# EMODnet essential data needs and gaps

## A comparative review of the Atlantic, Black Sea and Medsea Checkpoints

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http://www.emodnet.eu/checkpoints

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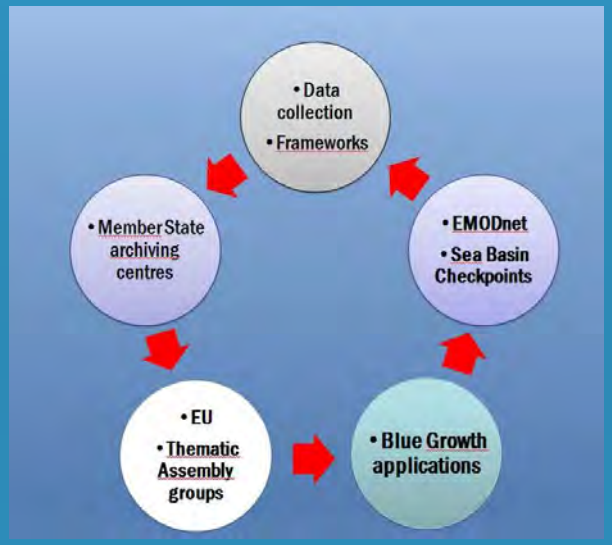
ifremer

EMODnet
European Marine Observation and Data Network

# Checkpoints Rationale




EMODnet Sea Basin checkpoint:
a quality management approach
to improve the adequacy of
existing monitoring systems
for a sustainable Blue Growth

- To check the adequacy of the data landscape in each EU marine basin by way of challenges whose remit is to specify thematic products and associated data needs
- To seek and download data sets
- To carry out assessment and produce data adequacy assessment
- To formulate recommendations on priorities for future observations, data assembly and data dissemination

# General framework

- Design by DG/MARE of “Challenge areas” meant to fully cover the broad scope of marine knowledge

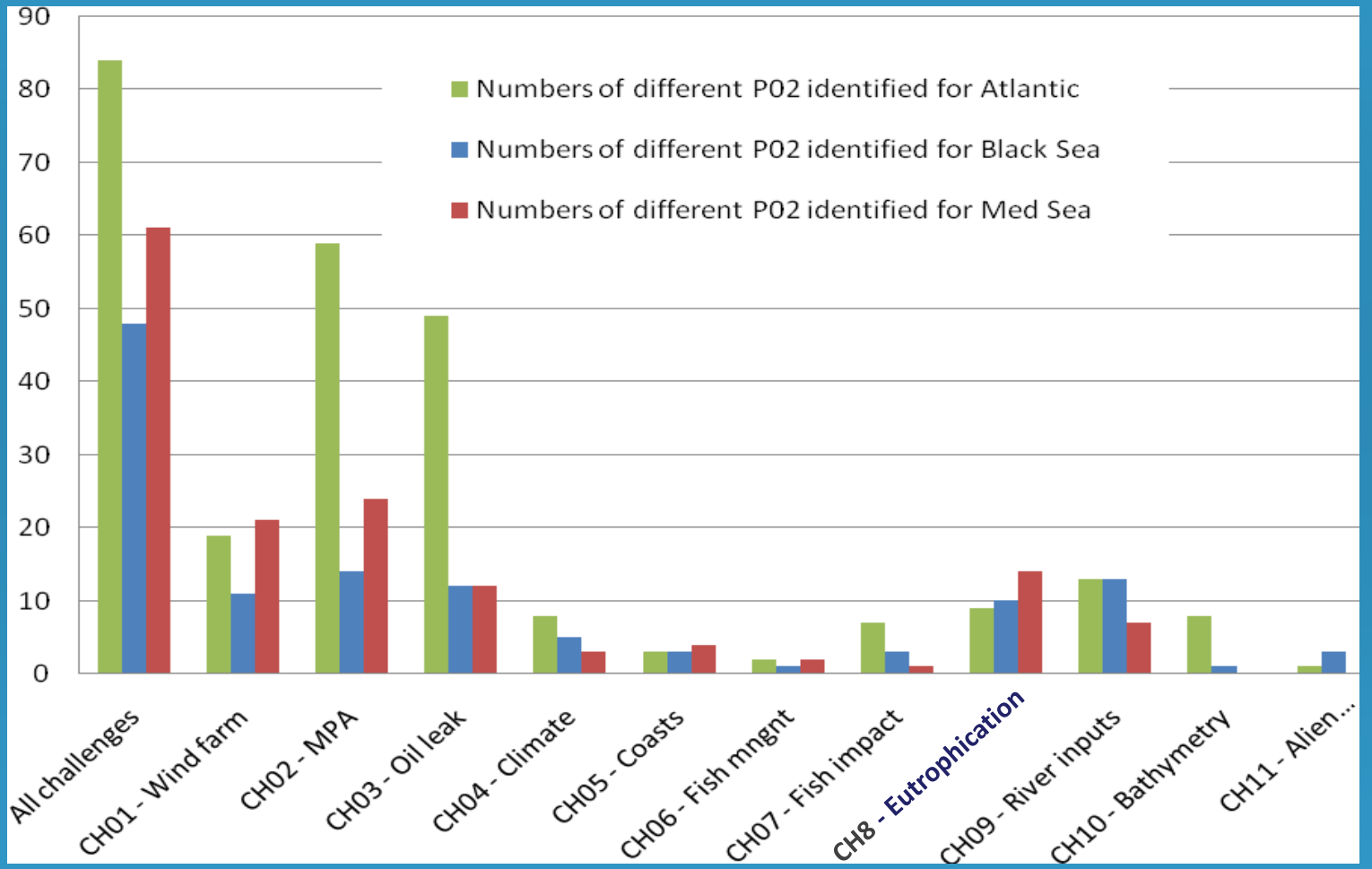
  - Offshore windfarm siting
  - Marine Protected Areas
  - Oil Platform leak
  - Climate
  - Coasts
  - Fisheries Management
  - Fisheries Impact
  - Eutrophication
  - River Input
  - Bathymetry
  - Alien Species

