

FISHERMEN IN OCEAN OBSERVING RESEARCH: ASSESSING THE AFFORDABILITY AND FEASIBILITY OF WORKING WITH OREGON COMMERCIAL CRAB FISHERMEN TO DEPLOY SCIENTIFIC INSTRUMENTATION

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A challenge facing ocean observing systems is the ability to achieve high spatial and temporal coverage at an affordable price. The Oregon Coastal Ocean Observing System (OrCOOS) relies on data from observational buoys, gliders, and towed arrays which, though proven technologies, are expensive to set up and maintain and only cover small areas of the ocean. As a result, there are limited year round oceanographic records at sufficient spatial scale off Oregon's coast to fully describe the important physical processes that characterize this environment. To potentially supplement this limited data, an ongoing research program is underway to assess the affordability and feasibility of working with Oregon commercial crab fishermen to deploy scientific instrumentation. Commercial crab fishermen spend many days at sea each year and their crab pots, each clearly positioned using GPS, cover much of Oregon's coastal ocean from near shore to the shelf break. Incorporating ocean information gathered from instruments attached to these crab pots has the potential to substantially increase the data available to the OrCOOS program and ocean researchers. The initial results of this research project are encouraging. While few scientific conclusions can be drawn from the limited data collected thus far, the concept of a cost effective partnership with local commercial crab fishermen and the application of small temperature logger technology has been demonstrated. To date, several significant oceanographic events have been documented and multiple scales of variability have been captured including upwelling interrupted by warm events, relaxations, or reversals of wind fields. To better map hypoxia events off the Oregon coast, dissolved oxygen sensors are being added to some crab pots for the 2008-2009 season. Future goals of the project are to quantify the costs of our cooperative approach to ocean observing and compare these costs to those incurred by more traditional means of near shore oceanographic data collection. We will also assess fisher and scientists attitudes towards the program to determine the willingness of fishermen to participate in the future and the willingness of scientists to support the program and its ongoing funding.

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