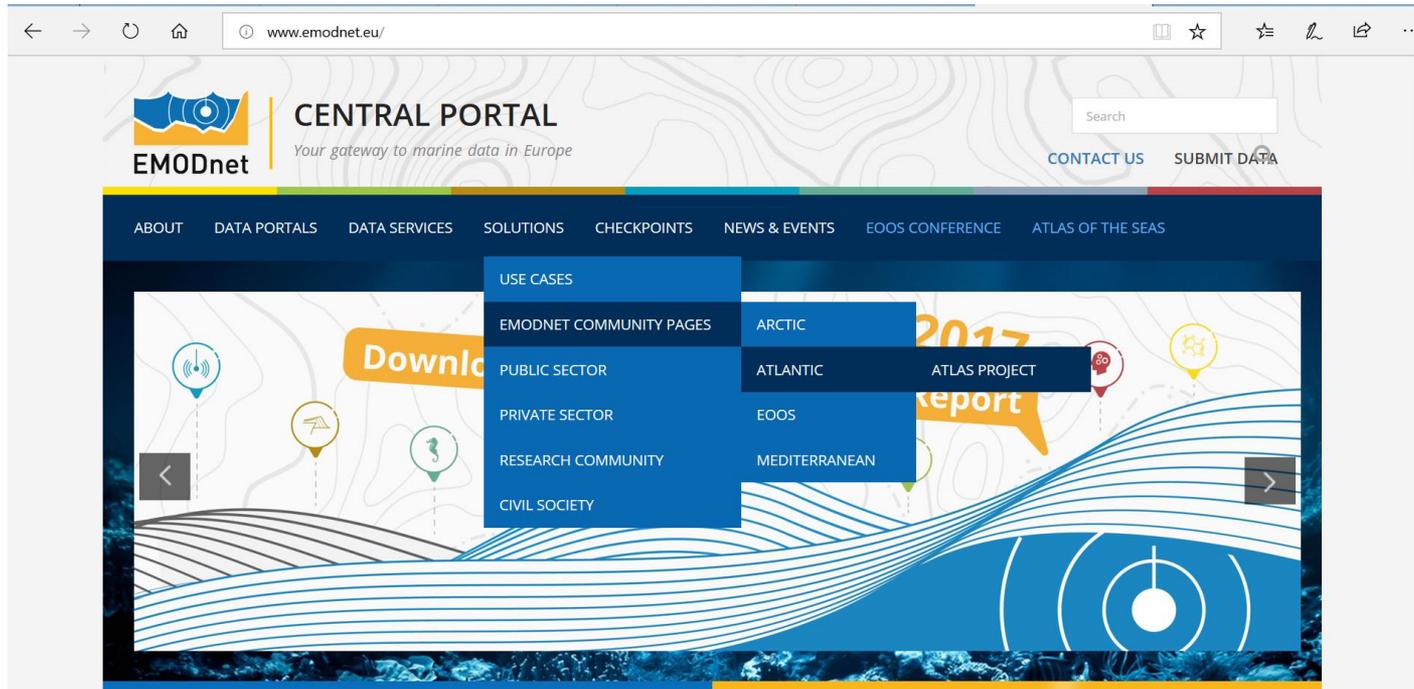


<http://www.emodnet.eu/atlantic>

<https://webgate.ec.europa.eu/maritimeforum/en/node/4204>

IV. Valorisation of Atlantic data + products

ATLAS online community page



Open access resource for EU ATLAS community and wider stakeholders to view and search ATLAS data layers, tailor make maps of interest (multiple layers/case study), view and link to other ATLAS outputs and open source service providers

IV. Valorisation of Atlantic data + products

ATLAS online community page



The screenshot shows the ATLAS online community page on the EMODnet website. The browser address bar displays www.emodnet.eu/atlas-project. The page header includes the EMODnet logo and the text "CENTRAL PORTAL Your gateway to marine data in Europe". A navigation menu contains links for ABOUT, DATA PORTALS, DATA SERVICES, SOLUTIONS, CHECKPOINTS, NEWS & EVENTS, and EODS. The breadcrumb trail reads: Home > Solutions > EMODnet Community Pages > Atlantic > ATLAS Community Page. The main content area is titled "ATLAS community page" and contains the following text:

 This EU ATLAS community page is being developed as a central platform for ATLAS partners, and the wider Atlantic stakeholders, to provide an overview of the data, products and other information resources (e.g. links to OpenAire for ATLAS research outputs). It will also include a direct link to a dedicated online GIS platform where ATLAS data layers can be found and visualised.