- Based on ISO standards for geographic information,
- Use of SeaDataNet parameter discovery vocabulary

# Methods

- A literature survey (22 case studies) which helped identify characteristics and most reported quality criteria
- Identification of “data sets” or “data set series” needed and metadata capture in the GIS data base Sextant (1270 records for Atl.+ Med.+ Black Sea)
- Assessment of data quality in two steps (i) the HOW (availability), (ii) the WHAT (appropriateness)
- Production of adequacy indicators (DAR)

# Survey of discovery parameters
## P02



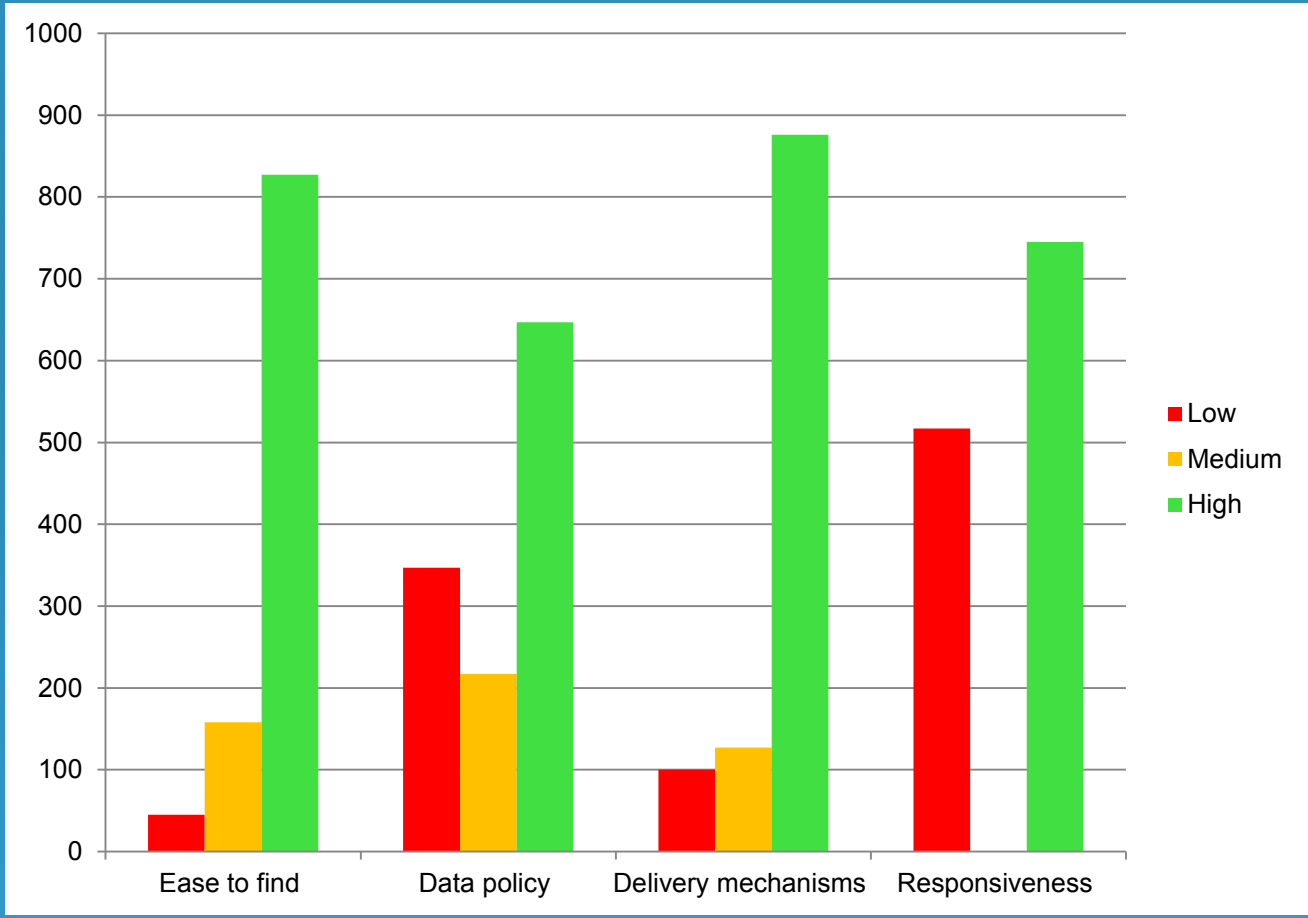
# Assessment of availability

Preliminary choice of:

- 4 key availability criteria: i) easy to find, ii) data policy, iii) delivery mechanisms, (iv) responsiveness
- 10 relevant characteristics (either P02 or P03)

| Matrix | P02 | Matrix | P02 |
|---|---|---|---|
| **Human activities** | Fish and shell fish catch statistics | **Fresh/Marine waters (chemistry)** | Nitrate concentration |
| | Administrative units | | Nitrite concentration |
| | Transport activity | | Phosphate concentration |
| **Biota** | Habitat extent | **Physics** | Currents |
| | Birds counts | | Temperature |
| | Cetacean behaviour | | Sea Level |

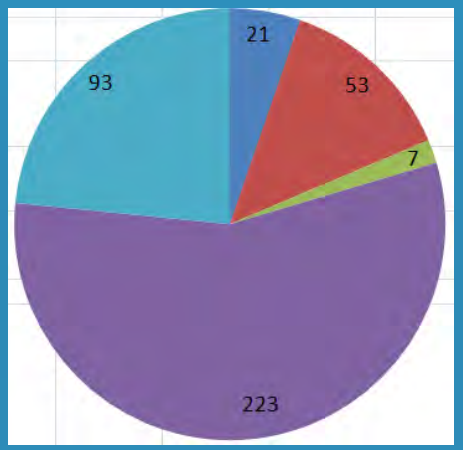
# Overall availability
## (3 basins)



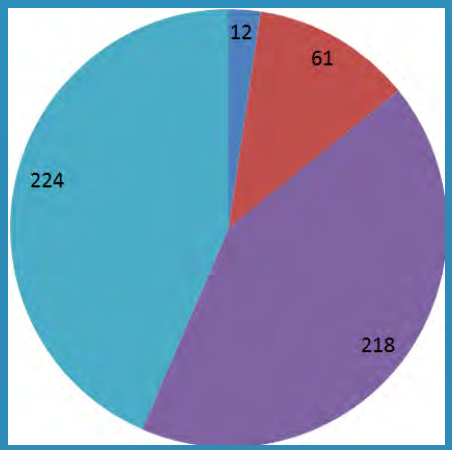
# Inter-basin comparison (1)

