

For submission to National Weather Service on behalf of MACOORA
<http://www.weather.gov/news/stratplan/#>

1) What trends will shape our long-term future?

There will be fundamental changes in the ecosystem-- shoreline, coastal environment, ocean acidification-- and potential sea level rise. Concurrently, there will be increasing uncertainty in the understanding and prediction of natural processes and environmental (ecological) dynamics.

There will arise a need for increasing investment in infrastructure and energy as both systems reach carrying capacity. The continued trend of a population gravitating toward the coast will result in a greater immediacy for managed use of the coastal ocean; mitigation of the increasing usage requirements of near coastal waterways, including competing recreation, energy, and commercial usages; and investment in near coastal alternative energy solutions (both wind and tidal).

2) What challenges or opportunities will we face?

Our challenges will be developing and implementing the necessary infrastructures and systems necessary to understand changing environmental changes; difficulty in improving estuarine water quality; meeting new demands on resources (primarily for energy); and overcoming the uncertainty of weather predictions.

Addressing the anticipated growing list of coastal ocean management challenges head-on provides an opportunity to engage the public in a "conversation about how to do it", which in turn increases public awareness of environmental challenges, particularly the coastal ocean.

It also provides an opportunity to develop public appreciation (perhaps even an understanding) of the role of observations and prognostic models (technology) in providing the kinds of high level information needed to define and manage ocean pollution and resource-related problems. Most importantly, awareness elevates the urgency to create advanced educational opportunities in things technical for people of all ages (and stages in their lives). This can prepare them for employment in the service industries that grow up around the need for ocean management.

3) What should NWS strive to accomplish?

Improved monitoring and prediction of weather and climate and improved inundation prediction.

The NWS, by example, provides important leadership in the effort to build, sustain and advance the necessary technical observational, modeling, and communications infrastructure needed for operational ocean forecasting. The applied ocean community looks to the NWS example for guidance as we build our infrastructure, which of course must operate on a very different set of spatial scales and for many different reasons than does the NWS.

Because of the crucially important coupling between the atmosphere and the coastal ocean, the NWS has already begun to work directly with MACOORA/MARCOOS as we strive to establish an effective and useful operational coastal ocean nowcasting/forecasting system. This synergy should be amplified with time to the benefit of both endeavors.