



NOAA FISHERIES

Fisheries Information System Program

The FIS Mission

Use partnerships to facilitate the collection, processing, and dissemination of fisheries information by investing in improvements to address: data gaps, data quality, efficient technology for data collection and integration, and effective coordination and communication.

FIS Program Contacts

Michael Liddel
Program Director
michael.liddel@noaa.gov

Lisa Peterson
Program Manager
lisa.peterson@noaa.gov

Lily Rios-Brady
Program Coordinator
lillian.rios-brady@noaa.gov

[fisheries.noaa.gov/national/
commercial-fishing/fisheries-
information-system-program](https://fisheries.noaa.gov/national/commercial-fishing/fisheries-information-system-program)



July 2024

Fisheries Information System Program Annual Stakeholder Update

Program Overview

The Fisheries Information System program (FIS) is a state-regional-federal partnership that supports sound, science-based fisheries management. The program does so by fostering cross-disciplinary collaboration and funding innovative projects to improve the quality of fisheries-dependent data.

Created by Congress under the Magnuson-Stevens Act, FIS is charged with building stronger connections among NOAA Fisheries headquarters,

science centers, and regional offices, along with councils, commissions, Fisheries Information Networks (FINs), and state partners. FIS addresses the inherently regional nature of fisheries-dependent data needs through a shared governance structure that promotes information-sharing and collaboration across professional disciplines and geographic boundaries.

2023 LEGACY DATA SYSTEMS WORKSHOP

BACKGROUND

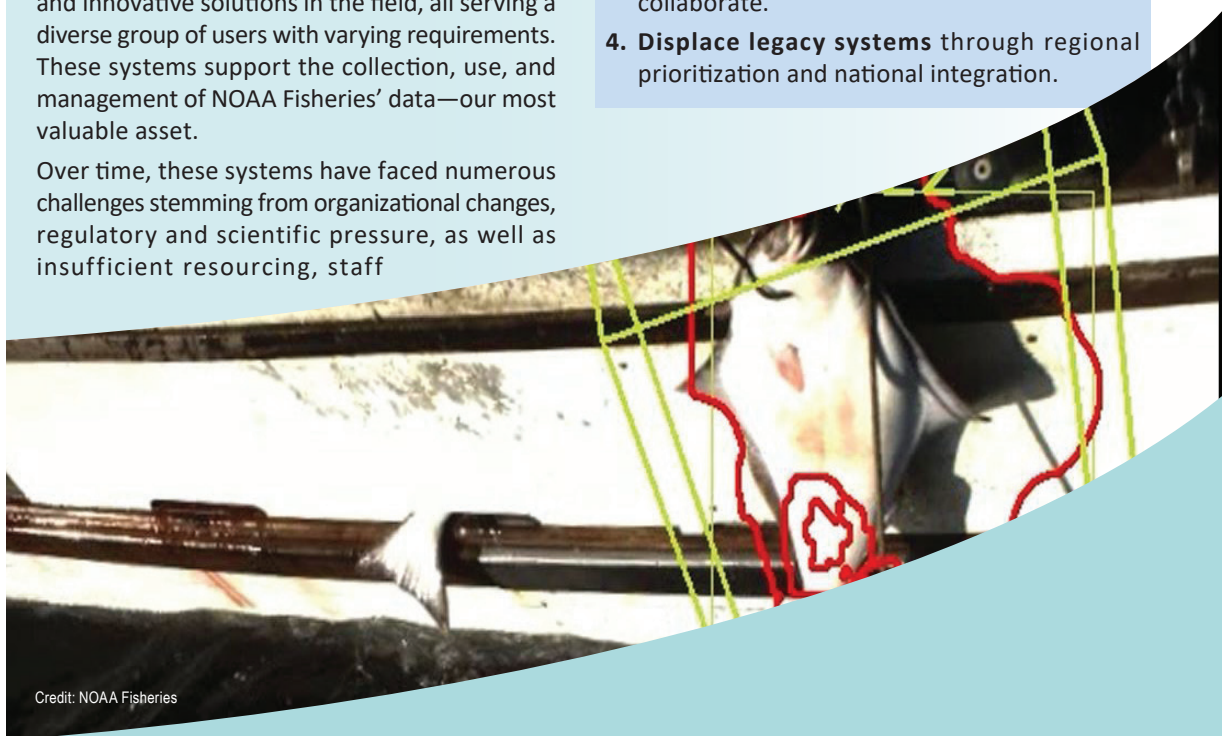
In response to existing and emerging data modernization needs, FIS held a Legacy Data Systems Workshop in 2023 that brought together experts from across NOAA Fisheries and our partners to discuss challenges and solutions. This workshop was the first step in developing a systematic approach to modernization that includes legacy data system displacement.

