

Fisheries Information System Program 2013 Annual Stakeholder Update



NOAA FISHERIES

NOAA Fisheries is an agency within the Commerce Department's National Oceanic and Atmospheric Administration (NOAA). NOAA's mission is to understand and predict changes in the earth's environment and conserve and manage coastal and marine resources to meet our nation's economic, social and environmental needs. The NOAA Fisheries Service provides world class science and stewardship.

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Letter from the Program Director

Welcome to the inaugural Fisheries Information System Program annual stakeholder update. The purpose of this document is to engage with NOAA leadership, partners and stakeholders on the multifaceted work of the FIS Program, including an overview of the past year and a discussion of priorities for the future.

In Fiscal Year 2013, FIS distributed approximately \$2 million to Regional Offices, Science Centers, Fisheries Information Networks, states and the Office of Science and Technology to fund projects targeting an array of data issues. A complete list of funded projects can be found on Page 3. A similar amount is being distributed in FY 2014.

Programmatic achievements for the year included continued progress on our nationwide data aggregation and access initiatives; supporting relationships among the federal, regional and state partners that comprise the FIS Program; promoting a culture of quality and the tools necessary to maintain that culture; and expanding our commitment and ability to share the important work of the FIS Program within NOAA and across a broad community of stakeholders.

The Fisheries One Stop Shop, or FOSS, data sharing tool is now being used as a portal through which customers can easily gain access to summary level statistics on U.S. commercial and recreational fishery landings of different fish and shellfish species or species groups. It pulls and aggregates data from each of the regional Fishery Information Networks, making national landings information available through a single source. Among many other benefits, this will enable accurate cross-regional summaries and comparisons (in an increasingly interconnected world of ecosystem management).

Created by FIS as a web-based system in which we can fully document and describe all of our fishery-dependent information assets, InPort will now grow as an important resource for institutions and organizations conducting or analyzing marine research as managers of fishery-independent data programs utilize the same system to provide

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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.



2013 PMT Meeting Review and Highlights

In August 2013, the Program Management Team (PMT) met to develop FIS-wide goals for the upcoming year and to prioritize projects to advance the overall FIS mission. Key priorities for Fiscal Year 2014 outlined at the meeting include:

Improving Data Collection and Access

Collection and access initiatives planned for 2014 fall into three broad categories:

- **Electronic reporting.** The PMT is working to develop and share technology standards and best practices for electronic reporting that can be adopted, modified and implemented to meet the unique needs of each region or fishery. The Electronic Reporting Professional Specialty Group (PSG) is regularly updating the inventory of ER tools it compiled in 2012. A complementary priority is to work closely with industry to create systems that increase efficiency and participation. An example of this strategy at work can be found in the tLandings case study on page 6.
- **Aggregating and sharing information.** One aspect of this work is the evolution of the Fisheries One Stop Shop Tool into a national database of all commercial landings, including highly migratory species data. In addition, FIS will provide support for existing regional data aggregation infrastructure and tools.
- **Working to balance access and privacy.** A major consideration in aggregating fisheries information is ensuring the privacy rights of data contributors. The PMT will work to evaluate current confidentiality

policies and provide a set of evaluations and recommendations.

Reinforcing a Culture of Quality Management

The PMT developed a strategy to expand quality management (QM) practices throughout existing and upcoming FIS projects. The Team charged the QM PSG to inventory current practices and outcomes; the PSG will then train and recruit “ambassadors” who will incorporate these practices across the FIS Program. As the emphasis on quality management continues to expand, the PSG is developing a dedicated website to become the central hub for all quality management materials, including a comprehensive QM toolbox for integrating practices and trainings into each project or initiative.

Promoting Effective & Active Leadership

The PMT is committed to fostering effective program leadership. Internally, the PMT is working to clarify and standardize the processes for setting priorities and awarding funds. Externally, the PMT will place a greater emphasis on engaging and communicating with NOAA leadership using the tools currently under development by the Communications and Education team. In addition, the C&E team will continue its work developing a comprehensive FIS Program marketing and communications plan.

Next Meeting

The PMT has rearranged its annual in-person meeting schedule to better coincide with NOAA budgeting cycles. The next one is tentatively scheduled for spring of 2015.

Program Director's Message (continued)

information about their assets.

Through national and regional meetings, workshops, trainings and similar activities, FIS serves as a major platform for collaboration across geography, agencies, sectors and disciplines. FIS plays a vital coordinating and convening role among NOAA Regional Offices and Science Centers; the Marine Fisheries Commissions; and the states to share best practices and lessons learned in meeting distinct data challenges. This work is further bolstered through close working relationships with each Fisheries Information Network (FIN). The FINs serve both as key data contributors, and as important channels for identifying and helping to set research, data-gathering and reporting priorities.

