



# BIOLOGY

*Dive into data on Europe's marine life*

## Supporting the essential - Recommendations for the development of accessible and interoperable marine biological data products

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The European Marine Observation and Data Network (EMODnet) is financed by the European Union under Regulation (EU) No 508/2014 of the European Parliament and of the Council of 15 May 2014 on the European Maritime and Fisheries Fund.





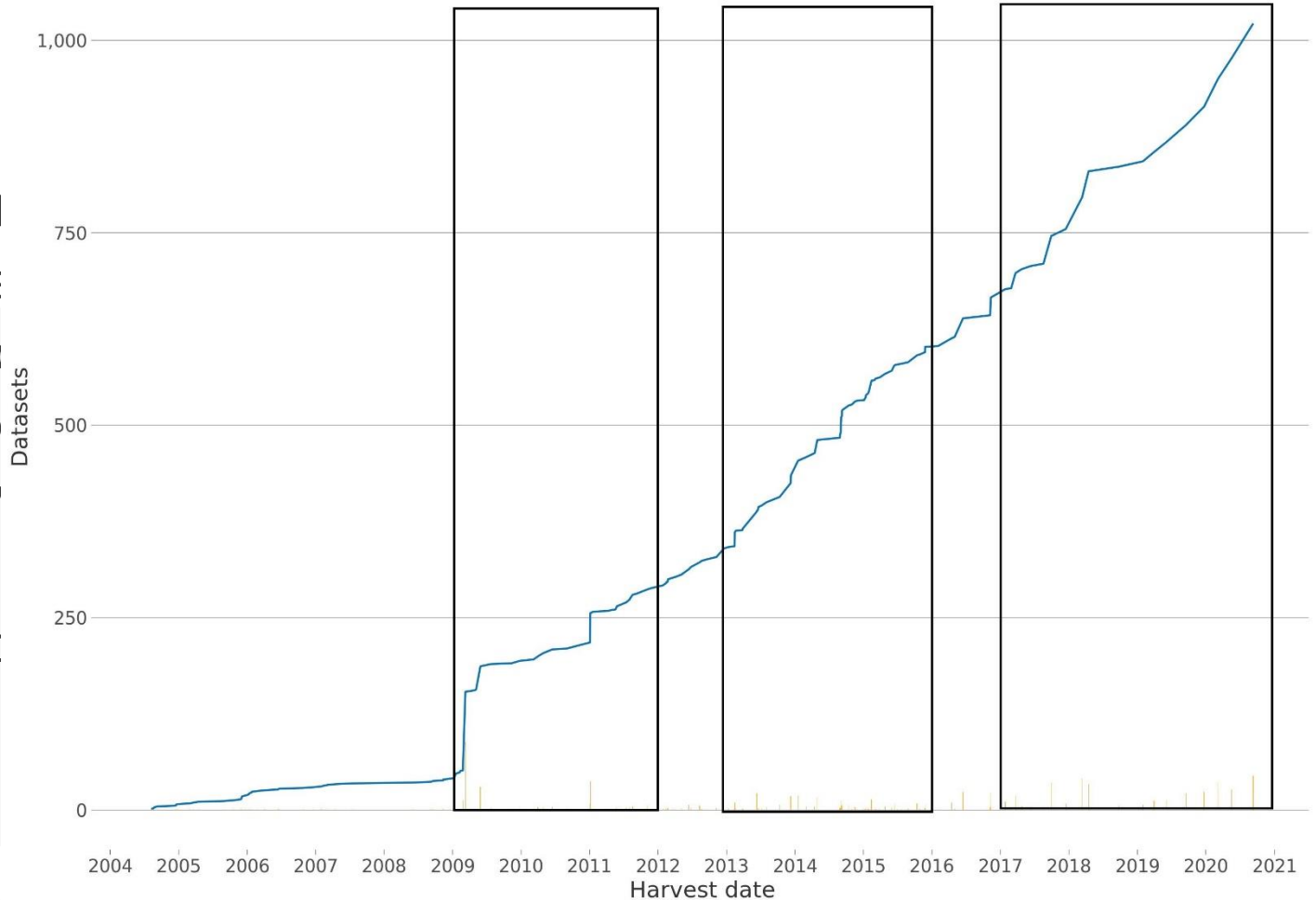
# EMODnet



European Marine  
Observation and  
Data Network

## EMODnet Biology

- 23 Organisations
- 1462 metadata
- 1056 online collections
- >25 M occurrences
- 24 regionally
- Dedicated accounts