NOAA Fisheries' data and information systems are a complex mishmash encompassing a wide array of both new and legacy systems, including web applications, desktop applications, mobile applications, databases, and sometimes ad hoc and innovative solutions in the field, all serving a diverse group of users with varying requirements. These systems support the collection, use, and management of NOAA Fisheries' data—our most valuable asset.

Over time, these systems have faced numerous challenges stemming from organizational changes, regulatory and scientific pressure, as well as insufficient resourcing, staff

KEY RECOMMENDATIONS

1. **Inventory and assess** fisheries-dependent data systems.
2. **Develop best practices** for establishing product requirements, project management, and budgeting and contracting to create flexible, supportable products. Additionally, share best practices on methods for displacing legacy data systems while developing these modern systems. This includes developing cross-disciplinary teams.
3. **Establish common forums** for Fishery managers and IT professionals to communicate and collaborate.
4. **Displace legacy systems** through regional prioritization and national integration.



Credit: NOAA Fisheries

turnover, expanding project scopes, resource limitations, and a lack of proper documentation. Consequently, many of these systems have accumulated a substantial amount of technical debt and have now reached the end of life. Furthermore, there are redundancies among some of these systems, both within and across different regions, and they often lack interoperability.

To add complexity, many of these systems are built with different technologies despite being closely dependent on one another, and are often maintained by individuals who are siloed from each other. Because these systems are tightly coupled, expensive modernization efforts may only partially succeed, or fail entirely.

In addition, when new functionality is required to meet new needs, often an entirely new system needs to be built. This cycle of creating more systems further makes sustained engineering and maintenance challenging—and support teams are spread thin.

DEVELOPING A SOLUTIONS ROADMAP

The challenges NOAA Fisheries faces with respect to legacy data systems and technical debt have been years in the making. While it is important to note that efforts are continually underway to retire high-priority legacy systems on an as-possible basis, arriving at the future state envisioned at the workshop—where mature systems are interoperable but not overly interdependent, and mature organizations collaborate internally and externally to share best practices and lessons learned—will require a consistent, efficient, stepwise process beginning with fundamental building blocks:

PROMOTE SYSTEMIC CULTURE CHANGE WITH RESPECT TO DATA SYSTEM DEVELOPMENT

Legacy data systems do not get built in a vacuum. They are the result of decisions made and processes that exist across an organization that ripple throughout the development process. Culture change can seem to be an esoteric issue, but it is definable, and it is solvable.

ACTION ITEM

- Develop best practices for establishing product requirements, project management, and budgeting and contracting to create flexible, supportable products. Additionally, share best practices on methods for displacing legacy data systems while developing these modern systems. This includes developing cross-disciplinary teams.

NEXT STEPS

- FIS will convene a team of software developers, IT professionals, data managers, and fisheries scientists and managers to create a clear, operable, actionable set of best practices. This “bottom-up” approach will facilitate socialization with and adoption by peers, and ultimately become part of the fabric of organizational culture.

ESTABLISH GUIDELINES FOR COMMUNICATION

Avoiding pitfalls that lead to legacy data systems in the first place requires frequent communications among developers, IT professionals, end users, and data customers throughout each phase of design and deployment. FIS provides a significant amount

of funds for the development and modernization of data systems, and can leverage its request for proposals (RFP) process to instill best practices in these areas.