Throughout NOAA Fisheries – along with virtually

FIS-supported initiatives are helping NOAA Fisheries work toward effectively managing the challenges facing our living marine resources.

all government-funded research – there is a growing recognition of the expectation of our peers and the public for greater transparency in our data collection and information management practices and greater access to our data and data products. FOSS and InPort address this

need from a technical perspective, but the FIS Program also works to drive that transformation culturally.

Looking ahead, FIS will continue to refine the tools that we have already developed; fund critically needed and innovative field research; support

quality management initiatives and training; and advance emerging areas of interest such as electronic reporting and monitoring.

We can't eliminate all the challenges facing our living marine resources, but FIS-supported initiatives help NOAA Fisheries work toward effectively managing those challenges.

2013 FIS-Funded Projects

For a complete list of all FIS-funded projects, visit www.st.nmfs.noaa.gov.

Project Name	Description	Support for FIS Vision	Area of Impact
A Service Oriented Architecture for Enhancing Vessel Information in Catch Share Reporting	Create a vessel validation web service that can validate data in real time. Service will be developed for the Northeast Region and eventually made available to other regions.	Provide access to landings data attributed to a specific vessel in order to meet an emerging need created by catch share programs.	Northeast Fisheries Science Center
Pacific Coast IFQ Computational Video-Based Monitoring (CVM)	Develop a device that recognize species, determine if it can be used to identify the species of fish discarded, and then evaluate the potential of developing a system that automatically transmits the data collected.	Increase the timeliness and accuracy of estimates by producing real-time estimates of species, length, and potentially weight.	Northwest Region Office
InPort Application Maintenance, Support and Enhancement	Identify resources that need to be dedicated to InPort and work collaboratively between operations and technical teams to meet those needs. Re-engineer the InPort tool to be more user-friendly by providing a modern interface and increasing the efficiency of system maintenance.	Ensure InPort provides easily accessible data and metadata that meets the needs of users.	National
Pacific HMS Reporting	Build upon a multi-year effort to standardize HMS data collection and reporting using standard, automated summarization procedures.	Produce comprehensive, high-quality data on U.S. HMS fisheries to meet the needs of all customers.	Pacific Islands Fisheries Science Center and Southwest Fisheries Science Center
National Fisheries One Stop Shop (FOSS) – Effort Phase and Annual Operations and Maintenance	Part of a multi-year effort to resolve issues with producing estimates unique to each type of fishing, such as gear used and specific fisheries, and producing an estimate of the total number of vessels fishing.	Provide better, more detailed, easily accessible data to stakeholders on fishing effort.	National
Data Integration of Hopper Scale Weight with Landings eReporting Application	Determine the feasibility of using hopper scale weights to automatically capture species and delivery information with current electronic reporting systems.	Improve data quality and automate reporting to more efficiently collect and report data for management and the seafood industry.	Alaska Department of Fish & Game
PacFIN Upgrades	Update ability to meet PacFIN data users' needs by improving data quality; Improve user experience for internal and external query tools and improve the process of adding new data to the system.	Expand the usefulness of the PacFIN data warehouse by providing higher quality, more easily accessible data.	Pacific Fisheries Information Network
Quality Management RFP and Training	Provide a means for the FIS Quality Management Team to develop a well-scrutinized and improved RFP process for quality management projects/trainings. Quality Management Team Members (ambassadors) will continue to promote and recommend best practices, develop tools, and assist partners in improving their products and process.	Standardize improvements across Fisheries Management Councils by maintaining a consistent approach to quality management within NOAA that includes a set of tools and recommended approaches.	National
Integrated Atlantic Highly Migratory Species Information System – Phase 5	Build a Unified Data Processing and Reporting system for the Southeast region that can share HMS data with external systems, including the Fisheries One-Stop Shop System (FOSS).	Improve stakeholder access to integrated, comprehensive Atlantic HMS data in order to support HMS fisheries management.	Southeast Fisheries Science Center
Development of an Electronic Logbook Study Fleet in the Reef Fish/Snapper-Grouper and Pelagic Longline Fisheries	Explore the utility electronic logbook software options for vessels in the South Atlantic snapper-grouper, Gulf of Mexico reef fish and Atlantic pelagic longline fleets.	Meet emerging management needs for more timely data with finer spatial resolution with an electronic reporting system that is endorsed and trusted by the industry.	Southeast Fisheries Science Center

Professional Specialty Group (PSG) Updates

The FIS professional specialty groups (PSGs) convene experts from multiple disciplines in order to address a specific need or issue that's identified by the FIS PMT. The PSGs are composed of representatives from NOAA Fisheries Headquarters, Regional Offices, Science Centers, FINs and state partners.



