Fisheries Information System Program

NOAA

The FIS Mission

In order to support sound science and effective stewardship of our living marine resources, we work collaboratively through partnerships to provide every customer with easy access to comprehensive, high-quality, timely information on the nation's fisheries.

What FIS Does

Saltwater fisheries data collection, reporting, analysis and management are inherently regional functions. Each region, state and their respective fisheries, have unique data needs and management challenges. However, there is a growing demand for information that is more timely, accurate, interconnected, easily accessible and regionally comparable. This breeds the need for cross-regional strategies to capture and share best practices, spark innovation, integrate information and facilitate coordinated priority-setting.

We foster partnerships so that all stakeholders benefit from the findings of FIS pilot projects and research studies.

Under NOAA Fisheries' Office of Science and Technology, the FIS program's collection of cross-functional teams coordinate and support projects and initiatives that:

- Improve data collection processes and promote efficient data integration.
- Develop relationships among data providers, managers and users to explore, test and share ideas to address common issues and challenges.
- Demonstrate proof of concept and create on-the-ground realities to better collect, manage and disseminate data.

FIS fosters partnerships among Fisheries Information Networks, NOAA Regional Offices and Science Centers, state agencies and other organizations. At a functional level, this approach enables stakeholders to benefit from the findings of pilot projects and other studies, whether conducted in a nearby state or across the country.

In terms of mission, these collaborations are helping to bridge knowledge gaps, improve information flow and bring disparate parties together in a community of practice to meet common fisheries data needs.
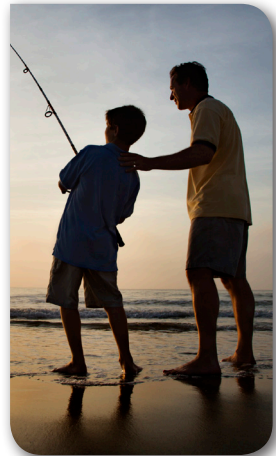
FIS Product and Initiative Highlights

The **Fisheries One Stop Shop (FOSS) tool** is a portal for summarized U.S. commercial landings data. By aggregating data from each Fishery Information Network, it makes landings information for the entire country easily accessible in a central location. Among many other benefits, this provides a coherent picture of domestic commercial fishing activities and facilitates comparisons among regions.

FIS' **Quality Management (QM) Professional Specialty Group** is focused on helping organizations use principles and strategies that lead to the production of quality data, reports and other products that meet customer requirements. One of the products that the group is working on is a Quality Improvement Toolbox for national and regional data collection programs to improve data, activities and processes. The group supports regional trainings, including one in the Greater Atlantic Region that resulted in the development of quality processes that allow data quality issues to be addressed in real time.

The **Electronic Reporting Inventory** is a comprehensive list of electronic reporting systems used by NOAA Fisheries. The inventory contains detailed information about each system, including operational status, characteristics of the relevant fleet, types of data collected, transmission mechanism and more. The list is maintained by the Electronic Reporting Professional Specialty Group and is housed on an internally accessible Google site. The inventory serves two key functions: It shares available system information across Regions and platforms, and it identifies technology solutions to aid in developing a road map of best practices and lessons learned as NOAA Fisheries continues to expand the use of electronic reporting.

InPort is the metadata catalog for NOAA Fisheries. InPort allows NOAA Fisheries and its state and regional partners to share essential information about fisheries data and programs, fulfilling a vital supporting role in fisheries management. It also plays a key role in meeting the Presidential directive – and the growing public expectation – that all federally funded data be easily accessible. Equally important, by standardizing and centralizing NOAA metadata storage and access, InPort is a critical driver of FIS data quality initiatives and data management best practices.

FIS Program Structure

The FIS Program is an initiative of NOAA Fisheries that resides in the **Office of Science and Technology**. Program sponsors include the **Deputy Assistant Administrator of Regulatory Programs**, the **Director of the Office of Science & Technology** and the **Chief Science Advisor**. FIS priorities, activities and program funding are administered by a **Program Management Team** consisting of representatives from NOAA Regional Offices and Science Centers, as well as the Fisheries Information Networks.

Program Management Team

Sets policy and budgetary direction.

Core Business Team

Group within the PMT responsible for overseeing implementation.

Program Management Office

Manages day-to-day operations of the PMT.

Program Director

Serves as liason between PMT and NOAA leadership.

Program Manager

Manages operations of the FIS Program.