Ultimately, relevant ATLAS research data will be made available via EMODnet using the interoperability protocols specified by the different EMODnet thematic portals. This will also include links to the original data, available through open source data repositories such as Pangaea and EMODnet.

This platform is a contribution to the wider and longer-term aims of ATLAS to actively contribute to Open Research and Open Data through implementing innovative open science practices.

Read more about the EU ATLAS project at <https://www.eu-atlas.org/>

Coming soon! GIS platform with ATLAS data visualisation.



The thumbnail shows the ATLAS Project H2020 interface with a search bar and the text "Search for Data." and "Advanced Search".

- **Tool for wider Atlantic stakeholders:** Open access, long-term visibility for ATLAS outputs
- **Not another data repository!** Link to source data layers and open source data services
- **Information on ATLAS outputs** (data, data products, other)
- **Embedded GIS platform** to search + visualize ATLAS data (case study regions)

V. H2020 ATLAS GIS platform



Pascal Derycke:
EMODnet Technical Coordinator
EAS Coordinator



Your gateway to marine data in Europe

Atlas-horizon2020.eu – a geospatial data repository for ATLAS project

(Mallorca April 2019)

Pascal Derycke
pascal.derycke@emodnet.eu

EMODnet Secretariat



EMODnet



European Marine
Observation and
Data Network

How to improve collaboration and data-sharing?

ATLAS H2020 feeding into EMODnet

www.atlas-h2020.eu

Geospatial Content Management System





EMODnet



European Marine
Observation and
Data Network

What is GeoNode?

- ④ A popular approach to spatial data infrastructure focused around **users**. GeoNode is an open source platform that facilitates **collaborative** use of geospatial data and maps. Geonode lets you upload, manage, browse and search data.
- ④ GeoNode enables the creation, sharing and collaborative use of geospatial data.
- ④ Simple web-based application
 - Web Front-end
 - Web back-end with privacy controls to restrict access as needed



EMODnet



Other projects using Geonode...

 <http://worldmap.harvard.edu/>

WorldMap is being developed by the [Center for Geographic Analysis](#) at [Harvard University](#).

 <http://www.haitidata.org/>

HaitiData is a platform designed to disseminate, share and exploit GIS and cartographic data about Haiti.

 <http://geonode-rris.biopama.org/>

BIOPAMA: a data repository for biodiversity and protected areas

 <https://www.caribbeanmarineatlas.net/>

Caribbean Marine Atlas
repository to store and share data for Caribbean.



853 Layers



32 Maps



63 Documents

Indicators Management



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Data ▾

Maps

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ATLAS Project H2020

Changing environmental conditions and human activities have major impacts on the distribution and sustainability of living marine resources.





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Discover the available datasets.

LoVe Observatory



CASE STUDY 1



CASE STUDY 2



CASE STUDY 3



CASE STUDY 4



CASE STUDY 5



CASE STUDY 6



CASE STUDY 7



CASE STUDY 8



CASE STUDY 9



CASE STUDY 10



CASE STUDY 11



CASE STUDY 12

Featured Datasets

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Powered by [GeoNode version 2.6.3](#)
[Developers](#) | [About](#)

English



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The portal goals

- Collecting geospatial data from the Atlas H2020 project in one single gateway
- Makes data useful by sharing with working groups as EMODnet
- Use existing data to create maps
- Offer data download in a variety of formats
- Search Data and Metadata



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Explore layers

Home Data Maps About

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Upload Layers

Cart

Add resources through the "Add to cart" buttons.

Create a Map

Filters Clear

TEXT

Search by text

TYPE

Raster 3

Vector 12

CATEGORIES

OWNERS

DATE

REGIONS

EXTENT

Total: 15

1



OCEANS

Middle Bathyal

Classified Depth Zones, derived from SRTM30_PLUS by the University of the Azores.