## Availability criterion: Ease to find

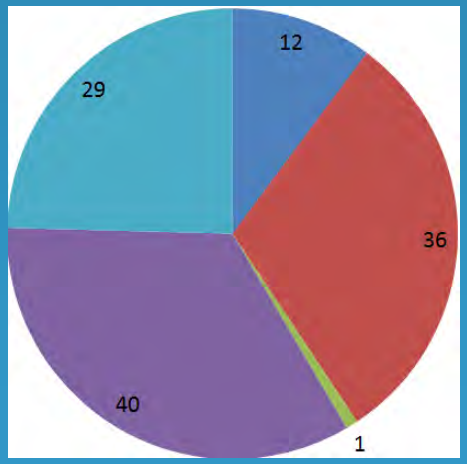
**Black Sea**




**Atlantic**




**Mediterranean**

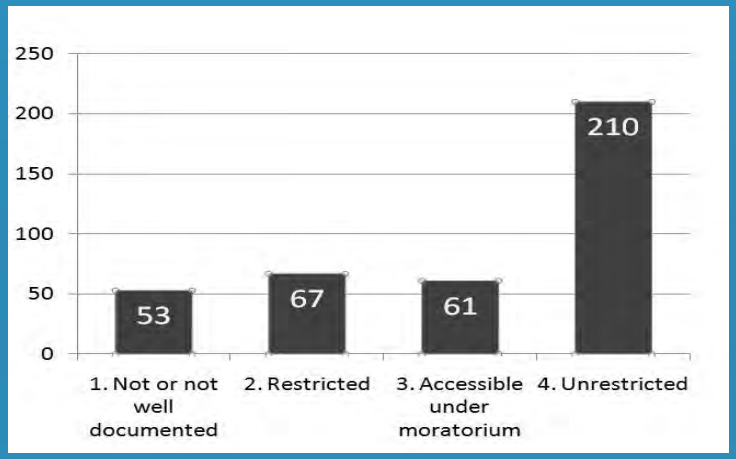


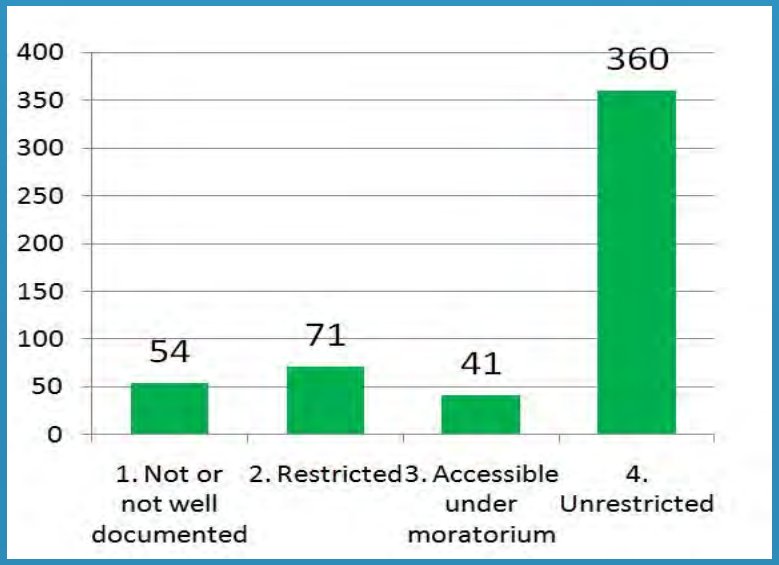

- 1. Cited in peer reviewed paper or grey literature but no info on how to access
- 2. Information retrieved upon specific request to the data source
- 3. Use of social network, community of practices sharing information, portals of organization where no search is organized
- 4. Use of open search engines, searching by name either the data provider or the characteristics
- 5. Search via reference catalogue (e.g. MyOcean, GEOSS Geoportal)

