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NMFS Economics and Human Dimensions Program and the National Seafood Strategy



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Outline

Economics and Human Dimensions Staff and Research Areas

Commercial Fisheries Economics

- Data Collections
- Economic Research
- Costs
- Catch Share Programs

Human Integrated-Ecosystem Based Fisheries Management

Questions



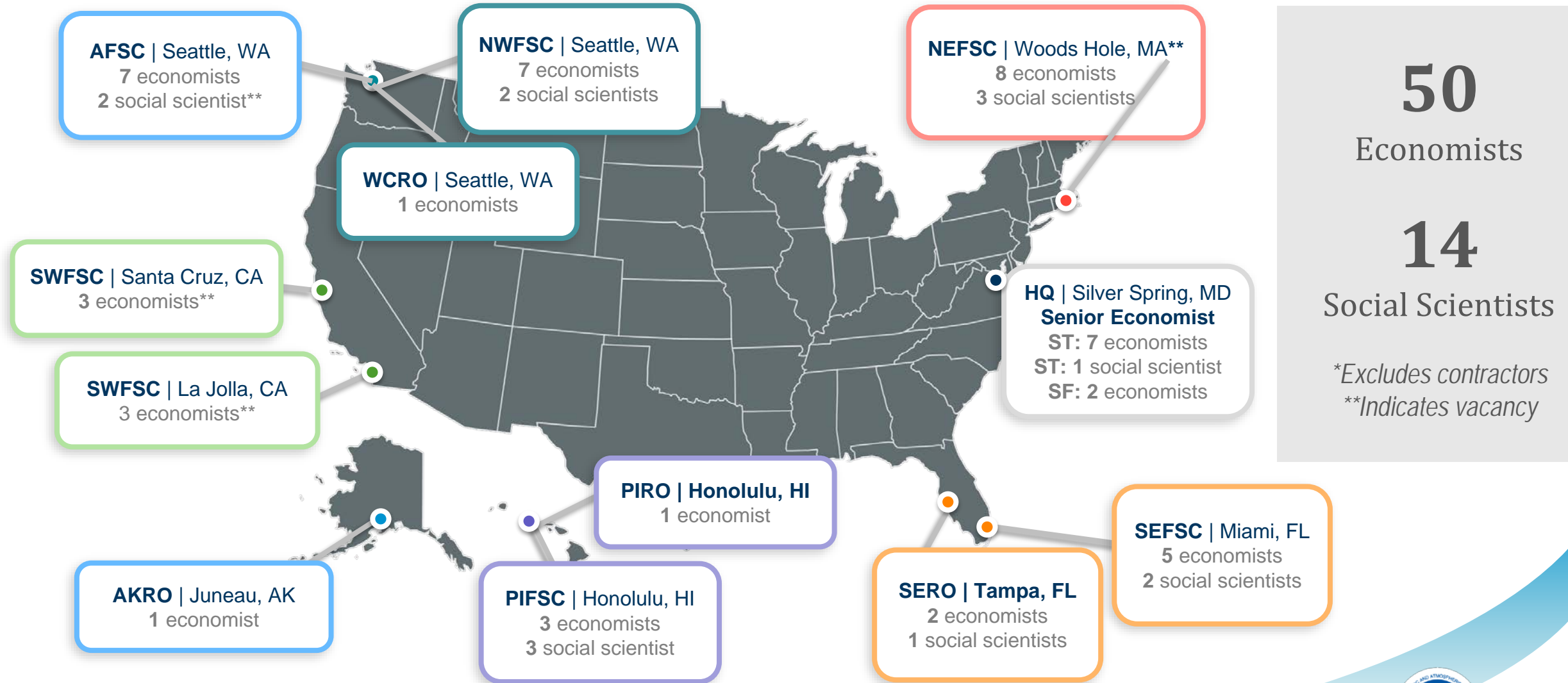
Economics and Social Analysis

Staff and Research Areas



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NMFS Economists and Social Scientists (2021)



