



NOAA FISHERIES SERVICE

“One of the greatest long-term threats to the viability of commercial and recreational fisheries is the continuing loss of marine, estuarine, and other aquatic habitats. Habitat considerations should receive increased attention for the conservation and management of fishery resources of the United States.”

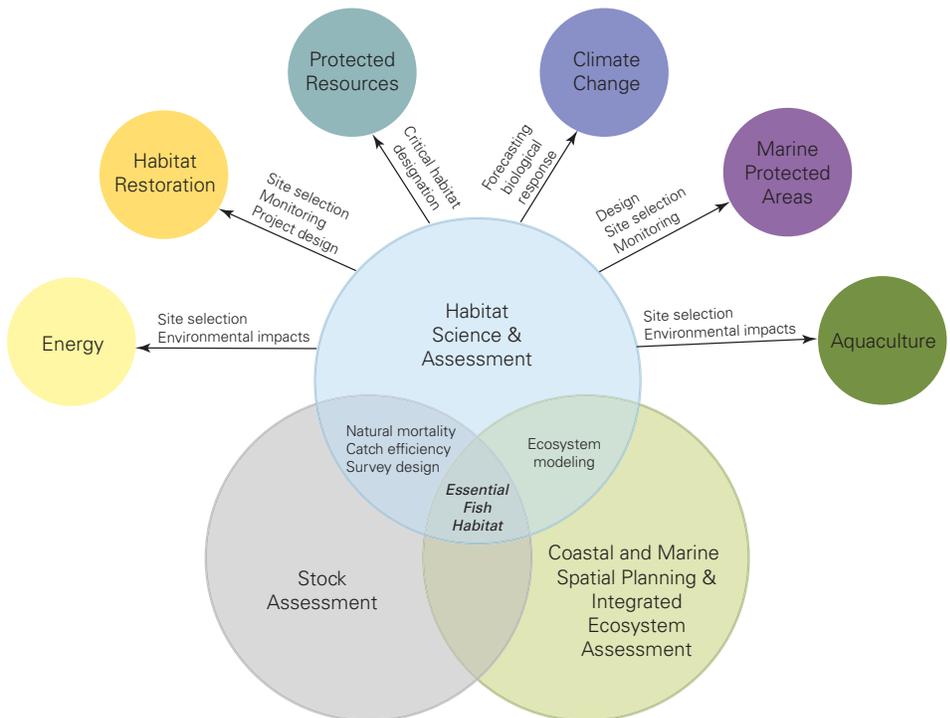
–Magnuson-Stevens Act



Habitat Assessment Improvement Plan

NOAA Fisheries announces the availability of a new planning document that will help meet mandated responsibilities to sustain marine fisheries and their associated habitats. The *Marine Fisheries Habitat Assessment Improvement Plan (HAIP)*, published May 2010, is the first nationally coordinated plan to focus on the marine fisheries aspects of habitat science. The HAIP outlines current gaps in NOAA Fisheries’ habitat science, steps to improve habitat assessments, and the need for an integrated, national habitat science program.

There are ever-increasing demands being placed on marine habitats across many sectors of the U.S. economy, but the role of marine habitats in supporting fishery production and in providing other critical ecosystem services is poorly understood. Despite the critical need for habitat information in most NOAA Fisheries programs, support for habitat science is lacking. A comprehensive habitat science program will enable NOAA Fisheries to more effectively manage resources and meet expanding needs.



Linkages among habitat science and assessments and other components of ecosystem-based fishery management within NOAA and uses for that information.

Goals of the HAIP

The *Habitat Assessment Improvement Plan* (HAIP) is intended to serve as a blueprint to:

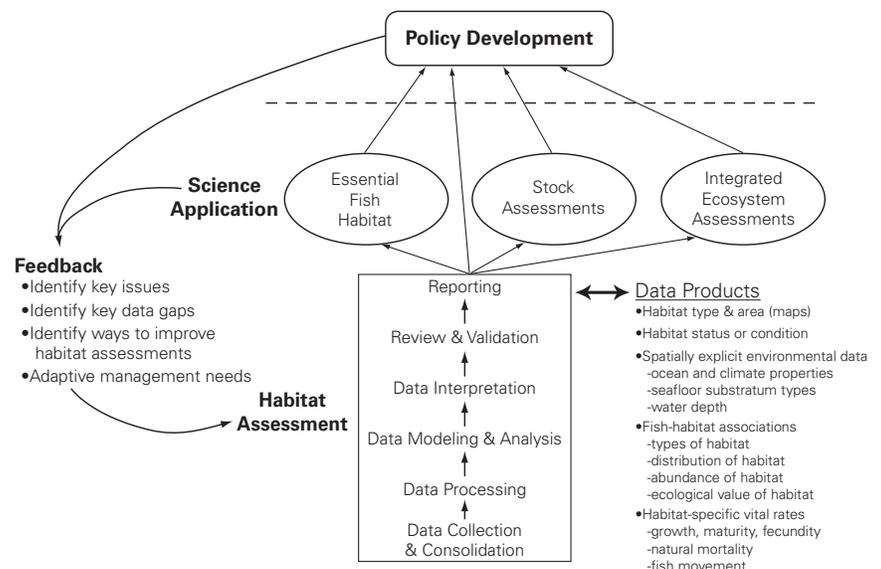
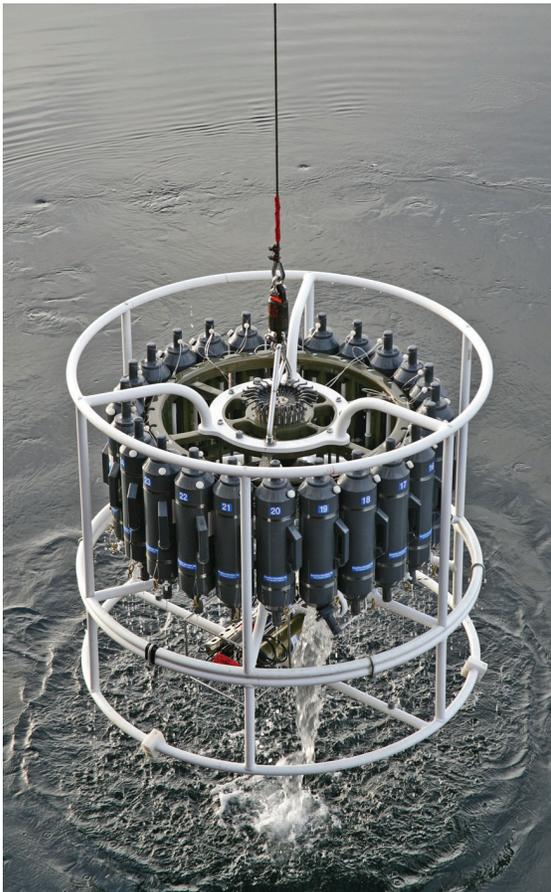
- Develop the habitat science necessary to meet the mandates of the Magnuson-Stevens Act and the economic, social, and environmental needs of the nation.
- Improve NOAA Fisheries' ability to identify essential fish habitat (EFH) and habitat areas of particular concern and assess impacts to these areas.
- Reduce habitat-related uncertainty in stock assessments and facilitate a greater number of advanced stock assessments, including those that explicitly incorporate ecosystem considerations and spatial analyses.
- Contribute to assessments of ecosystem services.
- Enable NOAA Fisheries to be prepared for management challenges associated with climate change.
- Contribute to ecosystem-based fishery management, integrated ecosystem assessments, and coastal and marine spatial planning.



What is a Habitat Assessment?

Habitat is the place where species live, characterized by the physical, chemical, biological, and geological components of the ocean environment. Measuring the associations between species and their habitats across space and time is essential to determine the relative importance of various habitats in structuring marine ecosystems.

A habitat assessment is both the process and products associated with consolidating, analyzing, and reporting the best available information on habitat characteristics relative to the population dynamics of fishery species and other living marine resources. Indicators of the value and condition of marine habitats can be developed through a habitat assessment by investigating the relationships between habitat characteristics, the productivity of fishery species, and the type and magnitude of various impacts. The ultimate goal of a habitat assessment is to support management decisions by providing information on how habitats contribute to species' productivity.



Flow diagram of a habitat assessment, including development, application, and improvement of assessments through feedback.

How Can NOAA Fisheries Use Habitat Assessments?

- Inform habitat management, conservation, and restoration activities.
- Support consultations and evaluate environmental impacts for proposed activities, including aquaculture and energy projects.
- Help to assess risk and injury to living marine resources after environmental disasters.
- Support the design of fishery-independent surveys and improve the interpretation of survey data.
- Inform stock assessments.
- Act as a bridge between single species stock assessments and integrated ecosystem assessments.
- Understand and predict the effects of climate change and other anthropogenic impacts on ocean resources.



Tiers of Assessment Excellence

The HAIP defines three Tiers of Excellence for Habitat Assessments, which require increasing levels of resolution in assessment data and an increased understanding of habitat functions for fishery species.

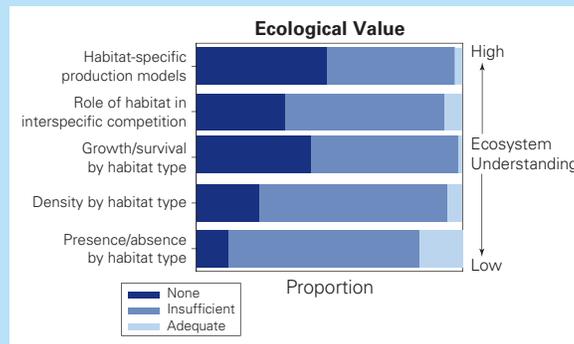
Tier 1: Assess habitats using existing data