# Inter-basin comparison (2)

## Availability criterion: Data policy

**Black Sea**



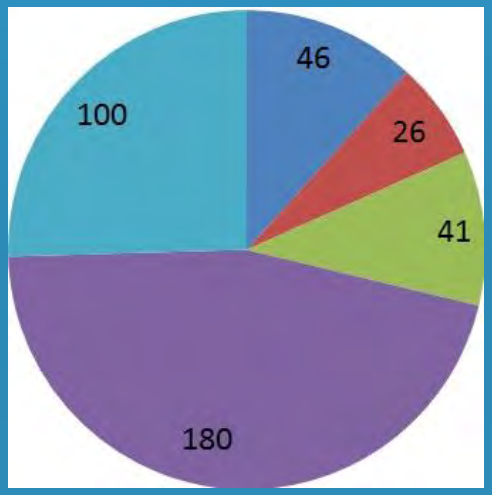

**Atlantic**

**Mediterranean**

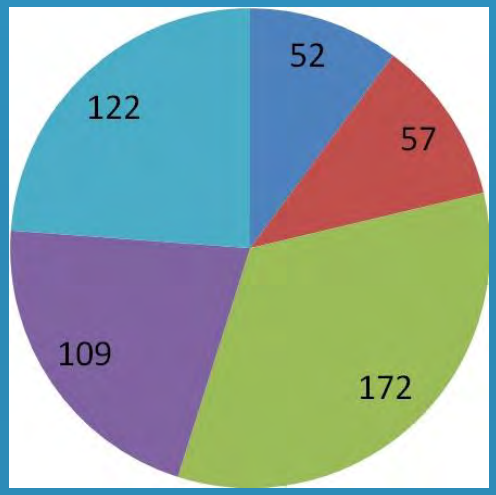
# Inter-basin comparison (3)