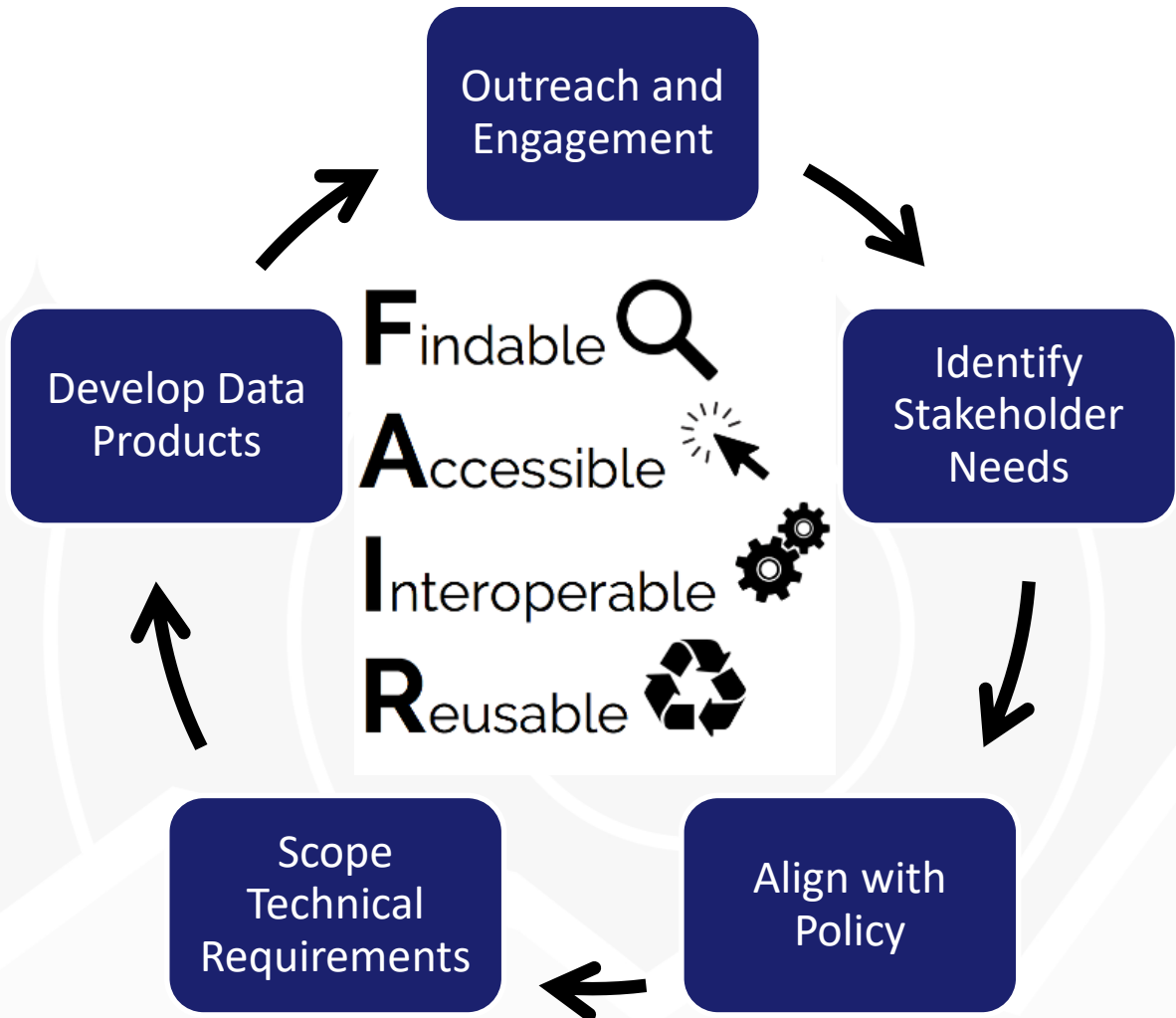




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# Inclusivity & Openness



**GitHub**





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# Continual engagement



How the customer explained it.



How the Project Manager Understood it.



How the Engineer Designed it.



How the Technician Built it.



How the Customer really wanted it.





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# But what is a Data Product?

Level	Definition
<b>DATA</b>	
L0	Raw data. Unprocessed instrument data at full resolution, including synchronisation methods (e.g. elimination of CTD up-down duplicates) and excluding communication artefacts
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)
<b>DATA PRODUCT</b>	
