



NOAA
FISHERIES

NMFS and External Partner Data Uses, Strengths/Weaknesses of Existing System, and Future Characteristics

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Needs Based Approach

- Comprehensive needs analysis
 - All affected partners
 - All fisheries dependent data in the Northeast
- Identify “generic” needs
 - Decoupled the need from the data source/mechanism
 - Identify best source of data
 - Recognize redundancies
 - Streamline data flow processes
- Identify generic data uses
 - Organization
 - Context
- Identify the necessity of the use
 - Validate the reason for the need

Identifying Current Data Uses and Needs

- Survey/interview questions
 - What type of information do you need to know about fisheries operations?
 - For what purpose do you use fishery dependent data?
 - Why is it important to have access to this type of information?
- Determined 5 fundamental static uses
 - Identified why the use is necessary
 - Identified the information needed to perform the use

Fundamental Data Uses

1. Population Estimation
2. Management and regulation evaluations
 - Existing and proposed management measures
3. Quota monitoring
4. Compliance monitoring
 - Federal/state regulations
 - International measures
5. By-catch and discard monitoring
 - Protected species and marine mammals
 - By-catch species

Population Estimation

Why is this necessary?

- Magnuson-Stevens Fishery Conservation and Management Act
- Highly Migratory Species Stock Assessment and Fisheries Evaluation (HMS SAFE)

What data are needed?

- Permit information (vessel, dealer, and/or operator)
- Vessel characteristics
- Gear used, including detailed characteristics
- Environmental (temperature, depth)
- Effort (time fished, quantity of gear fished, days absent)
- Area fished
- Amount species caught (landed, personal use, discarded)
- Species biological information (age, length, sex)

Management and Regulation Evaluation

Why is this necessary?

- Magnuson-Stevens Fishery Conservation and Management Act
- Regulatory Flexibility Act/E.O. 12866 (economic analysis)

What data are needed?

- Permit information (vessel, dealer, and/or operator)
- Allocation
- Gear used, including detailed characteristics
- Effort (time fished, quantity of gear fished, days absent)
- Area fished
- Amount species caught (landed, personal use, discarded)
- Port (home, sail, and/or landing)
- Costs, market price, vessel revenue

Quota Monitoring

Why is this necessary?

- Magnuson-Stevens Fishery Conservation and Management Act

What data are needed?

- Permit information (vessel, dealer, or operator)
- Sector rosters
- FMP, including exemptions and sub-programs
- Gear fished, including detailed characteristics
- Area fished
- Amount species caught (landed, personal use, discarded)
- Port (home, sail, and/or landing)

Compliance Monitoring

Why is this necessary?

- Magnuson-Stevens Fishery Conservation and Management Act
- Endangered Species Act & Marine Mammal Protection Act
- Northwest Atlantic Fisheries Organization (NAFO)

What data are needed?

- Permit information (vessel, dealer, and/or operator)
- Sector rosters
- FMP, including exemptions and sub-programs
- Gear used, including detailed characteristics
- Effort (time fished, quantity of gear fished, days absent)
- Area fished
- Amount species caught (landed, personal use, discarded)
- Port (home, sail, and/or landing)

By-catch and Discard Monitoring

Why is this necessary?

- Endangered Species Act & Marine Mammal Protection Act
- Magnuson-Stevens Fishery Conservation and Management Act
- National By-catch Report (NBR)
- Standardized By-catch Reporting Methodology (SBRM)

What data are needed?

- Permit information (vessel, dealer, and/or operator)
- FMP, including exemptions and sub-programs
- Gear used, including detailed characteristics
- Effort (time fished, quantity of gear fished, days absent)
- Environmental (temperature, depth)
- Area fished
- Amount species caught (landed, personal use, discarded)
- Species interactions
- Species biological information (age, length, sex)

Additional Data Uses

- Data requests
 - Confidential and Non-confidential
 - Congressional reports and inquiries
- Research
 - Mesh/gear selectivity
 - Effects of closed areas
- Fishing trends
 - Understand real-time trends
 - Understanding fishing operations
- Cost recovery
- Economic performance indicators
- IFQ transfers/leases/allocations
- Eligibility determinations

Additional Mandates, Laws, and Agreements

- Fisheries of the United States (FUS)
- Freedom of Information Act (FOIA)
- Memorandum of Understanding (MOU)

Identifying Strengths and Weaknesses of Existing System

- What is working and what needs to be maintained
- What is *NOT* working and needs to be improved

Strengths of the Existing System

- Long time series of fisheries dependent data
- Comprehensive 4 – source data system
 - Vessel (effort, gear, area, catch, socio-economic)
 - Dealer (landings, product type, value)
 - Observer (biological, operational, socio-economic, discarded catch, species interactions, detailed gear, detailed position)
 - Port samples (length, age)
- Outreach
- Partnerships with other agencies/organizations

Weaknesses of the Existing System

- Lack of integration
- Redundant systems
- Lack of enforcement of existing requirements
- Insufficient precision of VTR area fished
- Poor communication among staff
 - Lack of metadata
 - Undocumented roles/responsibilities
 - Undocumented data catalog
 - Reporting instructions not clear
- Data are not available timely
- Data are not accessible
- Inconsistent data outputs

Future System Characteristics

- Integrate fishery dependent data systems
- Standardize data formats, codes, methodologies, and definitions
- Collect and transmit data electronically
- Automate validation processes
- Reduce manual entry where possible
- Provide data in a timely manner to meet stakeholders' needs
 - All sources of fishery dependent data
 - Self-service data queries via online portals

Future System Characteristics

- Data is available in one location
- Data is controlled by one entity
- Singular data entry where elements are collected only one time
- Universal data collection: same basic/fundamental data should be collected from all fisheries
- Flexible systems that can adapt to changes
- Retain raw data and track all changes made to the data

Future System

Make recommendations to achieve identified characteristics and identify best ways to collect data in an efficient manner to minimize burden/cost, improve accuracy and compliance, and only collect the data that is needed and will be used.