



BioEcoOcean: Co-creating an innovative Blueprint for Integrated Ocean Science

A new EU project funded with 5.7million EUR. will provide a step change in how we observe the ocean to improve biodiversity and climate assessments.

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We are making continuous advancements in the way we observe and model our ocean to better understand and assess the state of the ocean, its biodiversity, role in climate regulation and other vital services it provides for us. This is a major achievement, yet biological and ecosystem observations are often uncoordinated, the data is inaccessible, and the data collected is not designed to be comparable, in other words there is room for improvement in how we collaborate around ocean observations.

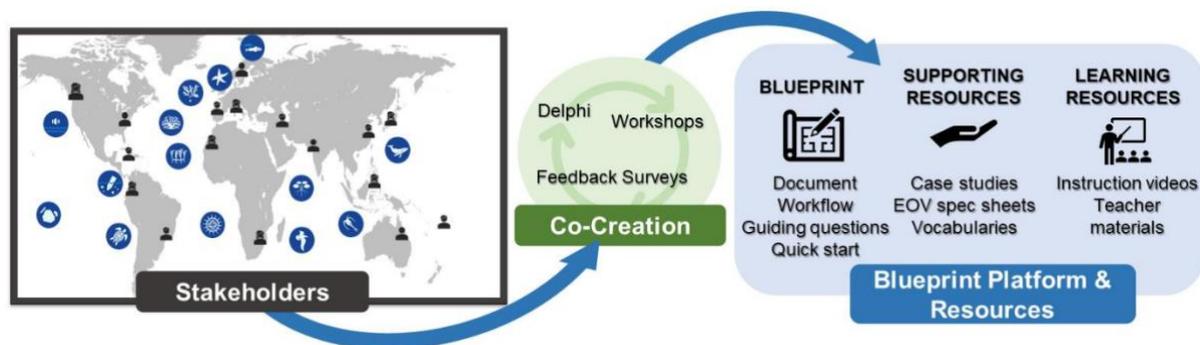


Credit: Stefan Andrews / Ocean Image Bank

In a bid to transform the landscape of biological and ecosystem (BioEco) ocean observations in Europe and beyond, the EU has funded a new project, BioEcoOcean, with 5.7million EUR. under the Horizon Europe Programme. The project will work in living labs with stakeholders to co-create effective solutions to address gaps in the current BioEco global observing system and foster a more coordinated and recognized role in climate and biodiversity decision-making, while leveraging existing data and infrastructure.

BioEcoOcean, which involves nine partner institutions from seven EU countries, just held its online kick-off event on 5-7 March 2024, to officially embark on this exciting and innovative project. With a focus on fostering collaboration, advancing technology, and adhering to FAIR (findable, accessible, interoperable, reusable) data principles, BioEcoOcean aims to bring about a systemic change in the way we understand and monitor the ocean. A key outcome of the project will be a Blueprint for Integrated Ocean Science.

“We need to improve collaboration to gain a better understanding of the ocean. BioEcoOcean will develop a tool to facilitate and encourage collaboration among planners, researchers, managers, data analysts and policymakers, along with other stakeholders involved in ocean observations. The tool or guiding document is called Blueprint for Integrated Ocean Science and has a specific focus on marine life. It aims to support the whole ocean observing community to think bigger and across sectors.” says Dr. Lina Mtwana Nordlund, who is coordinating the project from Uppsala University. Ultimately, the Blueprint is set to guide operational workflows, strengthen technological readiness and encourage holistic thinking in ocean observations building on the existing essential variable (EV) frameworks for the ocean, climate and biodiversity.



The Blueprint for Integrated Ocean Science platform and resources will be co-created with global stakeholders through an iterative process. Credit: BioEcoOcean.

A key objective of the project is to strengthen the development of common approaches, standards, and protocols according to the requirements provided through the Essential Variable frameworks. Increasing the level of coordination of observations and data management will result in more operational and interconnected workflows among the BioEco monitoring and research communities, ultimately enhancing our capacity for evidence-based decision making on sustainable use of our ocean. Thus, the outcomes of BioEcoOcean will also support the implementation of the EU's Mission Ocean and Waters, the delivery of the European Green Deal, and the recently approved EU Nature Restoration Law.

BioEcoOcean runs from February 1, 2024 to January 31, 2028, and is a collaboration between the following partners: Uppsala University (UU; Sweden; Lead), Danmarks Tekniske Universitet (DTU; Denmark), EUROGOOS (Belgium), Università di Pisa (UNIPi; Italy), United Nations Educational Scientific And Cultural Organization (UNESCO; France), Centro Interdisciplinar de Investigação Marinha e Ambiental (CIIMAR, Portugal), Instytut Oceanologii Polskiej Akademii Nauk (IO PAN; Poland), Mercator Ocean international (MOi; France) and the Atlantic International Research Centre (AIR Centre; Portugal).

The project will operate in close collaboration with global organizations such as the Global Ocean Observing System (GOOS), IOC-UNESCO's Ocean Biodiversity Information System, and the Marine Biodiversity Observing Network (MBON), ensuring its global relevance and long-term legacy of its outcomes.

The project BioEcoOcean: Co-Creating Transformative Pathways to Biological and Ecosystem Ocean Observations received funding under Grant Agreement No: 101136748. Its sister project, [Ocean observations and indicators for climate and assessments \(ObsSea4Clim\)](#) was also funded under the same call topic [HORIZON-CL6-2023-CLIMATE-01-8](#).

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