L5	Model or analysis output that uses data of Level 2 and/or 3 as input. Data products of this level represent the distribution of a single parameter derived from multiple measurements. Data are aggregated and undergo some level of geo-processing and spatial or temporal interpolation to cover data gaps and/or solve data discrepancies.  L5A. One-dimensional distribution of a specific parameter, without variations on the temporal or depth dimensions. L5B. Two-dimensional distribution of a specific parameter, with variations on the spatial or temporal/depth dimensions. L5C. Three-dimensional distribution of a specific parameter.
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.

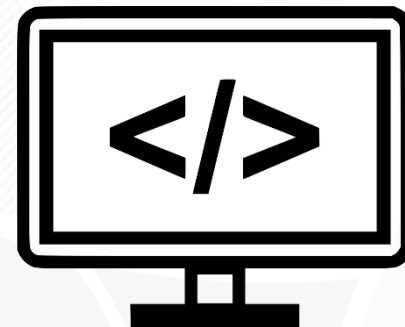




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# Stakeholder engagement and validation



15/03/2021





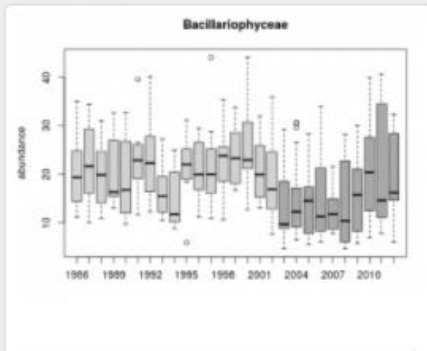
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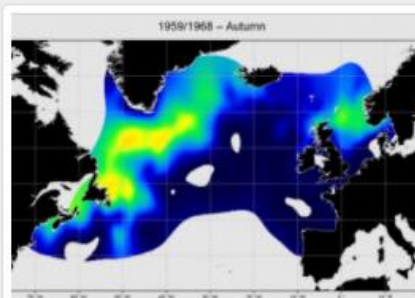
Search for Data Products



