

EMODnet Stakeholder Conference & Sea-basin Workshops 14-15 February 2017

Atlantic Workshop

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On behalf of the Project Partnership



Work Breakdown

Oct. 2015

- ⊙ **Literature Survey: provided an overview of data availability and appropriateness across Europe**
- ⊙ **Challenge experts to specify their products: input data ‘wish list’ (550 datasets)**

- ⊙ **Challenge experts to collate input datasets**
- ⊙ **Data Adequacy Report 1: feedback on data availability**

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- ⊙ **Challenge experts to generate their products**
 - ⊙ **Data Adequacy Report 2: feedback on appropriateness**
 - ⊙ **Final Report: to formulate ways of improvement and recommendations on priorities for future observations, data assembly and data dissemination**

We are here

Oct. 2018

Attendees

Val Cummins	Ireland	UCC
Patrick Gorringe	Belgium	EUROGOOS
Vicent Fernandez	Spain	EUROGOOS
Kate Collingridge	UK	CEFAS
Annja Detante	Belgium	EU Comission
Bernhard Freiss	Belgium	EU Comission
Claudia Junge	Germany	Aquatt
Francisco Souza Dias	Belgium	Flanders Marine Institute
Gouvain Wiemar	Germany	Marum
Han Tiebout	Holland	GustoMSC
Sofia Cordiero	Portugal	Foundation of science and Technology
Adriano Bordalo	Portugal	UNI Porto
Lesley Rickards	UK	BOD
Eric Moussat	France	IFREMER
Fergal McGrath	Ireland	MI
Anouar Hamdi	France	IFREMER (F/L)
Victor Henriques	Portugal	IPMA
Agostino INGUSCIO		EU

Material ...

Our findings

We need your
help for filling
this in!!

⊙ Topics for discussion

- Bathymetry
- Geology
- Physics
- Chemistry
- Biology
- Habitats
- Human Activities
- Other

HUMAN ACTIVITIES		
Issue	Suggestion	Type of issue
1 Fishing: To date the most comprehensive and recent datasets available on bottom fishing effort and intensity are a series of maps generated in 2016 by the ICES Working Group on Spatial Fisheries Data (WGSFD) who assembled VMS data from vessels, coupled with log book data obtained via a data call to 21 countries of the NE Atlantic and Baltic Sea (four of them did not submit data and in another case data was worthless). These maps only cover the OSPAR area, their time coverage is from 2009 onwards and their resolution 0.05 degrees (~5 km). If the purpose is to assess fisheries impact on seabed habitats, this resolution is significantly lower than that of the broadscale habitat maps provided by the EMODnet Seabed Habitat lot (250m).		Appropriateness
2 Fishing: At the moment, collected data (catches, efforts, landings, VMS, logbook data) need to be requested from the Member States via data calls. This can become extremely cumbersome for Member States and also creates data bottlenecks		Availability
3 Fishing: The literature survey stressed the difficulty to collect data on recreational fisheries and artisanal/small scale fleet		Availability
4 For the assessment of impact of an oil spill on tourist beaches the dataset used as a proxy was the EMODnet dataset 'Quality of bathing water' which might not be comprehensive.		Availability
5 Aquaculture sites are often found as point locations rather than polygons boundaries. Data on shellfish aquaculture currently available on the EMODnet Human activity portal are clearly not satisfactory, as they are still mostly in point form from many sources. GIS compliant cadastre data were found for Ireland and France but are still missing elsewhere. More efforts are needed from the community to provide an effective representation of aquaculture suitable to challenges.		Availability
6 Maritime traffic data (AIS vessel tracking), deemed useful for challenges such as "Oil leak" (impact of spill on traffic), "Windfarm siting" or MPAs (competition for space, traffic statistics) or "Invasive species" (ballast water as vector of species transport), are not available for download		Appropriateness
7 Most of the data products currently available on human maritime activities seem regionally clustered or are scarce		Availability
8 Wrecks layer is available on EMODnet bathymetry portal. EMODnet Human Activities also makes a wreck layer available, but it has very limited spatial coverage. Yet should a user need data on wrecks he may intuitively look it up on EMODnet Human Activities portal rather than on EMODnet Bathymetry		Availability
9		
10		
11		

Physics

Issue	Type of issue	Need for better...	Suggestion
sea surface currents observations scale and coverage	Appropriateness	observation	More real-time data required. Increase HF radar presence, especially in relation to strategically important areas/pathways (Oil slick/Emergencies).
Hydrodynamics models resolution	Appropriateness	service	Provision of higher resolution gridded model (500m). This is technically feasible
Spatially distributed information on the uncertainty of predicted values	Appropriateness	service	Recommendation for provision of associated confidence assessment
Sea level/land motion observation integration	Availability	observation	Computing absolute sea level requires integration of land vertical motion. A broad programme of GPS correction at each tide gauge
Sea level model spatial resolution	Appropriateness	observation	EU wide initiative to deliver improved sea level models, either through re-analysis or using satellite info and other sources. High temporal resolution is required.
Wind vertical distribution datasets	Availability	observation	EU wide initiative to deliver improved wind vertical models. Interaction with private / public intereste. Upward looking LiDAR systems to deliver wind profile. National meteorological services

◎ Key recommendations

- **HF radar presence to be increased** to improve sea surface currents real-time observation, crucial data for Marine safety (search and rescue, oil spill), Marine resource (Renewable marine energy), Environment (water quality monitoring, pollution control), weather forecast and ocean 3D modeling
- **500m 3D modeled data to be produced** everywhere for wave, currents, temperature and salinity
- **A broad programme of GPS correction at each tide gauge** to be undertaken to provide information on vertical land motion