ACTION ITEM

- Develop recommendations for team collaboration, transition planning, and the use of quality management and continuous improvement principles in the design of projects and the development of proposals. (These recommendations were established shortly after the workshop and incorporated into the FY 2024 RFP guidance document.)

NEXT STEPS

- Promote transition planning and collaboration through joint FIS/Office of the Chief Information Officer (OCIO) forums.

DISPLACE LEGACY SYSTEMS: REGIONAL PRIORITIZATION AND NATIONAL INTEGRATION.

Based on ongoing assessment and prioritization, begin a modernization effort across NOAA headquarters, regional offices and science centers, and FINs that includes legacy data systems displacement.

ACTION ITEMS

- Prioritize existing systems, taking into consideration such factors as:
 - Number of dependencies
 - Alignment with strategic plans and mission
 - Regulatory, financial, and/or reputational impact
 - Risks (e.g., to the resource, politically, and/or litigation-related)
- Implement and support national or centralized solutions to support system rationalization efforts, such as headquarters-supported microservices.

NEXT STEPS

- Through an RFP mechanism and leveraging funds made available from the Inflation Reduction Act, FIS will work with NOAA offices and FIN partners to conduct an evaluation and prioritization of legacy data systems and document which systems will be displaced when.
- The FIS community and OCIO will work through common forums to identify regional resource burdens that would benefit from centralization or national support.

IN SUMMARY

There is no one root cause of the challenges identified at the workshop, and there is no one-size-fits-all solution. However, by following the steps outlined in the Solutions Roadmap, we can work across disciplines, geographic regions, and teams to compile and develop best practices, create replicable models for communications and transition planning, implement appropriate support services, and ultimately displace these legacy systems that no longer serve—and indeed are significantly detrimental to—the data needs of NOAA Fisheries, our partners, and the resources we protect.

SUPPORTING INNOVATION

Since 2013, FIS has provided funding for innovative fisheries-dependent data projects through a competitive Request for Proposals process in partnership with the National Observer Program's Electronic Technologies program and the National Catch Share Program. This funding is available to NOAA Fisheries regional offices, science centers, headquarters offices, FIN partners, and state partners (via the interstate commissions), and supports projects in the following focus areas:

- Data improvements, modernization, and integration
- Electronic monitoring pre-implementation and implementation
- Electronic reporting pre-implementation and implementation

- Fisheries Information Network development
- Quality management and continuous improvement

Initiatives representing each phase of the project life cycle—from evaluation through implementation and back to re-evaluation—are eligible for funding, with a process designed to spur collaboration, limit redundancy, and effectively target resources.

For fiscal year 2024, 27 projects were funded, bringing the total projects to 323 since the inception of the RFP in 2013. These are summarized by region and category on page 8 of this report, while descriptions of the most recently funded projects are available on pages 6-7.

PROFESSIONAL SPECIALTY GROUP SNAPSHOTS

Professional Specialty Groups are integral parts of FIS. These communities of practice bring together a diverse array of participants from across NOAA Fisheries and our partners to focus on specific fishery-dependent data challenges. Currently, there are three PSGs: Coder, Highly Migratory Species, and Quality Management and Continuous Improvement.

The FIS Program Management Team recently approved a fourth PSG, which will be focused on data sharing and integration across the East Coast.

CODER PSG

Chair: Seth Gerou, Northwest Fisheries Science Center

Vice-Chair: Jeffrey Wyman, Northeast Fisheries Science Center



The Coder PSG convenes experts from across the fisheries-dependent software design and development community to address common challenges related to data information systems, including interoperability, modernization, and cross-regional information and idea sharing. The PSG explores opportunities for innovation and ways to ensure systems and tools work in synergy across NOAA Fisheries and our partners.