Electronic Reporting PSG

Priorities & Goals:

The ER PSG supports national electronic reporting capabilities, as well as electronic monitoring (EM) through improved integration on projects and teams. The group prioritizes projects that support cross-regional efforts for electronic reporting, including identifying needs and assessing gaps in information. The ER PSG has been focused on the involvement and engagement of electronic reporting personnel across the agency, creating a “community of practice” and sharing lessons learned. The group documents existing ER systems, and is working to create a roadmap for meeting cross-agency standards based on these shared best practices.

Key Milestones:

The ER PSG served as a liaison between the regions and Headquarters on ER-related actions, and it received FY14 funding for five proposed projects. These projects include Electronic At-sea Data Entry for the Commercial Small-boat Fleet, West Coast Groundfish Observer Program Digital Data Dissemination, Cost and Benefit Analysis of the eLandings Interagency Electronic Reporting System, Development of a new Gulf of Mexico Shrimp Data Entry System, and Washington Commercial Fisheries Database Redesign and Electronic Fish Ticket Expansion.



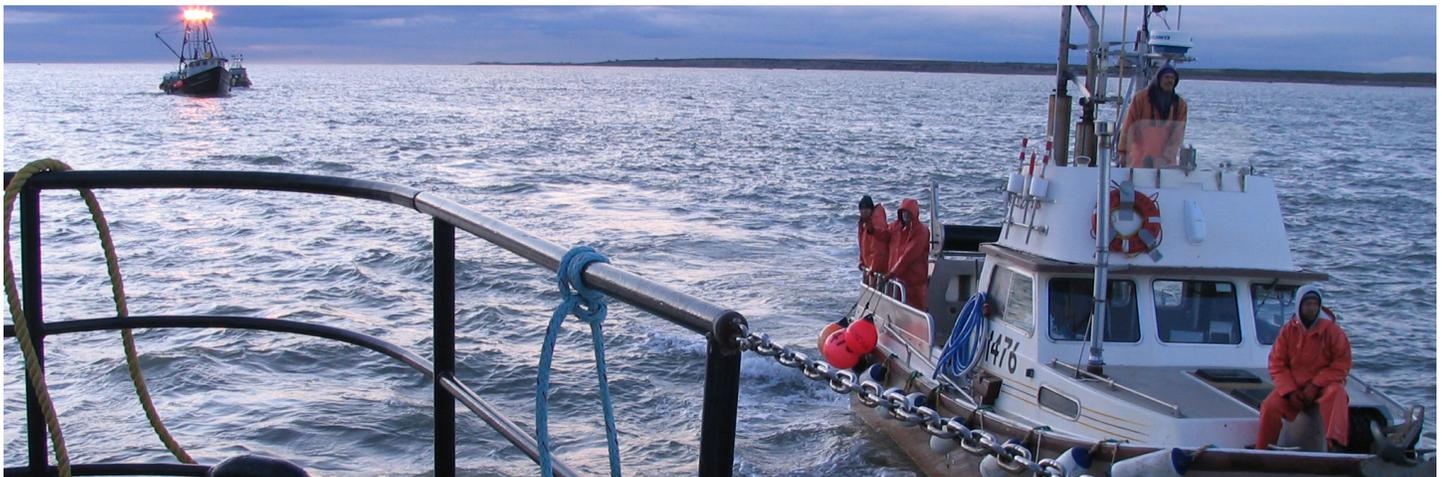
Access and Dissemination PSG

Priorities & Goals:

The AD PSG guides the development of the dynamic and evolving Fisheries One Stop Shop tool, which allows stakeholders to access and compare commercial landings data from different regional data collection systems on a single web platform. The PSG also serves as the liaison between business users and the technical team to support the development process. The group is working to soon replace the commercial landings query tool with the FOSS tool. The AD PSG is exploring ways to count the number of unique vessels fishing.

Key Milestones:

The PSG created a new technical back end and enhanced the public-facing front end for the FOSS system. The latest FOSS version will dramatically increase future flexibility of use and create opportunities for significantly better data access. The PSG's Species Working Group has also made substantial progress in mapping specific species to larger taxonomic groups, making confidential species rollups and custom data queries possible.



Professional Specialty Group (PSG) Updates (continued)



Permits PSG

Priorities & Goals:

The Permits PSG was created to serve as a forum for members to discuss cross-regional permit issues and to coordinate permit-related issues within or outside the FIS Program. The group's focus in 2013 was to ensure clarity of jurisdiction that easily directs users to the appropriate regional permit website. This includes enhancements to the National Permit System (NPS) website to improve the way users find and access appropriate regional permit information, and to more effectively display permitting information.