## Availability criterion: Delivery mechanisms

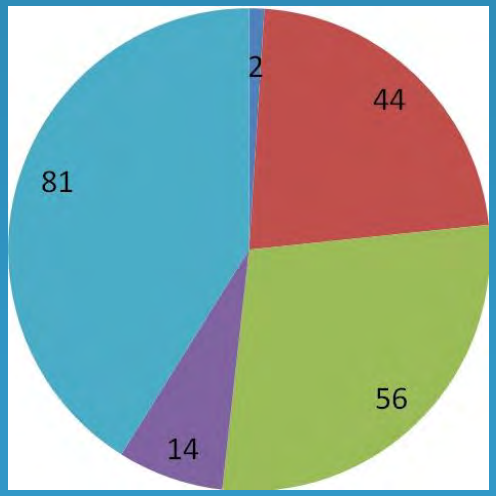
**Black Sea**




**Atlantic**



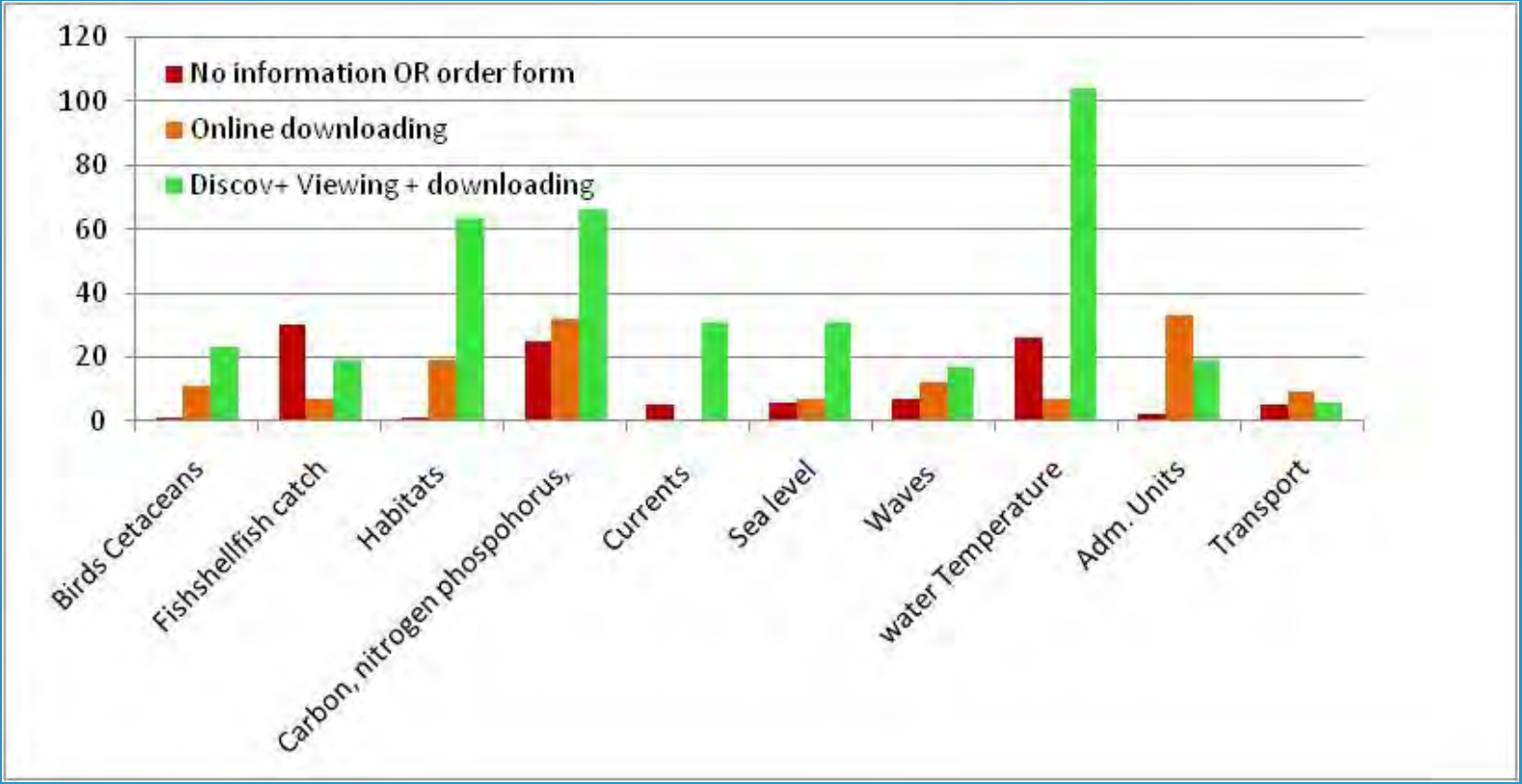

**Mediterranean**




1. No information was found on data delivery mechanisms
2. Manual process: Order form/invoice is requested
3. Online downloading services
4. Online discovery and downloading services
5. Online discovery + downloading + viewing services (Advanced services)

# Delivery mechanisms

## For a selection of P02 or P03s



# Some lessons

- Challenges are handled in a rather scientific way, whereas a double expertise - data management – would be needed)
  - “Easy to find” may not always score high, however a catalogue is available but is not visible and “Delivery mechanisms” still scores high
  - High score of “Unrestricted “ data policy results from the illusion of successful download
  - Cultural and vocabulary issues (e.g. moratorium, discovery, etc)
- The bottleneck is not so much with delivery services but rather with routing people to data sources (internet visibility, master directories...)
- Additional issues are the diversity in types and ergonomies of portals (e.g. in Emodnet) where users may get confused

# Preliminary conclusions

- The strong point is that the assessment is made by users
- Our assessment is measurable and systematic, not only narrative
