



## **Ocean Observation Best Practices – Interoperability at a New Level**

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Ocean observation and information is essential to understand the dynamics of the Anthropocene. Measurements have been expanding over time as technology evolves and offers new opportunities in autonomous platforms and devices for more comprehensive observations. The procedures for consistent, interoperable measurements are still fragmented in moving across regions and across disciplines. There is no central resource for best practices or standard operating procedures.

This abstract addresses a new global effort to further an Ocean Best Practices System for operational and research systems that will bring together best practices across the end-to-end value chain from sensors and calibration to platforms to data management and dissemination. Building upon the IODE's OceanBestPractice Repository, new capabilities for discovery and access are based on semantic search and extended vocabularies. DOIs for documents are provided and collaboration with organizations creating BPs will support enhanced metadata.

Best practices should be broadly adopted to improve interoperability. Opportunities for community engagement, training and peer review are an important to support broad adoption. To acknowledge the efforts in creating BPs, peer review papers and documents are important as well as the academic recognition that comes from peer-reviewed publications. For this, a new Research Topic, "Best Practices in Ocean Observing", has been created in the Frontiers in Marine Science which will further the visibility and discussion of Best Practices. The Research Topic is now accepting papers on BP, standard operating procedures and observation methodologies (<https://www.frontiersin.org/research-topics/7173/best-practices-in-ocean-observing>).

A prototypical system will be available for users in April 2018. This paper will review the system capabilities and the implementation steps for a central resource for ocean best practices.