Phytoplankton community analysis  
in the Northern Adriatic

Source: EMODnet Biology, OGS & Deltares

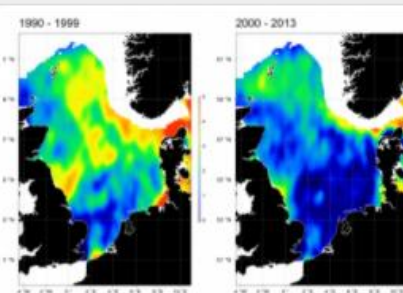
Visualize



Gridded abundance maps of most  
common Atlantic Copepod species

Source: EMODnet Biology, VLIZ, Ulg And MBA

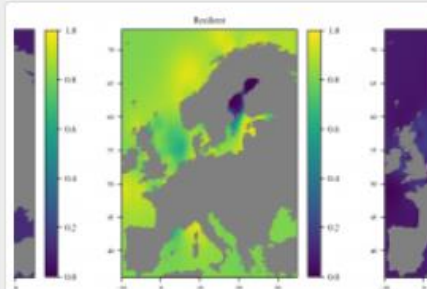
Visualize



Trends in abundance of fish  
species in the North Sea

Source: EMODnet Biology, ICES

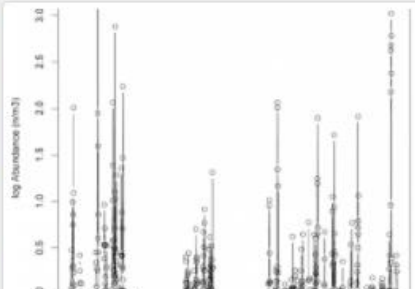
Visualize



Distribution of macrobenthos living  
modes in European seas

Source: EMODnet Biology

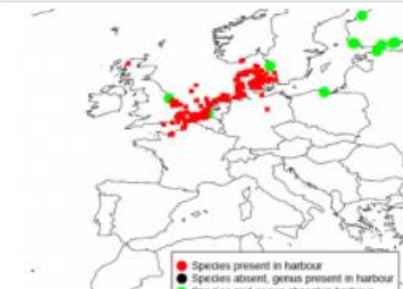
Visualize



Long term zooplankton time series  
analysis from the West Med Sea

Source: CNRS, Deltares

Visualize



Invasive marine species occurring  
in European marine harbours

Source: EMODnet Biology

Visualize





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ELSEVIER

# “Read all about it”

<https://doi.org/10.1016/j.marpol.2020.103958>

Marine Policy

Volume 117, July 2020, 103958



## Supporting the essential - Recommending the development of accessible and interoperable marine biological data products

D. Lear <sup>a</sup>✉, P. Herman <sup>b</sup>, G. Van Hoey <sup>c</sup>, L. Schepers <sup>d</sup>, N. Tonné <sup>e</sup>, M. Lipizer <sup>f</sup>, F.E. <sup>g</sup>, W.D. Kissling <sup>j</sup>, N. Holdsworth <sup>j</sup>, M. Edwards <sup>a</sup>, E. Pecceu <sup>c</sup>, H. Nygård <sup>k</sup>, G. Canonic Graham <sup>a</sup>, K. Deneudt <sup>d</sup>, S. Claus <sup>d</sup>, P. Oset <sup>d</sup>

 **DOSI** @DeepStewardship

DOSI #SciPol Paper of the Week: @DanLear leads an international effort to identify stakeholder-led approaches in the development of biological data products to support effective conservation, management and policy development. Read it @sciencedirect [buff.ly/3c31PGk](https://buff.ly/3c31PGk)