Joana.Gafeira 2 Apr 2019 2 0 0

Create a Map



OCEANS

Upper Bathyal

Classified Depth Zones, derived from SRTM30_PLUS by the University of the Azores.

Joana.Gafeira 2 Apr 2019 0 0 0

Create a Map



OCEANS

Upper Slope

Classified Depth Zones, derived from SRTM30_PLUS by the University of the Azores.

Joana.Gafeira 2 Apr 2019 0 0 0

Create a Map



littoral_200m

No abstract provided

Joana.Gafeira 2 Apr 2019 0 0 0



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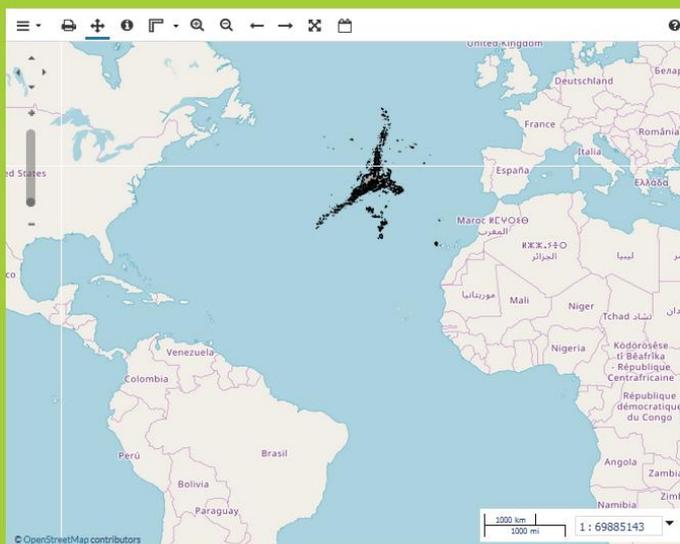


Data visualisation

Home Data Maps About

Search Sign in

Middle Bathyal



Info Attributes Share Ratings Comments

Title Middle Bathyal

Abstract Classified Depth Zones, derived from SRTM30_PLUS by the University of the Azores.

Publication Date April 2, 2019, 6:01 p.m.

Type Vector Data

Category Oceans

Owner Joana.Gafeira

More info -

- Download Layer
- Metadata Detail
- Download Metadata

Legend

- Gray Polygon with Black Outline

Maps using this layer

This layer is not currently used in any maps.

Create a map using this layer

Click the button below to generate a new map based on this layer.

Create a Map

About

Owner, Point of Contact, Metadata Author

Joana.Gafeira
BGS



EMODnet



Create maps

Data ▾ **Maps** ▾ **About** ▾

Search **webmaster** ▾

Map ▾ Print Identify Query Measure ▾ Edit ▾ Maps / This map is currently unsaved

LAYERS » **AVAILABLE LAYERS**

View available data from:
OpenStreetMap Layers ▾

Title	Id
+ OpenStreetMap	mapnik

+ Add layers Done © OpenStreetMap contributors 2000 km / 1000 mi | 1 : 139770286 ▾



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Offer data download in a variety of formats

The screenshot displays the EMODnet web application interface. A 'Download Layer' dialog box is open, showing a list of download formats under the 'Data' tab. The background shows a map of the Mediterranean region with a 'Gray Polygon with Black Outline' layer selected. The interface includes a search bar, a user profile 'webmaster', and several action buttons like 'Download Layer', 'Metadata Detail', 'Edit Layer', and 'Download Metadata'. The map shows labels for 'España', 'Portugal', 'Rabat', 'Alge', and 'Maroc'.



