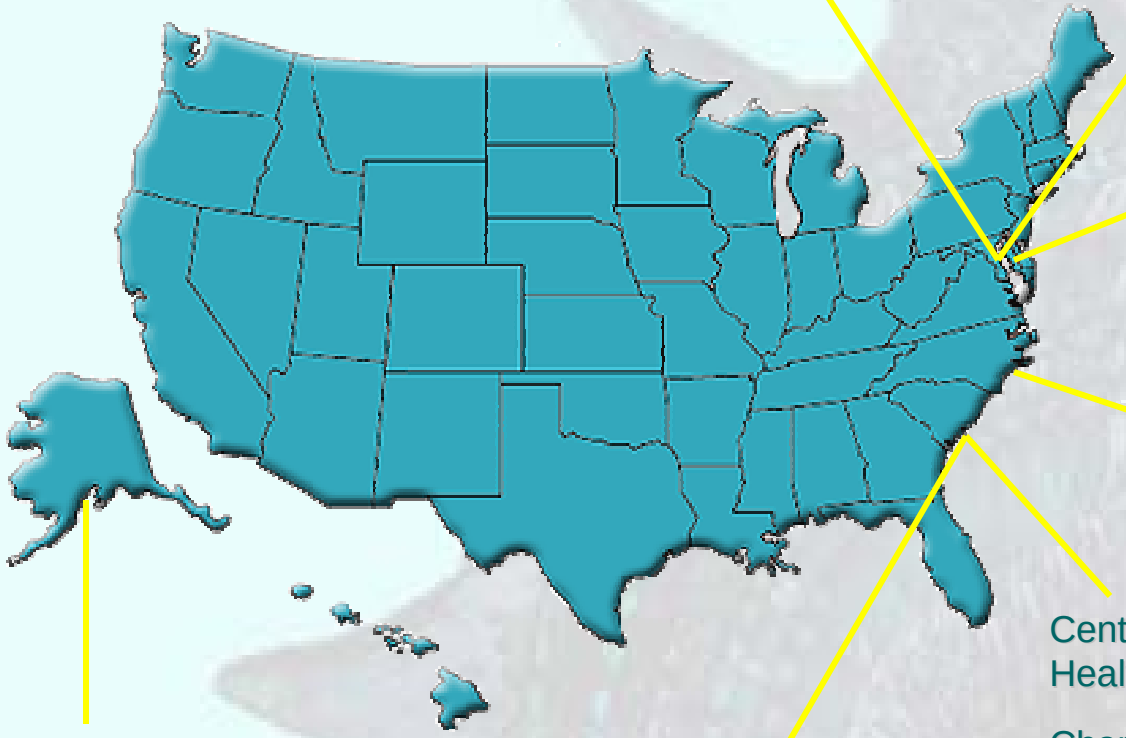
National Centers for Coastal Ocean Science

Program Overview

NCCOS Centers



Center for Coastal Monitoring and Assessment, Silver Spring, MD

Center for Sponsored Coastal Ocean Research, Silver Spring, MD

CCEHBR - Cooperative Oxford Laboratory Branch, Oxford, MD

Center for Coastal Fisheries and Habitat Research, Beaufort, NC

Center for Coastal Environmental Health and Biomolecular Research, Charleston, SC

CCFHR - Kasitsna Bay Laboratory, Seldonia, AK

Hollings Marine Laboratory, Charleston, SC

NCCOS focuses its multiple scientific capabilities on meeting coastal managers' needs.

Operating Principles

- Deliver high quality science
- Conduct relevant and timely research
- Transfer technology, tools, knowledge
- Conduct anticipatory research
- Provide optimal work environment for employees

Vision

Coastal stewardship decisions are guided by science to maximize societal benefits.

Mission

To provide coastal managers with scientific understanding and tools needed to balance NOAA's environmental, social, and economic goals.

Environmental Stressors

- Climate Change
- Land and Resource Use
- Invasive Species
- Pollution
- Extreme Natural Events

Integrated Assessments

- **Document the status and trends of ecosystem and cultural resource conditions;**
- **Relate those trends to their environmental and economic causes and consequences;**
- **Build models to predict outcomes of alternative management actions; and**
- **Evaluate effectiveness of management decisions.**

Who do we work for/with?

- **Customers – managers, decision-makers.**
- **Stakeholders – groups with an interest in what we do and how we decide what research to conduct = universities, environmental groups, recreational and commercial industry groups, other NOAA LOs. These groups should have input into our research agenda.**
- **Partners – universities, professional organizations, and government agency scientists.**

Goals: Provide tools & understanding so that coastal managers:

- Rely on science to maintain ecosystems at sustainable levels (conservation)
- Rely on science to influence human activities affecting coastal ecosystems (ecological forecasting)
- Rely on science to mitigate the effects of natural events (mitigation)
- View NCCOS as the partner and scientific resource ‘of choice’ in the environmental stewardship community (leadership)

Resources

- Funding:
  - FY2001 – $ 52,499 M
  - FY2002 – $79,710 M
  - FY2003 (President's budget) – $52,267 M
- Personnel (FY'02): 412 total
  - 184 FTPs
  - 227 contractors

Ecosystems of Focus

- Coral reefs
- Estuaries
- National Marine Sanctuaries
- National Estuarine Research Reserves

NOAA CRE Research Plan

Federal mandates drive the Research Plan:

1. Executive Order 13089
2. Coral Reef Conservation Act of 2000
3. Magnuson-Stevens Act.

NOAA CRE Research Plan

These mandates:

1. direct NOAA to strengthen its stewardship of the nation's and world's coral reef ecosystems
2. provide NOAA the authority to preserve, sustain, and restore the condition of coral reef ecosystems.

NOAA CRE Research Plan

Stresses determine ecosystem change

1. 5 stresses: climate change, extreme natural events, pollution, invasive species, land and resource use.
2. Primary stresses identified in the Atlantic: disease, coastal development and runoff, pollution, fishing, and trade in coral and live reef species.
3. Primary stresses identified in the Pacific: coastal development and runoff, pollution, recreational use, fishing, trade in coral and live species, and invasives.

NOAA CRE Research Plan

Research needed to understand how these stresses impact the integrity of coral reef ecosystems and impede the delivery of their goods and services:

- coral reef ecology, biology, geochemistry, fisheries biology, and socioeconomic studies
- individual and cumulative impacts of stresses
- national scope, regional implementation

NOAA CRE Research Plan

Goal: *to provide coastal and ocean managers with scientific understanding and tools to protect healthy coral reef ecosystems and reverse the degradation of those that have been impaired by anthropogenic stresses.*

Research Program will support NOAA in achieving Congressional mandates by:

1. documenting the status and trends of ecosystem and cultural resource conditions,
2. relating those trends to their environmental and economic causes and consequences,
3. building models to predict outcomes of alternative management actions, and
4. evaluating effectiveness of management decisions.

Future Plans

- Ecological Forecasting
- Socioeconomic-Ecology Linkages
- Biotechnology Capabilities
- Support Wise Decision-Making