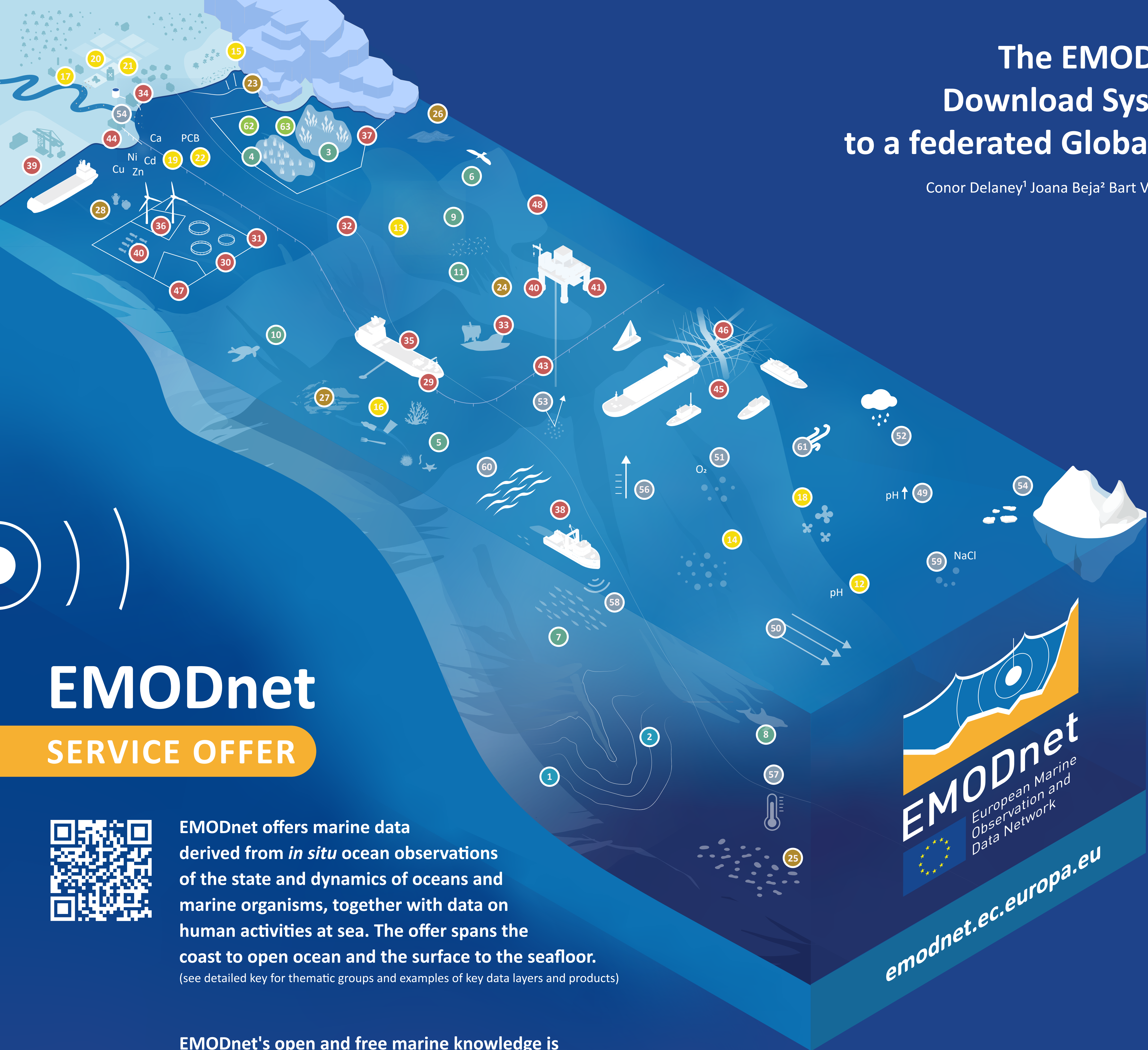


The EMODnet Data Discovery and Download System: A key contribution to a federated Global Ocean Data Ecosystem

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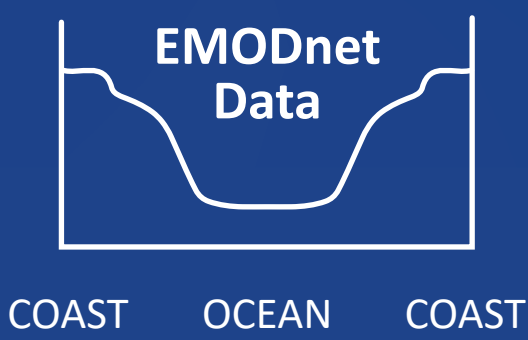


EMODnet SERVICE OFFER



EMODnet offers marine data derived from *in situ* ocean observations of the state and dynamics of oceans and marine organisms, together with data on human activities at sea. The offer spans the coast to open ocean and the surface to the seafloor.

(see detailed key for thematic groups and examples of key data layers and products)



EMODnet's open and free marine knowledge is offered at pan-European scale. EMODnet serves diverse users, providing the evidence-base to support EU Policy implementation e.g., Marine Spatial Planning Directive and the Marine Strategy Framework Directive, stimulating Research and Innovation, and providing baseline information on European seas and bordering seas to empower the Blue in its green transition, and to underpin decisions towards nature restoration and climate-smart management of ocean space. Explore EMODnet today, and see what it can do for you!

