

European Marine Board expert working group's recommendations to strengthen Europe's capability in biological ocean observations

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Biological ocean observations, in addition to current physical and chemical observations, are necessary to help understand the structure and functioning of marine ecosystems, to determine patterns and trends of biodiversity and to be able to inform the sustainable use of the ocean's living resources. Only by integrating sustained biological observations within monitoring programs, it will be possible to understand our changing oceans and to implement flexible management strategies that will adapt to evolving scenarios of societal and environmental change. The biological Essential Ocean Variables (EOVs) of the Global Ocean Observing System (GOOS), and the marine Essential Biodiversity Variables (EBVs) of the Group on Earth Observations Biodiversity Observation Network (GEO BON), are welcomed initiatives towards this integration.

Enhanced biological ocean observing capacity is needed to strengthen the European vision of marine biodiversity conservation and to fulfil the European Union goal of "Good Environmental Status" for all its marine waters, as stated in the Marine Strategy Framework Directive and other legislative initiatives seeking a healthy and sustainable managed marine environment. As most of the observing requirements in Europe have regional scale characteristics, observing networks must be sustained and adjustable to the observing requirements. Technological progress will allow for flexible approaches, improving existing observing methodologies and broadening the scope and range of variables that can be measured.

A long-term, large-scale integrative biological observing system spanning over both oceanic and coastal systems is of fundamental value in expanding knowledge of the world in which we live and in the context of current shorter term fluctuations. Observation networks will also fulfil a critical strategic need for predictions and a more informed basis for environmental policy to safeguard our natural heritage and to guarantee the sustainable use of ocean living resources by multiple users and stakeholders, bringing benefits now and for future generations.

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