Economic and Social Science Research Areas



Commercial Fisheries Economics

Recreational Fisheries Economics

Human Dimensions

Ecosystem Services

- Protected Species Economics
- Habitat Economics

Commercial Fisheries Economics Data



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Permits and Permit Application Information

Information gathered varies by region & fishery

May be issued to vessels or individuals

Collected for open access or limited access

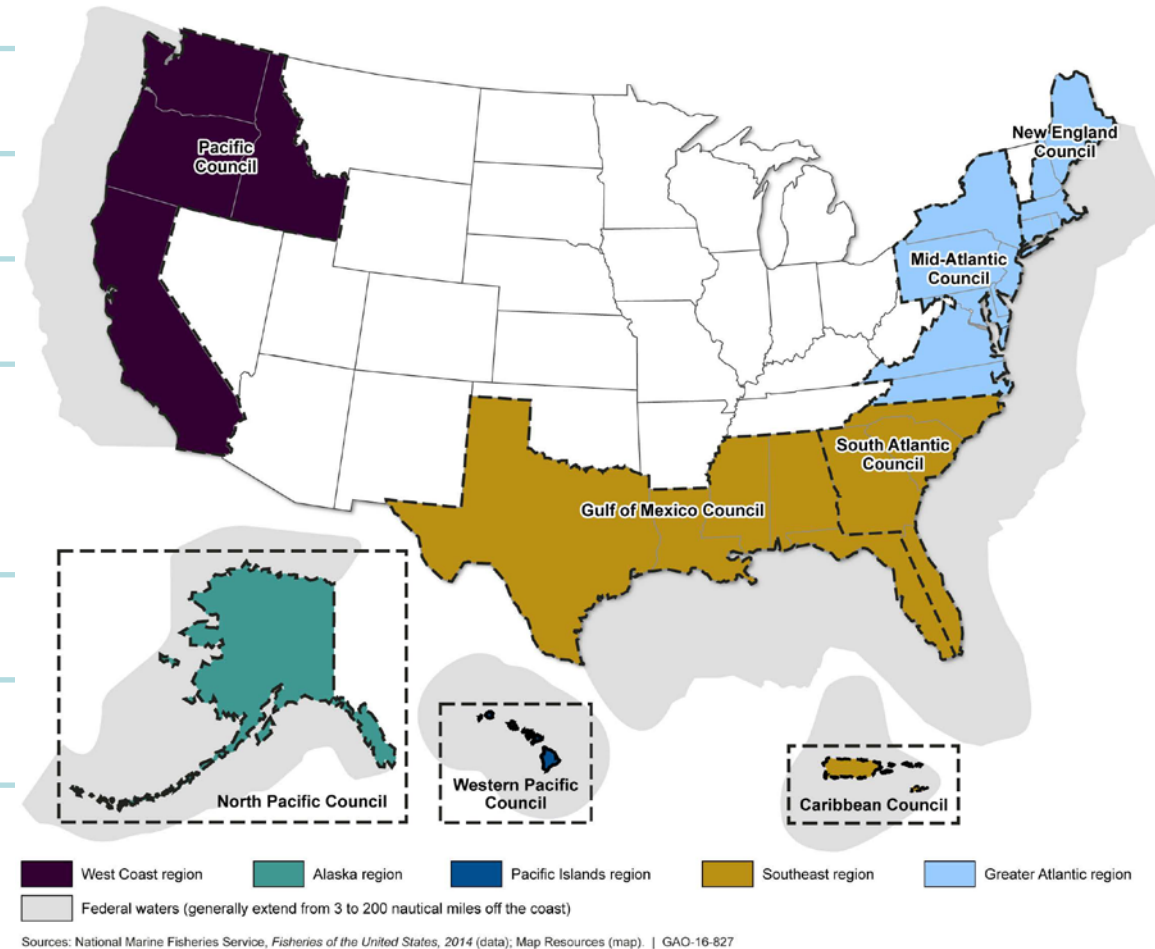
Catch share permits tied to allocations

Owner name and mailing address for permit
(May not be owners residence)

