

Towards a National Network for Ocean Observation

Convenors:

Lee T. Wilson¹ and Andrew Sherin²

(1) MEOPAR, Dalhousie University, Halifax, NS (lee.wilson@dal.ca); (2) COINAtlantic, Dalhousie University, Halifax, NS (a.sherin@dal.ca)

The world's oceans are a critical part of the Earth system. Sound knowledge and understanding of the oceans is essential for mitigating human impacts on the global environment and for promoting sustainable economic use of the marine environment, including: the safe and sustainable use of natural resources; the assessment of, and adaptation to, climate change; deep knowledge about complex and interconnected ecosystems; our understanding of the entire Earth system; and health and public safety. Knowledge and understanding, in turn, depend on access to accurate, rich, available, and integrated ocean data by end-users, including academic researchers, policy and decision-makers, and the general public. In Canada, ocean data is generated primarily by regional Ocean Observing Systems (OOS') operating in blue water and coastal areas. These regionally-focused activities, while strong individually, have not yet formed a strong national network, resulting in a fragmented ocean sciences sector. This "coordination gap" has made access to data by end-users difficult, with data and forecasts collected by various programs and agencies being scattered across a range of web-pages that can be difficult to find and hard to access – or not available at all. A careful re-examination of our data management practices, including how we share, access, and use data, is necessary to ensure we are leveraging Canada's ocean data to best support scientific excellence, foster collaboration and innovation, and harness oceans data to inform decision-makers and other stakeholders.

To that end, an Expert Forum on Ocean Data Management (November 18-19, 2015 in Montreal, Canada) was held to bring together national and international experts and stakeholders to present and evaluate international best practices in managing data from ocean observations, the current state of ocean data collected and managed in Canada, and goals and visions for the future of ocean data management in Canada. The vision that emerged from the discussion was of the formation of a Canadian Integrated Ocean Observing System (CIOOS): An integrated Ocean Observing System for Canada that would bring together and leverage existing Canadian and international ocean observation data/programs/projects to generate value-added data products on an open web-based platform that maximizes utility to end-users (e.g., government, science partners, industry, and the public). The proposed system would be comprised of several primarily regional/thematic Ocean Observing Systems already in operation across the country. Regional nodes would also have a mandate to engage smaller groups within their region, ranging from academic research projects and regional science networks to indigenous and local communities.