7 THEMATICS

- BATHYMETRY
- BIOLOGY
- CHEMISTRY
- GEOLOGY
- HUMAN ACTIVITIES
- PHYSICS
- SEABED HABITATS

BATHYMETRY

1. Bathymetry (seafloor depth) survey data (integrated from diverse sources)
2. Digital Terrain Model (EMODnet high-resolution bathymetry DTM)

BIOLOGY

3. Macroalgae
 4. Angiosperms
 5. Benthos
 6. Birds
 7. Fish
 8. Mammals
 9. Phytoplankton
 10. Reptiles
 11. Zooplankton
- offer includes Occurrence data, abundance and distribution, biomass and diversity, presence/absence, habitat suitability maps, etc.

CHEMISTRY

- Chemical ocean parameters
12. Acidity/pH
 13. Chlorophyll-a as a proxy for phytoplankton
 14. Dissolved gases
- Pollution and contaminants
15. Beach litter
 16. Seafloor litter
 17. Fertilizers
 18. Hydrocarbons
 19. Heavy metals
 20. Pesticides
 21. Biocides
 22. Polychlorinated biphenyls

GEOLOGY

23. Coastal behavior
24. Geological events (e.g., earthquakes, submarine landslides) and probabilities
25. Marine minerals
26. Seabed substrate
27. Seafloor geology
28. Submerged landscapes

HUMAN ACTIVITIES

- Blue Economy multi-sector operations at sea
29. Aggregate extraction
 30. Algae production
 31. Aquaculture
 32. Cables
 33. Cultural heritage
 34. Desalination
 35. Dredging
 36. Energy
 37. Environment (e.g., Marine Protected Area, Natura 2000)
 38. Fisheries
 39. Main ports
 40. Military areas
 41. Oil
 42. Gas
 43. Pipelines
 44. Waste disposal
 45. Vessel/shipping density
 46. Route density
- Maritime Spatial Planning
47. National EU Member State MSPs
- Other forms of area management
48. MSFD Reporting Units, International/Regional Conventions

PHYSICS

49. Seawater alkalinity
50. Currents
51. Dissolved oxygen
52. Meteorological
53. Optical properties (suspended matter)
54. River outflow
55. Sea ice
56. Sea level
57. Temperature in the sea water column
58. Underwater sound
59. Water salinity and conductivity
60. Waves
61. Winds

SEABED HABITATS

62. Seabed habitats (habitat survey data, environmental variables)
63. EUSeaMap broad-scale seabed habitat map for Europe

What is EMODnet?

The European Marine Observation and Data Network, EMODnet, is a public marine data service of the European Union and a key marine knowledge initiative of the European Commission DG MARE. The guiding philosophy of EMODnet is to make marine data Findable, Accessible, Interoperable and Reusable (FAIR), providing a marine knowledge resource that is open to all. EMODnet today is an operational service with a single Portal (emodnet.ec.europa.eu) providing open and free access to high-value datasets and derived data products on the marine and coastal environment and human activities at sea, at European scale and beyond.

EMODnet is implemented by a large network of more than 120 partners across EU Member States and associated countries, whose experts bring their specialised knowledge on *in situ* ocean observation and marine data to collectively deliver the EMODnet service. In addition to thematic and data ingestion partners, EMODnet has a Secretariat providing coordination across the technical, governance, partnerships and communication aspects of the service. Since 2013 the EMODnet Secretariat has been hosted by VLIZ and the Flanders government at the Innovocean site in Ostend. VLIZ hosts the EMODnet Central Portal and also coordinates EMODnet's Biology thematic, among other roles as a partner in other thematics and data ingestion.

What is EMODnet's contribution to the global ocean data ecosystem?

EMODnet's core mandate is to provide FAIR data and data products at pan-European scale, delivered via digital data and web services, and EMODnet's leadership in open data and as an authority on marine data and metadata standards, implementing the INSPIRE geospatial data directive to the marine domain. This includes the expansion of EMODnet's user base and the core role that EMODnet has as the *in situ* component of the European Digital Twin Ocean (EUDTO), which EMODnet delivers in direct partnership with Copernicus Marine Service. Together these three EU assets EMODnet, CMEMS and EUDTO are central to the marine knowledge pillar of the European Oceans Pact. The Vision also looks at opportunities for how EMODnet could strengthen it's service e.g., to expand its offer in the coastal and land-sea interface to support the marine knowledge needs of the Mission: Restore our Oceans and Waters and the Blue Economy. And how EMODnet could further support the evidence-base for EU Policy, also for emerging policies including the Nature Restoration Law and Europe's contribution to global policy frameworks e.g., Marine Biodiversity Beyond Areas of National Jurisdiction (BBNJ).

The EMODnet Portal provides unified data and metadata discovery, visualisation and download services that rely on the federated EMODnet thematic lots webservices. Essential to the services are the reliance on a set of geospatial (OGC) and restful (ERDDAP) data service standards, INSPIRE and ISO metadata standards, controlled vocabularies and standards. The EMODnet Portal technologies are a key milestone in EMODnet's contribution to global efforts, with EMODnet's common metadata catalogue being harvested by the Ocean Data Information System (ODIS) of IODE IOC-UNESCO. Follow @EMODnet on social media e.g., LinkedIn and sign up to the monthly EMODnet newsletter for the latest news!



Subscribe to the monthly newsletter



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