Home port/Primary or Hailing port

Vessel characteristics

Persons with ownership/shareholder interest
(not all regions or all fisheries)



Commercial Fisheries Economic Data

Fishing (ex-vessel) Landings & Revenue

- Thorough and regionally consistent for most basic variables (*volume, value, vessel type, gear, port*)
- Reporting is mandatory
- Collected by both State and Federal data collections
- Will often contain other data which may vary regionally (*crew counts, disposition of catch*)
- Highly aggregate data available at: [NOAA Fisheries FOSS database](#)

Vessel Trip Reports (logbook)

- Requirements vary by region and fishery
- State and/or federal data collection.
- Effort (e.g., # of Crew) and location
- Gear
- Retained and discards by species
- Port



Dealer or First Receiver – Quantities and value/price paid to vessel (fishticket)

- Dealer/distributor, processor, or auction
- Regional differences in State role in data collection
- Some regions identify vessel, others do not

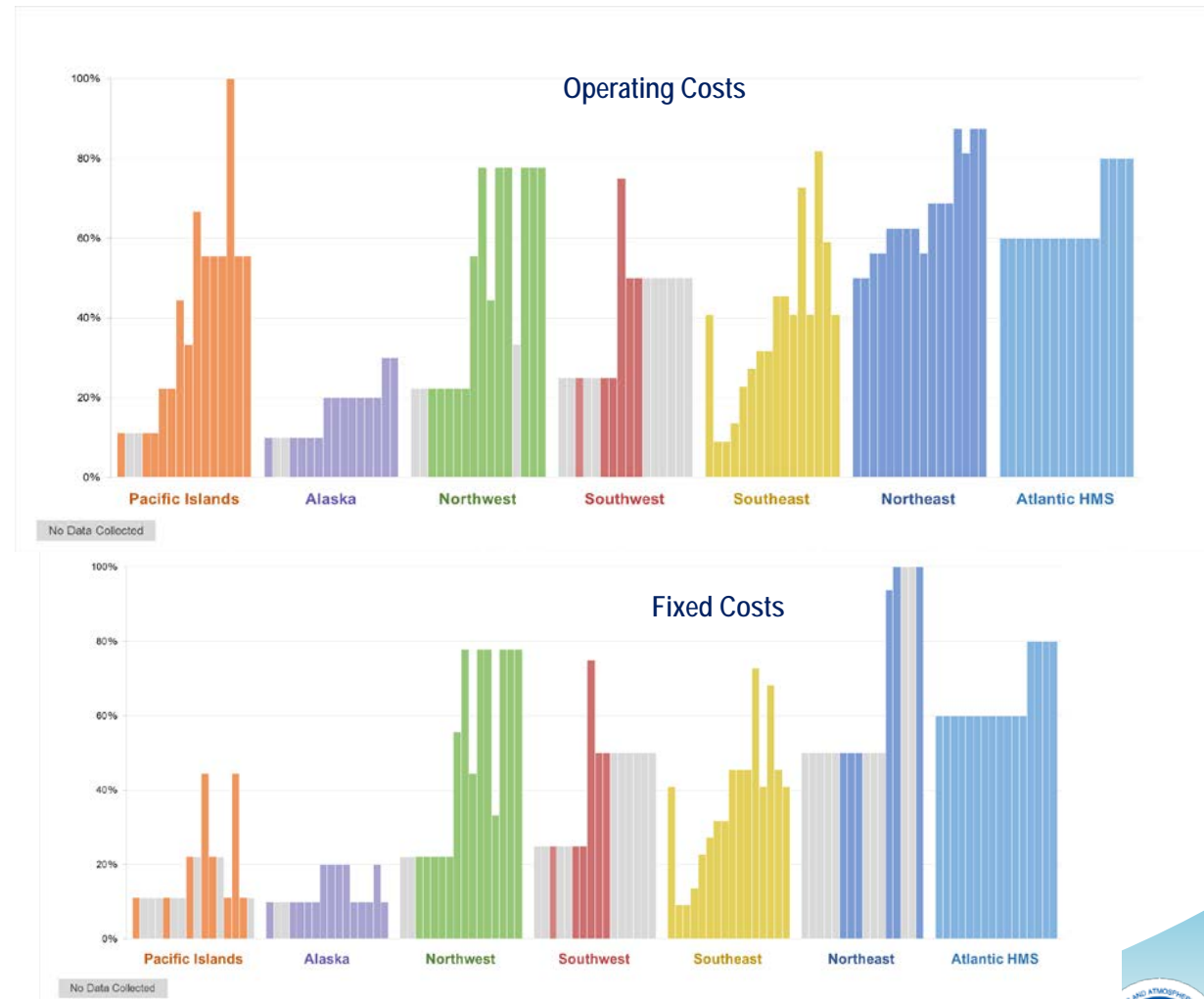


Collection of U.S. Commercial Fisheries Costs

Fishing Costs

- Collected for some fisheries, varies regionally (*Fuel, bait, crew remunerations, vessel fixed costs*)
- Reporting is a mix of voluntary and mandatory
- Generally collected through federal data collection
- Detailed documentation [Tech memo 154](#)

Percent of Fisheries with Fishing Vessel Cost Data (2001-2016)



