Integrated Ecosystem Assessments

The National Marine Fisheries Service (NMFS) requests an increase of $5.4M over the FY 2010 Enacted to support the development of Integrated Ecosystem Assessments (IEAs). This budget request supports NOAA and the Department of Commerce's efforts to conserve, protect, and manage living marine resources in a way that ensures their continuation as functioning components of marine ecosystems, affords economic opportunities, and enhances the quality of life for the American public.

FY2011 Highlights

Integrated Ecosystem Assessments +5.4M: IEAs provide the scientific basis for ecosystem-based approaches to management of the Nation's highly complex and evolving marine ecosystem resources and services. IEAs address specific management objectives through a formal synthesis and quantitative analysis of relevant natural and socioeconomic factors. The results of these analyses provide resource managers with ecosystem-specific information to make more cost-effective and informed resource management decisions.

IEAs also promote job retention and economic growth by supporting sustainable resource use within various sectors (e.g., fishing, aquaculture, offshore alternative energy development, recreation, and other coastal and marine ecosystem goods and services). IEAs allow managers to weigh trade-offs between sectoral uses and determine socioeconomic implications of management actions. For example, understanding the balance between offshore wind energy farms, commercial fisheries, and aquaculture facilities is key to maximizing economic growth and job creation/preservation in each sector while considering ecosystem health. This provides greater consistency and dependability in job sectors reliant on marine ecosystems. At a local- to regional-scale, IEAs will require support for data management and ecosystem modeling, thus spurring creation of green jobs. Furthermore, this project directly supports both federal and non-federal jobs through the growth of the IEA program by hiring experts to advance scientific and technological development to further NOAA's understanding of ecosystem processes.

In 2011, an increase of $5.4M is requested for IEAs to support continued development in the California Current Ecosystem. NOAA will also extend the application of the resulting products and tools to implement IEAs in the Gulf of Mexico and Northeast Shelf Regional Ecosystems.

During FY2011, NOAA will:

- Develop a set of integrative ecosystem indicators needed to assess the current and future status of these Regional Ecosystems, such as species diversity, mean trophic level of catch, and proportion of non-commercial species.
- Develop an ecosystem modeling framework to assess and forecast ecosystem status and trends.
- Develop a regional ecosystem data management system that supports all aspects of IEAs and makes ecosystem data accessible.
- Develop technical capabilities for ecosystem and ecological modeling and data management to support IEAs.
- Make IEA capabilities fully operational, including web-based IEA products and services and peer-reviewed documentation.

Funding will also be used to ensure continued access to existing biological, oceanographic, and socioeconomic data required by ecosystem models to simulate and forecast conditions, and ultimately evaluate the efficacy of management options. In addition, IEAs monitor the changes that result from actions taken so management strategies can be adapted appropriately and inform policy.

Providing scientific and management expertise for the development of IEAs is a clear role for NOAA. NOAA's strategic plan outlines the agency's steps toward implementing ecosystem-based approaches to management that recognize the problems facing living marine and coastal resources in a comprehensive framework. IEAs

are a coordinated effort across NOAA involving NMFS, the Office of Oceanic and Atmospheric Research, the National Ocean Service, and the National Environmental Satellite, Data, and Information Service.