

observatories, etc., allowing data collection efforts that are impossible or too expensive to perform with ships.

Yet, all these infrastructures totally and heavily rely on ships to be deployed, maintained and/or recovered. The number of vehicles and autonomous observatories is still quite limited but increasing. The European research fleet is confronted with a growing demand to cover these services. Even the modern cabled observatories, which are being developed and deployed at European seas (EMSO ERIC) and worldwide, and which provide continuous near real-time data, depend heavily on oceanographic vessels for service and data validation.

A fleet of modern and sophisticated research vessels remains a crucial element for marine research and ocean observations. The integration of this research fleet and its coordination with other observing infrastructures should form the basis of a truly integrated European Ocean Observing System.

The functioning of a European Ocean Observation System will therefore by necessity need to consult the expertise residing in ERVO (European Research Vessel Operators), OFEG (Ocean Facility Exchange Group) and the EuroFleets+ project to ensure an efficient use of the available capacity of the European research fleet. A working group, composed of members of these networks, is under the mandate of the European Marine Board, currently drafting a position paper on the European research fleet, including its relationship of with EOOS."

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Theme: Ocean observation gaps and requirements, and solutions to tackle the challenges

Title: Ocean Best Practices System: knowledge exchange for practitioners

"There is an ever-present need for the identification and dissemination of best practices in the multidisciplinary field of ocean observation and data management. However, the complexity of these domains and the diversity of its stakeholders make discovering relevant best practices (BP) a challenge. On the other hand, harmonizing the adoption of best practices across organizations, especially during the design and implementation of an Ocean Observing System becomes a crucial factor in establishing the

basis that guarantees its successful development and evolution. Nonetheless, addressing this aspect requires connecting and exchanging consensual best practices in ocean observation operation and technology, data management and applications. Equally important is the creation of a repository providing efficient discovery and access of documented best practices, and also expanding means of community engagement, including peer review and training.

The AtlantOS Project (through its Best Practices Working Group), the ODIP Project, the NSF Research Coordination Network, the UNESCO-IOC/IODE and others are collaborating on the development of an enhanced Ocean Best Practices System, based upon expanding the already existing IODE OceanBestPractices Repository and using new means to foster OBP use by a broader ocean community. This poster presents the progress of the collaborative efforts in developing the System that will become an essential building block as one of the fundamental elements of the European Ocean Observing System.

An Ocean Best Practices System (OBP-S) has been designed expressly to address the challenges of multidisciplinary research needed to answer the global challenges such as climate change and others (Pearlman et al., 2017). This solution covers the entire range of ocean observations including observing, data management and user support and draws on the developing fields of natural language processing and ocean vocabularies. But more than a technology, implementation is needed for effective community engagement. Thus, the OBP-S will provide mechanisms for community dialogues and to facilitate publishing BPs. One aspect of this effort is the recently created Frontiers in Marine Science, Research Topic: Best Practices in Ocean Observing, which will become a place of commentary and dialogue. Peer review of best practice articles is a means of promoting community adoption and providing increased visibility of methodologies. It also has significant benefits for those in universities and elsewhere that use number and quality of publications as a metric for advancement. Working together with Frontiers, the Research Topic offers this medium to describe and disseminate robust and high-quality methodologies and interoperability, linked and referenced to the OBP repository document as appropriate.

As the System depends on the quantity and quality of documents provided by its stakeholders, the project will pay substantial attention to community engagement. This is important, but does not stand in isolation. Training and capacity building are also an essential element for BP adoption. For OBP-S, this will be done working closely with established organizations such as IODE Ocean Teacher Global Academy (OTGA), POGO and the SCOR Committee on Capacity Building as well as other activities such as the summer schools run by major research initiatives such as IMBER, CLIVAR, SOLAS and GEOTRACES.

Reference:

Pearlman, Jay; Buttigieg, Pier Luigi; Simpson, Pauline; Muñoz, Cristian; Heslop, Emma and Hermes, Juliet (2017) Accessing Existing and Emerging Best Practices for Ocean Observation, a new approach for end-to-end management of best practices. In, Oceans 2017, Anchorage, 19-22 June 2017. MTS/IEEE Oceanic Engineering, pp. 1-7."