



# NOAA Ecosystems Goal The Role of FIS

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# NOAA Strategic Plan

## Ecosystems Goal

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- Protect, restore, and manage the use of coastal and ocean resources through an ecosystem approach to management.
- Outcomes:
  - Healthy and productive coastal and marine ecosystems that benefit society
  - A well informed public that acts as a steward of coastal and marine ecosystems



# Ecosystems Goal: Performance Objectives

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- Increase number of fish stocks managed at sustainable levels
- Increase number of protected species that reach stable or increasing population levels
- Increase number of regional and coastal marine ecosystems delineated with approved indicators of ecological health and socioeconomic benefits that are monitored and understood
- Other objectives...



# Ecosystems Goal: Strategies

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- Engage and collaborate with partners to achieve regional objectives
  - delineate regional ecosystems
  - promote partnerships at the ecosystem level
  - implement cooperative strategies to improve regional ecosystem health
- Manage uses of ecosystems by applying scientifically sound observations, assessments, and research findings
  - to ensure sustainable use of resources
  - to balance competing uses of coastal and marine ecosystems



# Ecosystems Goal: Strategies

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- Advance understanding of ecosystems through better simulation and predictive models. Build and enhance capabilities of an ecological component of the NOAA global environmental observing system:
  - monitor, assess, predict national/regional ecosystem health
  - gather information consistent with established social and economic indicators
- Engage in technological/scientific exchange with domestic/international partners to protect, restore, and manage marine resources within and beyond the Nation's borders
- Develop coordinated regional/national outreach and education efforts to improve public understanding and involvement in stewardship



# Ecosystems Goal: Programs

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- Aquaculture
- Coastal and marine resources
- Coral reef conservation
- Enforcement
- **Ecosystem observations**
- Ecosystems research
- Fisheries management
- Habitat
- Protected species



# Ecosystem Observations Program

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- EOP collaborates with other Programs to represent NOAA's ecosystem observing activities that are related to and support the Ecosystems Goal.
- EOP partners:
  - NOAA Fisheries Service (NMFS)
  - NOAA Research (OAR)
  - NOAA Oceans and Coasts (NOS)
  - NOAA Satellites and Information (NESDIS)



# EOP Operations

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- EOP provides scientific information on the status of living coastal and marine resources and their environment
  - Conducts routine monitoring activities
  - Produces operational assessments and forecasts
  - Distributes this information to NOAA, partners, clients, and resource users



# EOP Capabilities

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- Fisheries monitoring, assessment, and forecasts
  - Fish surveys
  - Fish assessments
  - Fish biology and life history
  - Fisheries Information System:
    - Commercial and recreational fisheries monitoring
    - Fishery-dependent information management and dissemination
- Protected species monitoring, assessment and forecasts



# EOP Capabilities

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- Ecosystems monitoring, assessment, and forecasts
  - Ecosystem surveys
  - Ecosystem assessments
  - **Observer Program (fishery-dependent information managed by FIS)**
  - Cooperative research
- Economic and social science monitoring, assessment and forecasts
  - **Economic/sociocultural surveys (fishery-dependent information managed by FIS)**
  - Economic/sociocultural applied research and assessments
- Data management, technology transfer, education and outreach



# EOP Role

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- Represents primary NOAA ecosystem observing activities within NOAA's Observing System Architecture
- NOAA's ecosystem component of the U.S. Integrated Ocean Observing System (IOOS).
- Complies with Data Management and Communications (DMAC) standards and protocols
  - Supports interoperability and seamless transmission of ecosystem-based observational data among NOAA Line Offices, intra-agency, state, academia, and others.
- Utilizes latest technologies to improve access and management of data and information.



# EOP Outcomes: Long-Term

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- National/international network of observations and analysis
  - acquires and disseminates data and information on present and future states of the coasts and oceans
  - meets monitoring, assessment and forecasting needs of NOAA and society for ecosystem-based management
- Comprehensive system for managing NOAA's ecosystem information
  - includes acquisition, quality control, validation, reprocessing, storage, retrieval, dissemination, and archiving
  - makes use of innovative technologies
- Well-informed public that acts as a steward of coastal and marine ecosystems.



# EOP Outcomes: Mid-Term

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- Timely and accurate stock assessments and forecasts
- Timely and accurate assessments and recovery strategies for endangered and protected species
- Increased integration of ecosystem (e.g., physical, lower trophic) observations into fish and protected species assessments and forecasts
- Increased number of ecosystem parameters that describe the status and trends of coastal ecosystems and are amenable for use in ecological forecasting
- Timely integrated indicators to show “status of the ecosystem”



# EOP Outcomes: Mid-Term

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- Increased ability to assess the economic/social impacts of existing policies and proposed management measures on fishermen, shoreside firms, coastal communities, and the affected public
- Increased development of IOOS through contribution to the “national backbone” and support of Regional Associations (RAs)
- Implementation of new procedures, data systems, and techniques to manage, archive, and disseminate ecosystem information for NOAA’s clients within the agency, as well as the public, private, and NGO sectors
- Increased public awareness of ecosystem diversity and function and improved sense of stewardship for ecosystem and living marine resources conservation







# Role of FIS

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- Efficient collection of comprehensive, accurate fishery-dependent data for both commercial and recreational fisheries
- Timely production of reliable fisheries statistics
- Effective management and dissemination of fisheries information (including observer and economic/sociocultural data and statistics)
- Integration of fishery-dependent information with fishery-independent ecosystem information collected by other EOP activities