FIS Program Participants

FIS is a national collaboration among federal, regional and state marine fisheries agencies and partners. Participants include the NOAA Offices of **Sustainable Fisheries**, **Protected Resources**, **International Affairs** and the **Chief Information Officer**; **Regional Offices** and **Science Centers**; and **State and Territorial Marine Fisheries Science and Management Agencies**.

In addition, the **Fisheries Information Networks**, or FINs, play a critical role in the FIS Program as the link to state and regional data collection programs. FINs act both as key data contributors and as liaisons for identifying and working to meet state and regional data needs.

Professional Specialty Groups

The PSGs are made up of subject matter experts drawn from NOAA and partner agencies. Their role is to provide technical expertise and help guide priority-setting in each specific area.

Electronic Reporting

The ER PSG supports national electronic reporting capabilities. The group prioritizes projects that support cross-regional efforts for ER, including identifying needs and assessing gaps in information.

Quality Management

The QM PSG works to incorporate quality management concepts and tools into fisheries data management by providing expertise, resources and trainings within and outside of the FIS Program.

Fisheries One Stop Shop

The FOSS PSG guides the development of the dynamic Fisheries One Stop Shop tool, which allows stakeholders to access commercial landings data from regional systems on a single web platform.

Managing the Data Lifecycle

FIS-supported work identifies and promotes best practices and innovative approaches to managing each step in the data lifecycle – from evaluating how data is collected at its source, to ensuring QA/QC throughout aggregation and analysis, to enhancing the way information is managed and shared, to maximizing its value for marine stewardship through broader, more efficient and more accessible dissemination.

Identify/Report

Work with partners to develop recommendations for collecting data.

Initiatives like the Pacific Electronic Fish Ticket program and the Greater Atlantic Region Logbook Development project are examples of our collaborative approach to recommending new ways to collect data from the commercial and recreational sectors.

Access/Disseminate

Support marine stewardship and sustainable ecosystems.

Data is only as useful as its ability to be accessed. Products like our growing metadata warehouse, InPort, help to make it easier to find, sort, compare and analyze fisheries statistics and research.

Capture/Audit

Aggregate data; Perform QA/QC.

Several FIS projects are evaluating ways to more efficiently and effectively capture data and integrate it into central platforms. For instance, the Alaska tLandings system enables tender vessels to capture catch data electronically at its source, providing more timely and accurate harvest information for in-season management and long-term analysis.

Information Management

Establish consistent, regionally applied data quality best practices.

We share and facilitate regional implementation of best practices through the FIS Data Quality Management Initiative. At the operational level, one of the goals of the Fisheries One Stop Shop is to create a common vocabulary of data, species, gear and fishing methods to promote regional comparability.

Case Study
Integrated Atlantic HMS Information System

Overview

This project highlights how the Fisheries Information System Program helps **identify needs and create nationally and regionally collaborative solutions** *that lead to improved data access and quality.*

The Challenge

Highly Migratory Species pose a data and management challenge by the very nature of the fishery. These challenges are compounded by the numerous, disparate data sources that contain HMS information – often running on outdated technology and unable to communicate with one another.

At the Southeast Fisheries Science Center (SEFSC), information related to Atlantic HMS has historically been managed and stored in multiple data systems, each with independent information files, programming platforms and databases.

Atlantic HMS Data Sources Integration Schedule

Phases 1 and 2 (Complete):
• Research and development.

Phase 3 (Complete):
• Accumulated Landings Reporting System.
• Fisheries Logbook System.

Phase 4 (Ongoing):
• Dealer Landings Data.
• ACCSP (SAFIS) Dealer Electronic Reporting.
• GulfFIN & ACCSP historic landings data for SE Region.

Phase 5 (FY14 Funding):
• Recreational Billfish Survey System.
• Shark Observer Program System.
• Pelagic Dealer Compliance System.
• Gillnet Observer Program.
• Pelagic Observer Program.
• Dealer Management System.

The FIS Approach

Led by the SEFC, an FIS-funded team is working on a multi-year, multi-phase project to make all Atlantic HMS data accessible in one place. This phased-in approach of incremental improvements allows designers to ensure that existing functionality in each data system is preserved or enhanced, while at the same time enabling data users to take advantage of new efficiencies as they come online.

The Outcome

Two initial SEFSC HMS data sources – Accumulated Landings Reporting System (ALS) and Fisheries Logbook System (FLS) – were integrated into the new data warehouse.

The end goal of the project is to integrate the entire system with the Fisheries One Stop Shop tool for even broader access and comparative value.