

TOWARDS A EUROPEAN OCEAN OBSERVING SYSTEM (EOOS)

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Abstract

A European Ocean Observing System¹ is proposed to provide accurate ocean forecasts that support operational decision making in European open and coastal seas. The proposed system can satisfy the considerable demand for ecosystem products and services, in particular the need for biogeochemical observations that are still relatively sparse in coastal and shelf seas. A broader technique for assessing the fitness for purpose and gaps in the ocean observing system is presented. Progress towards developing new partnerships in particular with the biological community to build EOOS will be elaborated.

Keywords: Hydrography, Coastal management, Time series, Mediterranean Sea, Black Sea

An inclusive, integrated, and sustained pan-European framework is needed to link the currently disparate ocean observing components by an overarching strategy, maximizing the benefits of optimization, infrastructure use, standardization, open data exchange and capacity building. EOOS will provide a flexible coordinating framework to help manage and improve the existing ocean observing effort, making it more efficient and effective at different geographical scales, and for different end-users. EOOS will align and integrate existing initiatives to ensure efficiency and value for money and to eliminate duplication of effort, identify gaps in observing capacity and foster initiatives to fill those gaps. It will promote standardization of the end-to-end system from observation collection to data management and products, drive capacity building and provide leadership for ocean observation, promote ocean observing services for multiple sectors including research, policy, management and industry and promote a common European voice and integration at the international level (Fig. 1).

management and products. It will make data free at point of access (data policy) and provide data and knowledge products, providing real-time and delayed mode data via an appropriate cyber infrastructure. Quality assurance, network monitoring and harmonized collection of EOVs at appropriate spatial and temporal scales will form part of the EOOS focus.

European leadership and capability in ocean observing will be demonstrated by EOOS. Specifically, EOOS will promote a strong European voice for international cooperation, support knowledge generation and drive European innovation and leadership, help transfer innovation into operations, state of the art science and technology, demonstrate value and impact and in turn drive sustainable funding and drive capacity building and provide leadership for ocean observation.

References

1 - European Marine Board. 2013. Navigating the Future IV. Position Paper 20. Ostend, Belgium. ISBN: 9789082093100

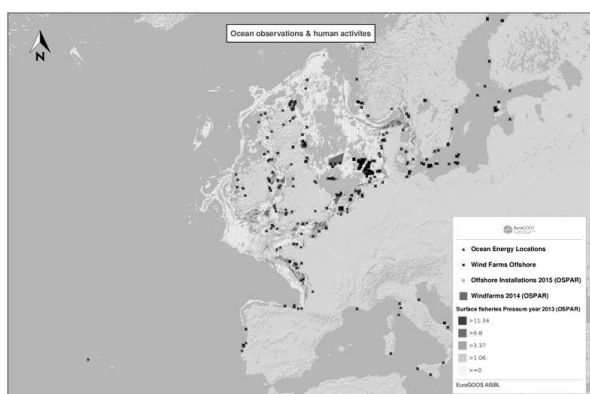


Fig. 1. Human activities in European shelf seas that provide basis for future European Ocean Observing System.

EOOS will bring an added value to existing observing efforts, catalyse new initiatives in a strategic way by targeting identified gaps and engaging a wide range of stakeholders.

EOOS will contribute to several areas of benefit. Knowledge for society will be generated through a systems approach to characterising the state of European seas and oceans, creating knowledge for stakeholders driving economic and societal benefits, providing a knowledge base for sustainable ocean governance and management of marine resources and offering a framework for connecting all the ocean observation underway to wider society, improving societal awareness of ocean observation and its value.

EOOS will optimise and standardise existing systems by improving efficiency and cost effectiveness, integrating and connecting existing capacities, providing strategic guidance and coordination of multidisciplinary observations, standardising of the end-to-end system from observation collection to data