



NOAA's Ecosystem Research Strategy and Coastal Management

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NOAA Ecosystem Research Committee
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Definition of Ecosystem Research

Ecosystem research is the systematic study directed toward fuller scientific knowledge or understanding of geographically determined systems of organisms (including humans), the environment, and the processes that control the system dynamics.

- Adapted from Murawski & Matlock, 2006 and OMB, 2004

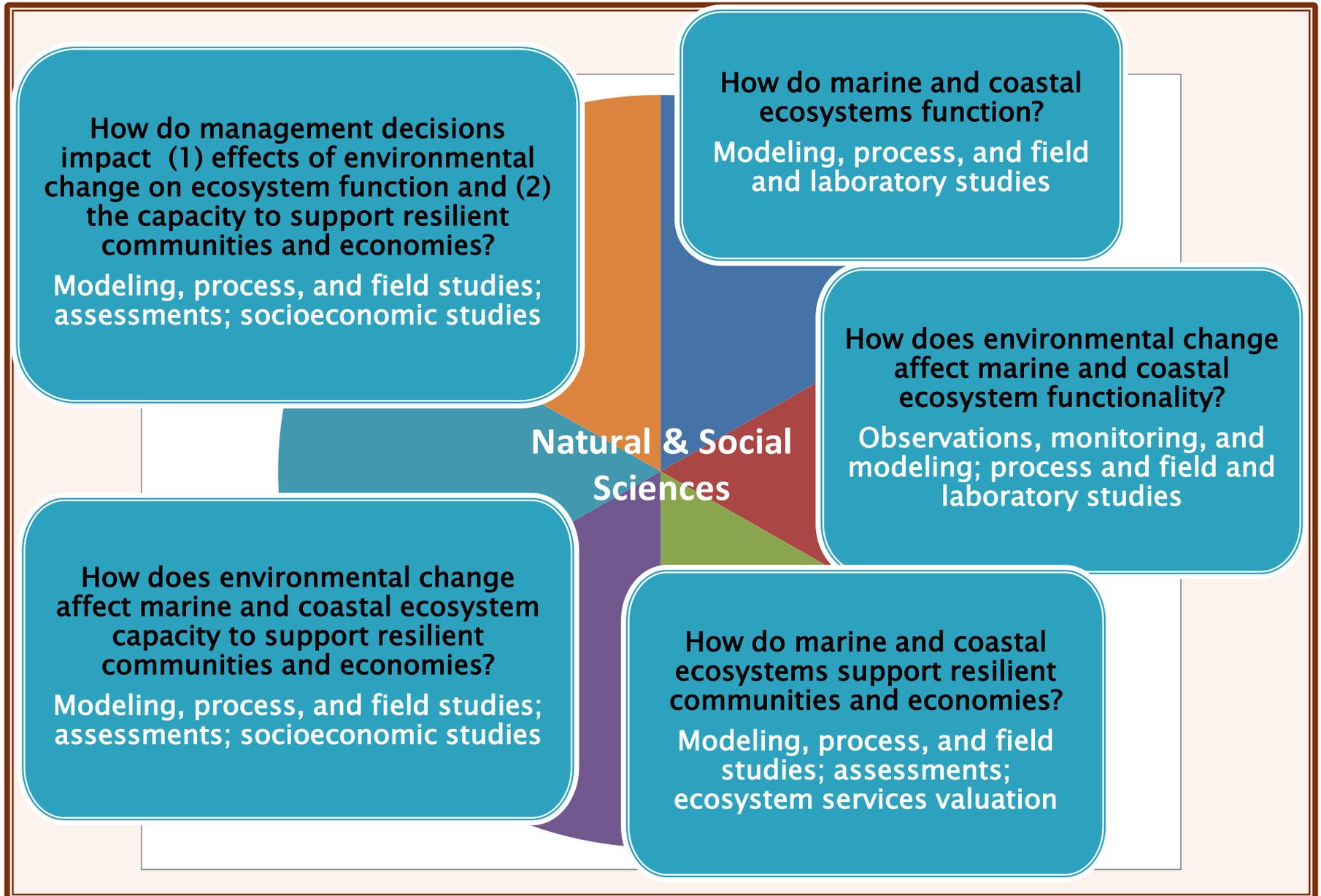


NOAA's Ecosystem Research Agenda

Goal: NOAA adopts a comprehensive approach to facilitating the

research needed to support the sustainable use, protection, and restoration of coastal and marine ecosystems, as well as the ecosystem services that they provide.

NOAA Ecosystem Research Approach





Premise: Outcomes of this workshop will be enhanced if we embrace an Ecosystem Research Approach

- Enable and encourage integration across disciplines and organizations;
- Strive for a multi-scale understanding of variability in natural and anthropogenic stressors that relate to the ecosystem's ability to provide ecosystem services;
- Identify institutional and cultural contexts for interactions between ecosystems, human communities, and ecosystem services; and
- Identify links between ecosystem services and ecosystem management goals, including the effects of management strategies on ecosystem services and their value to society



From 2008 Hypoxia Action Plan:

Action #5: Identify and, where possible, quantify the effects of the hypoxic zone on the economic, human and natural resources ... *including the benefits* of actions to reduce nitrogen and phosphorus and the costs of alternative management strategies.

Action #8: Continue to reduce existing scientific uncertainties regarding source, fate, and transport of nitrogen and phosphorus... to continually improve the accuracy of management tools and efficacy of management strategies for nutrient reduction.

Action #9 - Continue to reduce uncertainty about the relationship between nitrogen and phosphorus loads and the formation, extent, duration, and severity of the hypoxic zone, to best monitor progress toward, and *inform adaptive management* of the Coastal Goal.



Balance and Feedback is critical to success!!!!

Adaptive management involves continual feedback between the interpretation of new information and improved management actions and is the key to targeting actions within watersheds where they will be most effective.

Gulf Hypoxia Action Plan 2008



Questions & Discussion



South Pole Station, July 2003
Credit : Michael Holstine