

NEOS: The North East Ocean Observing System

By: Scott Glenn & NEOS Partners

Dr. Scott M. Glenn

Professor, Rutgers University

glenn@imcs.rutgers.edu 732-932-6555 x. 506

Abstract: Ocean.US is coordinating the development of a National Federation of Regional Associations of Coastal Ocean Observing Systems. It is anticipated that on the order of ten Regional Associations will evolve. These associations will coordinate regional enhancements of the existing and expanding national backbone of coastal ocean observations.

The North East Observing System, NEOS, is a Regional Association of subregional observing systems that covers the Northeast U.S. from Hatteras to Halifax. It provides a collaborative framework for the numerous subregional observing systems that have already evolved in this area. The subregional observatories are operated by several government, academic, industry and non-profit groups, some for over a decade. Linkages between the subregional observatories are being fueled by new enabling technologies that provide the means to address a new class of science problems, and provide applied products that fulfill societal needs. Cross-regional working

groups on technology development, regional product development, and regional science themes are forming to foster collaborations between subregional observatories and speed implementation. Time series from an expanding buoy and cabled observatory network will be spatially enhanced using higher spectral and spatial resolution satellite data acquired at multiple sites within the region, by nested grids of multi-static HF Radars, and by long-duration autonomous underwater gliders. Regional product development includes data management for the Radar surface current maps, calibrated ocean color imagery in complex coastal waters, and regional data-assimilative coupled atmosphere-ocean forecast models. Scientific applications include better parameterizations of air-sea coupling, long-duration datasets for assessing element cycling on continental shelves, and the use of forecast models for assessing regional circulation effects on fish populations. This presentation will be an overview of the progression and development of NEOS as a Regional Association in the National Federation.