Catch Shares

Regional differences in program design

- IFQ/ITQ or Cooperative/Sector
- Difference in reporting for seller vs. buyer
- Varied restrictions on leasing
- Varied ownership and quota consolidation restrictions
- May be intra-company or intra-coop swaps, barter, or transfers
- Detailed documentation in [Tech memo 145_0](#)

Region	Program
North Pacific	Alaska American Fisheries Act Pollock Cooperative
	Alaska Halibut IFQ
	Alaska Sablefish IFQ
	Central Gulf of Alaska Rockfish
	Non-Pollock Trawl Catcher/Processor Groundfish Cooperatives (Amendment 80)
	BSAI Crab Rationalization
Pacific	West Coast Sablefish Permit Stacking Program
	West Coast Trawl Rationalization Whiting and Non-whiting Directed
New England	Atlantic Sea Scallop General Category IFQ
	Northeast Multispecies Sectors
Mid-Atlantic	Mid-Atlantic Golden Tilefish IFQ
	Mid-Atlantic Ocean Quahog ITQ
	Mid-Atlantic Surfclam ITQ
Atlantic HMS	Atlantic Highly Migratory Species Individual Bluefin Tuna Quota
Gulf of Mexico	Gulf of Mexico Grouper-Tilefish IFQ
	Gulf of Mexico Red Snapper IFQ



FishSET – Spatial Modeling Toolbox

What tools are in the FishSET toolbox?



Data Tools

Data Management and Integration Tool

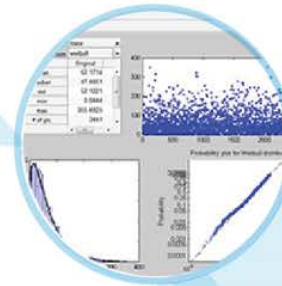
Facilitates the development and integration of datasets for spatial modeling

Monte Carlo Tool

Simulates real fisheries data while preserving confidentiality, allowing better model testing and comparison.