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www.atlas-h2020.eu Services

- Ⓜ Easily upload geospatial data
- Ⓜ Manage and publish Metadata
- Ⓜ Access control
- Ⓜ Interoperable OGC services WMS, WFS, WCS,... and metadata catalogue service (CSW endpoint)
- Ⓜ Social features



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Manage metadata

The screenshot displays the EMODnet web interface with a modal window titled "Edit Layer" overlaid on a map. The map shows the United Kingdom with labels for "Scotland", "United Kingdom", and "Edinburgh". The modal window has a light green background and a close button (X) in the top right corner. It contains four tabs: "Metadata", "Styles", "Thumbnail", and "Layer". The "Layer" tab is selected and active, showing two buttons: "Replace" and "Remove". The "Remove" button is highlighted in red. Below the tabs, there are several buttons for actions: "Edit" under Metadata, "Edit" and "Manage" under Styles, "Set" under Thumbnail, and "Replace" and "Remove" under Layer. A "Close" button is located at the bottom right of the modal. In the background, the web interface includes a search bar, a "webmaster" dropdown menu, and a list of actions for the layer: "Download Layer", "Metadata Detail", "Edit Layer", and "Download Metadata". A legend is visible at the bottom right of the map area.



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OGC services WMS, WFS, WCS,... and metadata catalogue service

Data ▾ Maps ▾ About ▾

Search



webmaster ▾

Information for Developers

Useful information for developers interested in GeoNode.

GeoNode is an open service built on open source software. We encourage you to build new applications using the components and resources it provides. This page is a starting point for developers interesting in taking full advantage of GeoNode. It also includes links to the project's source code so anyone can build and customize their own GeoNode.

GeoNode Software

All the code that runs GeoNode is open source. The code is available at <http://github.com/GeoNode/geonode/>. The issue tracker for the project is at <http://github.com/GeoNode/geonode/issues>.

GeoNode is built using several open source projects, each with its own community. If you are interested in contributing new features to the GeoNode, we encourage you to do so by contributing to one of the projects on which it is built:

- GeoExt - The JavaScript toolkit for rich web mapping applications
- GeoServer - Standards based server for geospatial information
- GeoWebCache - Cache engine for WMS Tiles
- OpenLayers - Pure JavaScript library powering the maps of GeoExt

GeoNode's Web Services

GeoNode's Web Services are available from the following URLs:

Dynamic tiles via WMS:	WMS 1.1.1
Vector data via WFS:	WFS 1.1.0
Raster data via WCS:	WCS 1.1.1
Metadata search via CSW:	CSW 2.0.2
Metadata search via OpenSearch:	OpenSearch 1.0
Metadata search via OAI-PMH:	OAI-PMH 2.0
Open Data:	data.json
Cached tiles via WMTS:	WMTS 1.0.0



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Social features

Data ▾ Maps ▾ About ▾

🔍 Search



webmaster ▾

Explore People

▾ SEARCH

Total: 4



Search by name 🔍



jan-bart.calewaert
No Organization Info

📍 0 📌 0 📄 0



webmaster
No Organization Info

📍 8 📌 2 📄 0



Joana Gafeira
BGS



Kate.Larkin
No Organization Info



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Geonode stack: all open source

Ⓜ CMS (Django, Python)

Ⓜ GIS Server (GeoServer – OGC standards)

Ⓜ DB (PostGIS)

Ⓜ OGC Catalogue service (Pycsw or GeoNetwork)

Ⓜ Mapping client (OpenLayers)



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Geospatial data requirements

ESRI Shapefile format, KML

Geotiffs

Projection information (recommended GCS WGS84)

Metadata (ISO TC211)



VI. Next steps

- **GIS platform: Spatial visualization of ATLAS data:**
Populate GIS platform (Geonode) with ATLAS data and data products. Focus: ATLAS case study areas (SSBE, BGS, UniHB, ALL ongoing) (Ongoing, full data by Autumn 2019)
- **ATLAS community page on EMODnet:**
 - Embed GIS platform (SSBE, BGS, UniHB, ongoing);
 - Further develop content of ATLAS community page: ATLAS outputs, open access services? (SSBE, ALL; April 2019 -)
- **Industry interaction and feedback (WP6)**
- **Data ingestion into EMODnet** (UniHB, SSBE, ALL; ongoing)
- **Longer-term continuation and development:**
 - ATLAS map layers into EAS?
 - Recommendations for future Checkpoint Challenge(s)
 - Input to i-Atlantic and link to TRI-ATLAS (BG-8 H2020)

Thank You



Presenter details

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