Tier 2: Upgrade assessments to a minimally acceptable level

Tier 3: Determine habitat-specific vital rates by life stage

Data Gaps and Resource Requirements

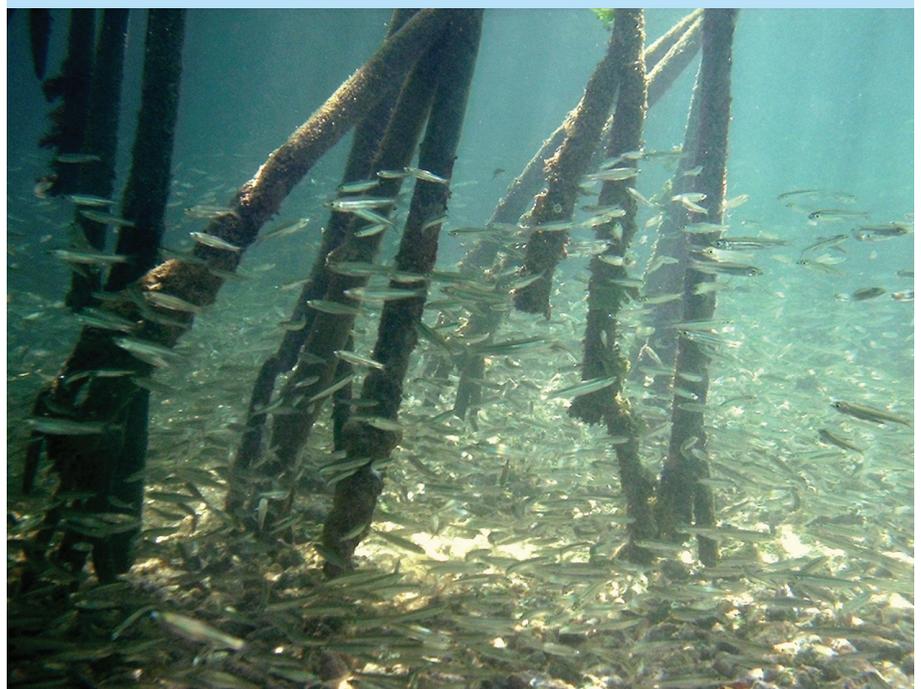
Habitat assessments require both collection and synthesis of multiple data types at a variety of temporal and spatial resolutions. To date, research efforts to collect habitat data have been fragmented and limited, with our greatest success demonstrated by the physical characterization of habitats. A survey of NMFS scientists indicated that most habitat data presently are inadequate or completely lacking and occur at low spatial and temporal resolutions.

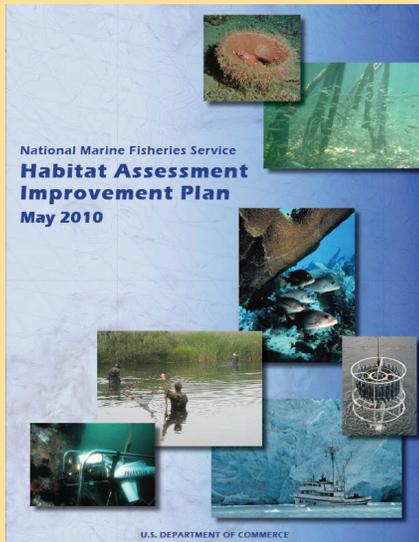


The availability of information on the ecological value of habitats from a recent survey of NOAA Fisheries scientists.

A number of factors are identified in the HAIP as being major obstacles to producing and using credible habitat assessments:

- Lack of habitat-specific biological information and population abundance;
- Inadequate numbers of technical and scientific staff;
- Insufficient research on environmental effects and multispecies effects; and
- Ineffective management of habitat data.





Learn More

Questions? Contact your regional representative:

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AFSC: Bob McConnaughey

NWFSC: Correigh Greene, W. Waldo Wakefield

SWFSC: Mary Yoklavich (Chair)

SEFSC: Thomas Minello

NEFSC: Thomas Noji

OST: Kristan Blackhart, Stephen K. Brown

OHC: Susan-Marie Stedman

To download an electronic copy of the HAIP, visit the OST website:

<http://www.st.nmfs.noaa.gov/st4/HabitatScience.html>

Request a printed copy of the HAIP:
(301) 713-2363.

HAIP Recommendations

1. Develop new budget and staffing initiatives to fund habitat science that is directly linked to NOAA Fisheries mandates.
2. Develop criteria to prioritize stocks and geographic locations that would benefit from habitat assessments.
3. Initiate demonstration projects that incorporate habitat data into stock assessment models.
4. Identify and prioritize data inadequacies for stocks and their habitats, to bridge information gaps identified in the HAIP.
5. Increase collection of habitat data on fishery-independent surveys and develop a plan for better utilizing new technologies aboard the NOAA fleet of Fishery Survey Vessels.
6. Engage partners within and outside of NOAA to exchange information about programs and capabilities. Coordinate habitat data collection and upgrade and expand data management systems.
7. Develop strategies to integrate habitat science and assessments, stock assessments, and integrated ecosystem assessments.
8. Establish a habitat assessment fellowship program and provide funds to graduate students and post-doctoral associates to advance habitat modeling, evaluation, and assessment efforts.
9. Unite with other NOAA line offices to develop a NOAA-wide strategic plan for habitat science and assessments in support of the nation's ocean policy priorities.