- The 3 checkpoints use the same GIS data base, which enables fast and comparable analysis
- Overall availability is quite good but we need to reduce uncertainty by making more data validation as well as detailed analysis per characteristic

# Next steps

- Data appropriateness is the next step using ISO data quality standard for GI for the production of indicators:
  - Per challenge
  - Per characteristic across challenges

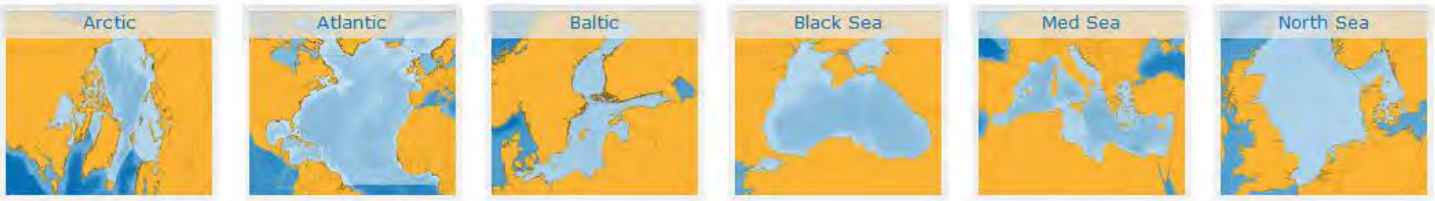
# Dzien Kuye Barzo



## Sea Basin Checkpoints

EMODnet Sea Basin Checkpoints assess the quality of the current observation monitoring data at the level of the regional sea-basins. By testing the data against specific end-user **challenges**, the checkpoints will demonstrate how well the current monitoring systems and data collection frameworks provides data to meet the needs of users. In doing so, data gaps and duplications as well as significant bottlenecks will be highlighted.
Six sea basin checkpoints are in operation. The first two checkpoints were initiated in the Mediterranean Sea and the North Sea in 2013; with checkpoints for the Arctic, Atlantic, Baltic and Black Sea being launched in 2015.

**More information about the EMODnet Sea-basin Checkpoint concept**

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