**DOSI**

DEEP-OCEAN STEWARDSHIP INITIATIVE

**#SciPol Paper of the Week**



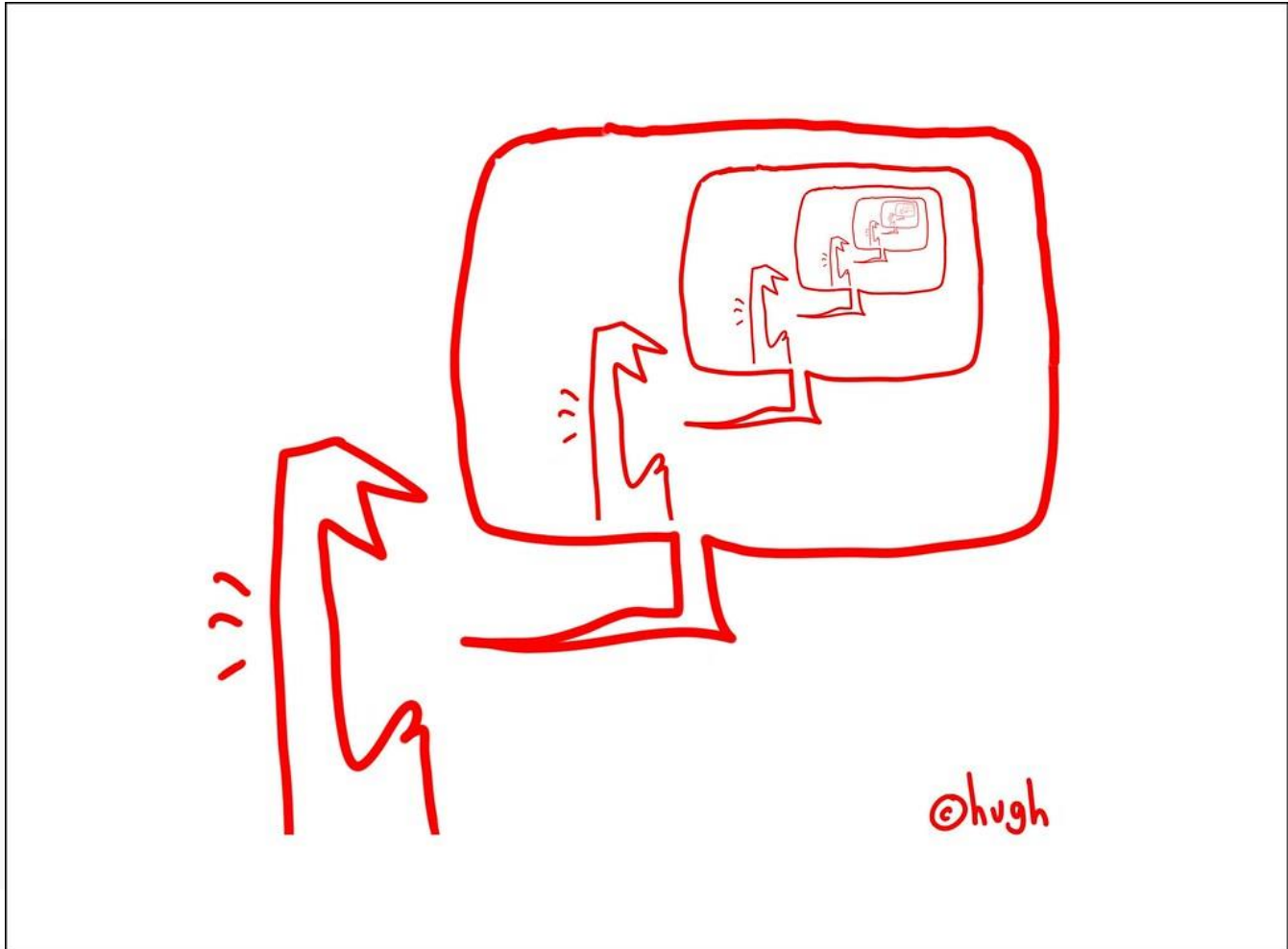




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# Escaping the echo chamber



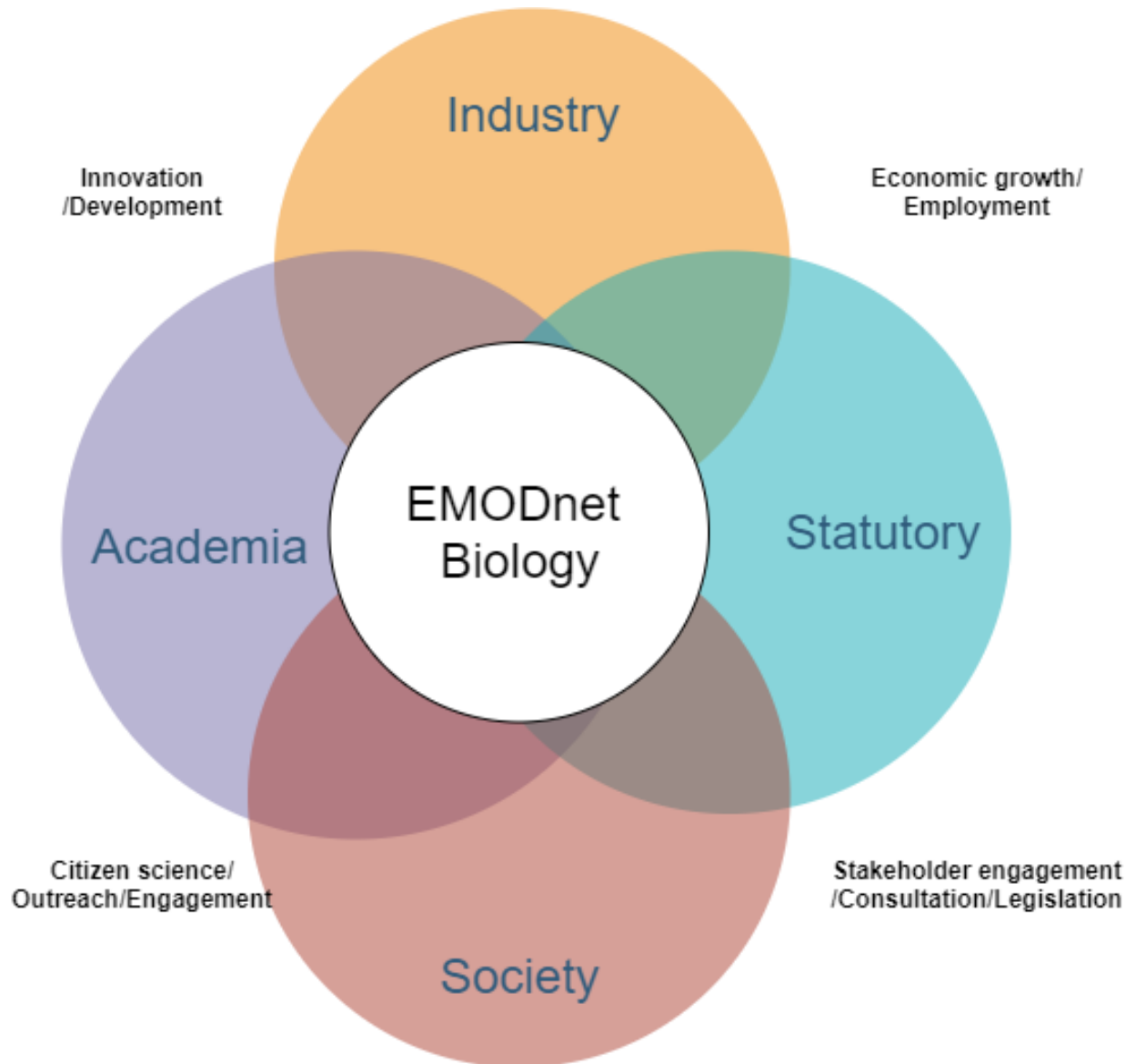


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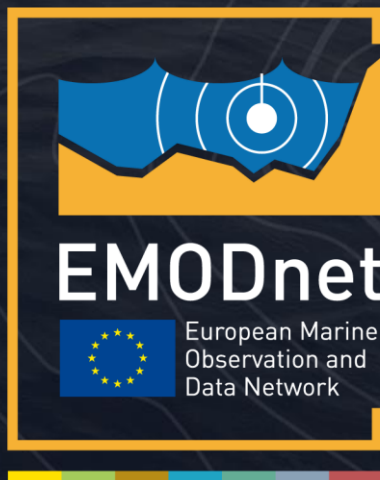
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## What Next?



15/03/2021





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[www.emodnet-biology.eu](http://www.emodnet-biology.eu)

*Your gateway to marine data in Europe*

