**Coastal currents in the Bay of Bengal derived by combining satellite Altimetry and drifter observations**

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The advent of satellite remote sensing have been enhanced our understanding of ocean circulation and variability. The present resoultion of satellite altimetry observations are enable to derive the coastal currents with fine spatial and temporal scales. By analysing the mean and seasonal velocity fileds of Bay of Bengal (BoB) between, the present study brings out some interesting features of mesoscale coastal circulation. High resoultion Eulerian velocity field is derived by combining the available satellite tracked surface drifter data with satellite altimetry and ocean surface winds. The drifter data used in this study includes Argos and surface drifter data from Global Drifter Program. The satellite altimeter data used are Maps of Sea Level Anomaly (MSLA) weekly files with a resolution of 1/3° in both Latitude and Longitude for the period 1993-2012. The weekly ocean surface mean wind fields derived from the scatterometers onboard ERS 1 / 2, Quikscat and ASCAT have been employed to estimate the wind-driven current. Mean velocity field displays northward flow along the eastern side with an average speed of 0.4 m/s in the northern part of the BoB and it feeds to the East Indian Coastal Current (EICC). Southward flowing (EICC) is the prominent current in the mean field and is visible from the head of the BoB as a narrow and strong southward flow along the eastern coast of India. The flow is intense between 12°N and 16°N, where the speed reaches 1 m/s. EICC shows strong seasonal variations and strong mesoscale eddy activity in the western side.

Suggested topics: Coastal Zone / Climate and Environment

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Prefer Oral Presentation