Data Analysis and Mapping Tool

Enables graphical and geographic data viewing and prepares data for spatial modeling



Model Tools

Model Design and Selection Tool

Enables modeling of different combinations of variables and models

Modeling Tool

Runs standard, cutting-edge, and user-designed models

Model Comparison and Reporting Tool

Provides an extensive comparison of model performance and summarizes data, models, and results



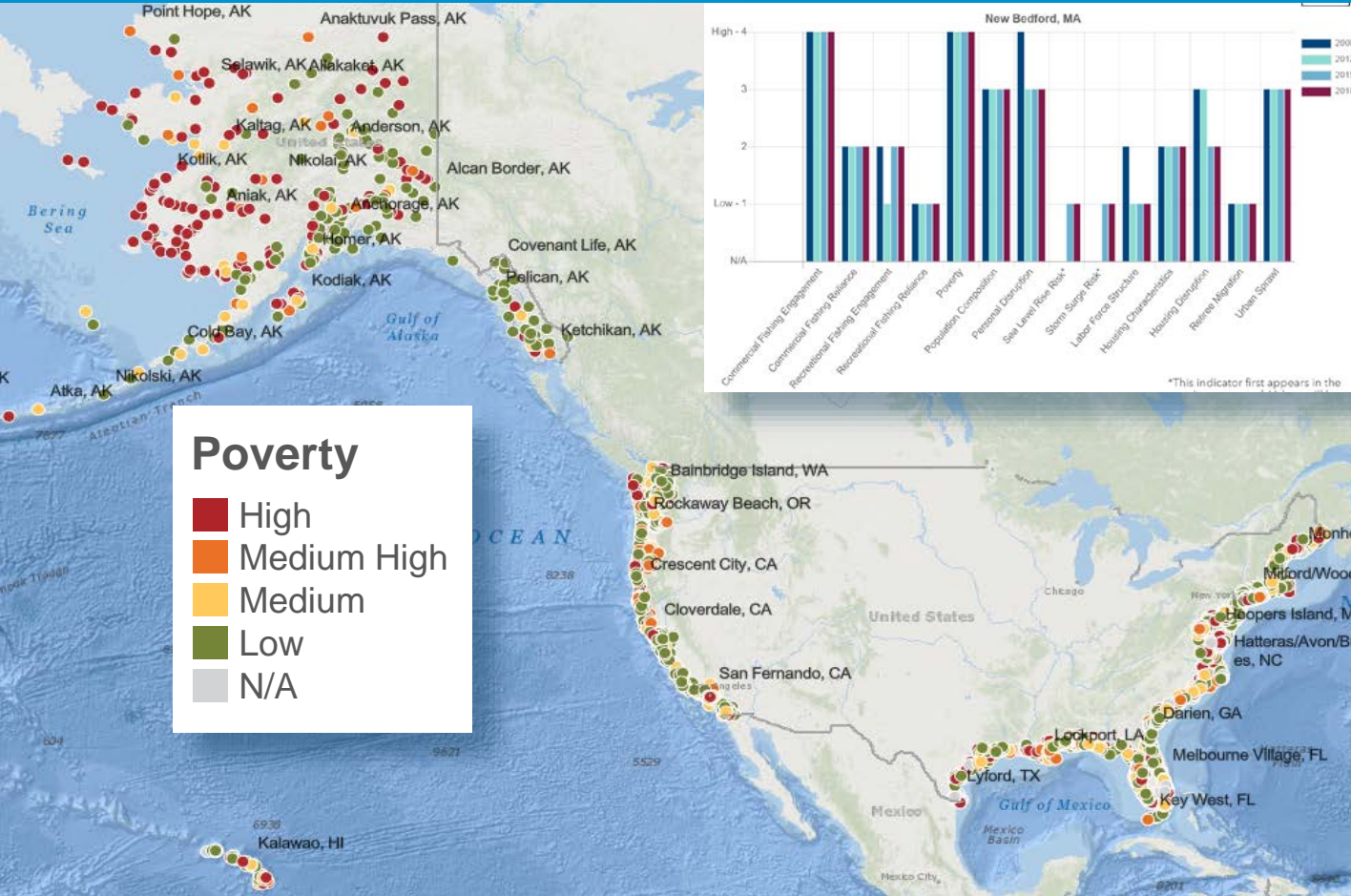
Policy Tool

Policy Simulation Tool

Predicts location choices and estimates policy impacts

Social Indicators for Coastal Communities Toolbox

Community Social Vulnerability Indicators (CSVI)



