

A Communiqué from the Global Ocean Observing System regarding Boundary Currents and Shelf Sea Interactions

Societal uses and environmental health of the coastal ocean are impacted by outflows from human activities on land and by coastal to open-ocean exchange at the edge of the continental shelf, which is strongly influenced by energetic shelf-edge boundary currents. Boundary currents are also significant in global budgets of heat, freshwater and biogeochemical constituents, and are regions of strong air-sea interaction.

To provide guidance to the Global Ocean Observing System (GOOS) in its advocacy for a coordinated international approach to sustained coastal observing to complement the global network, the Ocean Observations panel for Physics and Climate (OOPC) is asking ocean observing and prediction communities to help develop strategies to meet these emerging needs for coastal ocean knowledge by establishing a Task Team on Boundary Currents and Shelf Sea Interactions (BC/SSI).

The purpose of this communiqué is to invite input on framing the priorities and objectives of the Task Team, and to seek expressions of interest in participating directly in Task Team activities.

We specifically seek input and action on the following over-arching topics:

- **Capturing key societal issues;** for example, protecting coastal ecosystems, aiding human maritime activities, and understanding the interaction of global climate with coastal processes. While many such issues are pan-regional, individual coasts may have unique drivers that should be recognized.
- **Describing key phenomena to be observed;** for example, cross-shelf fluxes of freshwater, nutrients, and oxygen, along-shelf transport and dispersal of larvae, boundary current contributions to basin-wide transports, and air-sea fluxes in coastal and boundary current extension regions.
- **Using modeling systems to inform sampling resolution requirements** for EOVS*, devise and operate multi-platform observing systems, and contribute to the synthesis of inter-disciplinary observations in creating coastal ocean information products.
- **Identifying needs and opportunities for research and innovation in sensor technologies** and their modes of deployment in coastal environments, the coordination of observing networks, and interactions between coastal and global modeling systems and operators.
- **Aiding and assisting the GOOS Regional Alliances in developing capacity** to engage in activities that complement the global network, and in supporting and operating these locally on a sustained basis.
- **Proposing Pilot Experiments** that would provide guidance to GOOS on the requirements for sustained coastal observing efforts that deliver coastal information products that inform stated societal needs at both coastal and global scales.

* Essential Ocean Variables <http://goosocean.org/eov>

This communiqué is sent to stakeholders and communities active in coastal and boundary current oceanography.

We ask that you respond by the 31st March 2018,

- **Report briefly or in depth, on activities you are engaged in or would undertake in the future that contribute to the topics listed above.**
- **Propose a delegate who might join the BC/SSI Task Team to represent the interests of your stakeholder community, observing system network, research specialty, or region, or who might contribute other useful expertise to the Task Team.**

OOPC is promoting this effort through its existing relationships with observing system networks, the GOOS Regional Alliances, the GODAE modelling community, GCOS, JCOMM and WCRP. The BC/SSI Task Team will take this effort forward by seeking support for workshops, meetings or other activities that will bring together ocean observing and prediction communities to meet the challenges described above.

We invite your input and involvement in this endeavour.

Many thanks,

John Wilkin, Marjolaine Krug, Maria Paz Chidichimo

Ocean Observations panel for Physics and Climate.