Human Activities

Issue	Type of issue	Need for better...	Suggestion
AIS availability	Availability	service	Delivery of free access to AIS data and highest possible resolution of marine traffic information. ESA Sentinels
Fishing data availability	Availability	service	Centralisation and provision of relevant interpreted datasets. Possible coding of fisheries data for areas across region - data coded but still interrogable in models.
VMS availability	Appropriateness	service	Centralisation and provision of relevant interpreted datasets
Tourist beaches proxy data	Availability	service	Development of Human activities layers. Parking Lots / Hotel Beds/Leisure Activities. Via crowd sourcing (Quality Coast mechanism)
Aquaculture sites spatial representation	Availability	service	Standardised specification for delivery of datasets to the existing infrastructure
information on MPAs management consistency	Availability	Service	Development of a web platform to centralise this information. Harmonisation of delivery specification
Small scale fisheries data	Availability	observation	Development of artisanal fisheries layers. Proxy layers (vessel registrations/ Infrastructure/licencing/Local knowledge)

Key recommendations

- To develop services to deliver **free (or at least at much lower cost) access of AIS data**, key input for Oil leak (impact of spill on traffic), Windfarm siting or MPAs (competition for space, traffic statistics), fisheries impact or Invasive species
- Fishing: A service that interrogates the VMS raw data and outputs aggregated datasets across the basin would be beneficial
- For some variables (eg Aquaculture sites) a **working group to define and standardise what information should be captured** in datasets and provide guidance to data originators

Biology

Issue	Type of issue	Need for better...	Suggestion
Alien Species data consistency	Availability	service	Development of standards Development of NIS Pathways Resource (Biogeographic basis).
Alien Species data collection	Appropriateness	observation	More data Acquisition is required Definition of protocols for acquisition of data and elimination of bias
Alien Species data availability	Availability	service	Centralisation in EMODNET phase 3 Biology
Species mobility observation	Availability	observation and/or service	Standardisation of Tags/Genetic datasets. Coordination of monitoring datasets (Tags/Genetics). Increase scope of existing tagging initiatives.
Fisheries discards and bycatch data availability	Availability	observation and service	Augment existing EMODNET Biology

⊙ Key recommendations

- Alien Species: **urgent need for data standardisation and protocols** for data collection
- Species mobility/behaviour (migratory corridors, staging, feeding, nesting, breeding areas, larval dispersal) : **standardisation and coordination** of monitoring Tags/Genetics datasets

Chemistry

Issue	Type of issue	Need for better...	Suggestion
Nitrate and Phosphate data availability	Availability	service	Harmonisation of metadata protocols for all contaminants in order for EMODNET to aggregate the data
EMODnet chemistry data access services	Availability	service	Report Directly to Data Providers
OSPAR ODIMS data access service	Availability	service	Report Directly to Data Providers

⦿ Key recommendations

- Metadata standards should be defined for contaminants so that they can be integrated in EMODnet Chemistry

Bathymetry

Issue	Type of issue	Need for better...	Suggestion
Bathymetry 250m DTM product accuracy	Appropriateness	observation	Production of a Higher resolution product will be carried out in EMODNET phase 3
Spatial coverage in western Atlantic	Appropriateness	service	Development of an integrated service and of a DTM as that EMODnet
DTM resolution	Appropriateness	observation and service	Data Acquisition Programme, in prioritised areas - Coastal/SOLAS/Blue Growth/MPAs
Survey datasets availability 88% obtained by negotiation of which 57% are charged	Availability	service	Clarification and standardisation of providers data release policy
Metadata completeness	Availability	service	Delivery of timestamping as part of metadata

Key recommendations

- **Data acquisition programmes** should be undertaken in priority areas to be defined by needs (Coastal/SOLAS/Blue Growth/MPAs)
- **An effort should be made** by some data originators **to make available for free survey datasets funded by public money**
- Timestamping of soundings **MUST** be delivered

Habitat

Issue	Type of issue	Need for better...	Suggestion
availability of data on Spatial distribution of carbon sinks habitat	Availability	observation and service	Data Acquisition across carbon sink habitats
Deep sea habitat observations	Availability	observation	Data Acquisition across deepwater habitats
Catalog of habitat sample points	Availability	service	EMODNET Seabed Habitats Phase 3 will tackle this
Finescale habitat maps coverage	Appropriateness	observation	Prioritised Data Acquisition

◎ Key recommendations

- More data acquisition should be carried out across carbon sink (seagrass, mangrove, kelps, coral reef spatial) and deepwater habitats
- Spatial distribution modeling may be an alternative to costly extensive survey

Geology

Issue	Type of issue	Need for better...	Suggestion
EMODnet seabed substrate map distribution restriction	Availability	service	Request Data Provider to make data available in EMODNET Phase 3
seabed substrate data resolution in shallow waters	Appropriateness	observation	Data acquisition subject to prioritised drivers
seabed substrate data knowledge in deep waters	Appropriateness	observation	Data acquisition subject to prioritised drivers
Unprocessed datasets	Availability		Rescue Project for historical sediment sample datasets

◎ Key recommendations

- **Data acquisition should be undertaken in areas to be defined by needs (Coastal/SOLAS/Blue Growth/MPAs)**

Top recommendations

- ⦿ **HF radar presence should be increased**
- ⦿ **A GPS correction for all existing operational Tide Gauge platform in Europe**
- ⦿ **A free AIS service should be developed**
- ⦿ **In some fields need for standardisation prior to integration in data platforms**
 - Alien species
 - Mobility/behaviour
 - Contaminants
 - Human activities layers (eg aquaculture)
 - ...
- ⦿ **A little more effort has to be done for full availability for free of existing public data!**



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Observation and
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Thank you !