14 indicators
24 states
4,600 communities



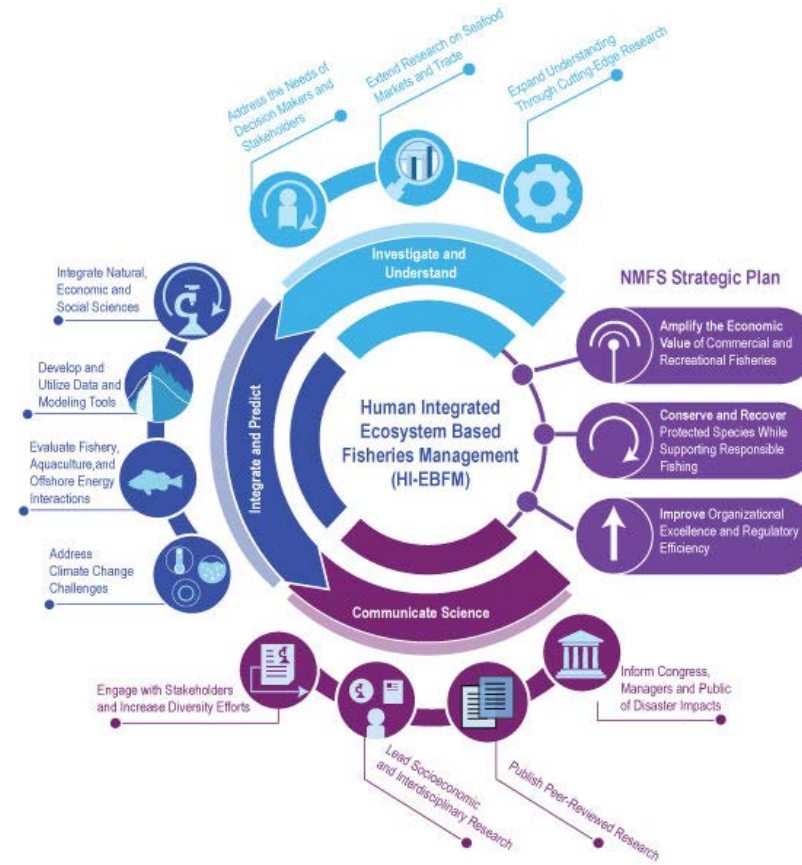
Indicator Categories

- Fishing Dependence
- **Environmental Justice**
- Gentrification Pressure
- Economic
- Climate Change Risk

Users

- Fishery managers
- Social scientists
- Stakeholders
- Academics

Human Integrated Ecosystem Based Fisheries Management (HI-EBFM)



HI-EBFM Goal 3: Monitor, assess and predict seafood markets, consumer preferences, and trade dynamics.

The Program conducts analyses to understand the markets for finfish, shellfish, and other marine resources. This includes the interaction between U.S. managed capture and aquaculture resources with foreign supplies, consumer preferences, direct markets, market structure, and seafood labeling. These studies cover markets at the retail level as well as other levels in the supply chain.

Priority Research Activities

- Construct seafood demand models that forecast how prices will be affected by changes in supply due to shocks such as fuel price changes, species catchability, or a regulatory action such as a change in fishing quota.
- Collect and analyze data on consumer seafood preferences. Areas of focus include sustainability certification, wild capture and aquaculture, and the incidence of price premiums throughout the supply chain.
- Summarize and describe the U.S. role in the global seafood trade over time including examining a) the interaction between U.S.-managed resources and foreign supplies, aquaculture, direct markets (e.g., consumer supported fisheries), market structure, and seafood labeling; and b) how these trends are influenced by changes in demand, and fishery and trade policies such as tariffs and import restrictions.



Questions?

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