Key Milestones:

In 2014, PSG members rolled out a public online version of the National Permit System, used in the West Coast Region for much of their federally permitted fishing activities and by the Pacific Islands Region for one permit. In addition, other regions issuing High Seas Fishing Compliance Act permits continue to use NPS. In keeping with the FIS model, the formal role of the PSG – responding to a data need, developing potential solutions, testing those solutions to identify the appropriate approach, and overseeing initial implementation of that approach – has concluded. The Office of the Chief Information Officer will now take on the role of maintaining the system. Working with former PSG members and the NPS contractor, OCIO created a user group to evaluate opportunities and share best practices for refining use of the system and expanding the system into other Regions and national permit programs.



Quality Management PSG

Priorities & Goals:

The QM PSG works to incorporate quality management concepts and tools into fisheries data management by providing trainings within and outside of the FIS Program. Ongoing trainings across the nation equip participants with the tools – and the skills to use them – to initiate process improvements. Long-term objectives include fully engaging Fisheries Management Council and FIN leadership in quality management practices; creating a comprehensive “QM Toolbox” of strategies, tactics and products to facilitate the adoption of QM practices among wider audiences; and recruiting and training teams of individuals to become “QM Ambassadors” to champion change and facilitate cultural transformation. Short-term priorities include continued development of PSG QM metrics, website development, continued RFP development, and an inventory of current QM practices and outcomes.

Key Milestones:

The QM PSG held regular monthly conference calls and met face-to-face to develop measures and metrics of quality. The group continued development of a strategic plan and redefined roles and responsibilities that align with the “Hoshin” process, the planning and management system adopted by the PSG; Hoshin involves a seven-step process focused on clear goal-setting and ensuring that all of an organization's resources and activities are explicitly linked to meeting those goals. The PSG also streamlined the QM RFP process, and made strides in bringing the concept and practice of quality management beyond the FIS Program through workshops and ongoing interaction with different Councils. Tangible outcomes of this work have included FMC process documentation and process improvement, as well as the identification and improvement of gaps and redundancies in data collection. Membership in the PSG grew in 2013, and work has started on a dedicated quality management website.



Case Study: tLandings in the Alaska Fishery

This project highlights how FIS helped to demonstrate proof of concept that led to a cascading series of electronic reporting solutions. Starting with a small grant from FIS for a feasibility study, the tLandings program is now a widely supported, efficient electronic reporting solution for Alaska's tendered fisheries.

Overview

More than half of commercially harvested seafood in the United States is harvested in Alaska. The Alaskan fisheries range from small boat salmon fisheries to large vessel at-sea catcher processors. As far back as a decade ago, it was clear that the volume and value of these fisheries justifies the pursuit of electronic reporting systems.

However, the sheer size and geography of the state make the implementation of electronic reporting challenging. Ports are separated by vast distances, and many are not accessible by road. Technical challenges, such as limited access to the internet and even telephone service, needed to be overcome before such a system could be put into place.

The FIS Approach – Micro-Grant Funding to Demonstrate Proof of Concept

Working through the FIS project funding protocols, the State of Alaska Department of Fish & Game received a grant to fund a feasibility study to determine whether there was a workable electronic reporting solution for tendered fisheries. The feasibility study found that such a system could be implemented, and presented several options.

tLandings Data Capture Flow

Catch is vacuumed from catcher vessel holding tank to the tender vessel where it is sorted and weighed.



Species, delivery condition and weights are recorded on the back deck tally. Tally is transferred into the tender vessel's galley and entered into the tLandings application, creating a fish ticket.



Leveraging Resources

Targeted FIS micro-grants provided the seed money that ultimately enabled the full development of the tLandings program.

Micro-Grant Amount	Funded Activity
\$28,000	Data integration documentation and workshop
\$35,000	Incorporate economic reporting with our electronic reporting system
\$34,000	Integrate hopper scale weights with the electronic reporting system.

The Outcome

The findings of that initial study led directly to the allocation of an additional grant by the Alaska State Legislature totaling \$500,000 to develop and implement an electronic data collection system for the state's tendered fisheries. What emerged was a program called tLandings, an application that is loaded onto a thumb drive and prepopulated with authorized users, the processor's vessel list, species and price list.

tLandings enables tender vessels to accurately and electronically measure their catch at its source, regardless of whether they have an internet connection. (The tender vessel is an agent for the shoreside processor and is used in many quickly executing fisheries such as groundfish, shellfish, salmon and herring.) As the adoption of tLandings has spread, additional FIS funds have been used to identify ways to further streamline and integrate the data collection and reporting process between the state and industry.

Results

As of January 2014, approximately 55 percent of all tendered salmon and groundfish landings within the State of Alaska are documented using the tLandings application. This represents 95,000 electronically captured salmon landings within the 2012-13 seasons.

The tLandings system provides timelier and more accurate harvest information for in-season fisheries management, as well as long-term analysis. Electronic reporting also provides industry with greater efficiencies that have resulted in significant cost savings. The majority of savings, for both the Department and industry, is associated with one-time data entry and improved data quality.