2023 HIGHLIGHTS

Among its other activities and accomplishments, Coder PSG members played an key role in convening the Legacy Data System Workshop, including agenda development, speaker recruitment, and facilitation. Projects for the coming year include:

- Creating a “project sounding board.” The goal of this initiative is to foster best practices, reduce duplication of efforts, streamline processes, and encourage collaboration. Project leads would present to a subgroup of the PSG their objectives, constraints, resources, and the scale and scope of what they’re working to develop. The subgroup would then review and provide feedback for new projects while evaluating successes and lessons learned from existing projects.
- Developing a Coder PSG white paper. To share members’ knowledge about information technology and software development across NOAA Fisheries and our partners, the PSG will develop publications capturing best practices on leading-edge topics in the field. The current goal is to publish one per year, with the 2024 topic focusing on project management.
- Facilitating one-day virtual developer exchanges. Similar in concept to LANTERN details, and other opportunities to experience different office environments, the PSG will conduct a one-day “developer swap” each month, where PSG members will collaborate with their peers through a variety of means. Models for the approach could be mentorship, one-on-one knowledge sharing, leadership development, or embedding with a team from another office. Each exchange would have a specific goal, and the program will be adjusted as needed as it unfolds.

PACIFIC HIGHLY MIGRATORY SPECIES PSG

Chair: Charles Villafana, West Coast Regional Office

Vice-Chair: Ashley Tomita, Pacific Islands Fisheries Science Center



The Pacific Highly Migratory Species PSG brings together data managers and users from the Pacific Islands, West Coast, and NOAA Fisheries headquarters with the mission of creating an integrated, accessible data system for highly migratory species in the Pacific. The group works across a spectrum of issues, including communications, electronic reporting and modernization, data reporting and business rules, and data sharing.



Credit: NOAA Fisheries



Credit: NOAA Fisheries

2023 HIGHLIGHTS

To streamline the process of receiving and fulfilling HMS data requests, the PSG developed a new [data request form](#) available on the PSG website. The back end of the system is based on the Jira project management software. Any time an external user—for example an NGO, university researcher, or independent analyst—enters a request, a Jira ticket is created, and the chair and vice chair of the PSG are notified. From there, the request is routed to the appropriate PSG member for review and processing. The goal of the project is to create a more efficient system of fulfilling data requests that benefits both users and PSG members.

In addition, significant progress was made on Phase 2 of the Onboard Record Collection Application, an electronic reporting tool for observers in the Pacific longline fishery that is part of the expanding drive to sunset paper reporting. ORCA was originally developed for the West Coast, but, thanks to collaborative efforts of the PSG, is now close to deployment in the Pacific. Both the ORCA web Application Program Interface (API) and a test version of the PIRO database, PIROPS, are now running on the ORCA server. The recent purchase of sixteen tablets allowed for end-to-end testing of data collection and the API/PIROPS interface.

QUALITY MANAGEMENT AND CONTINUOUS IMPROVEMENT PSG

Chair: Julie DeFilippi Simpson, Atlantic Coastal Cooperative Statistics Program

Vice-Chair: Stacy Katasse, Alaska Regional Office



The QM/CI PSG helps organizations enhance their data processes. This directly supports sustainable fisheries by enabling teams to build better data assets used for fisheries science and management. The PSG does so by collaborating across NOAA Fisheries and with our partners to embed [QM/CI practices](#) into organizational culture. These practices can aid in everything from combining complex and divergent information streams into a single, accessible data source, to creating a strategic plan that drives a good idea from the whiteboard into the field. The PSG has [tools](#), resources, and funding available to help solve these and other everyday challenges faced by scientists, managers, or anyone looking to improve outcomes through improved processes.

2023 HIGHLIGHTS

Using in-house resources and discretionary funds available to support QM/CI initiatives within NOAA Fisheries and with our partners, the PSG facilitated several internal and external trainings and workshops. These included:

- A meeting to [bring together partners from across the Caribbean](#) to effectively coordinate the complex array of fisheries and ecological data collection systems in the region. Thirty-six participants from 13 regional partners convened for a [Hoshin Kanri](#) strategic planning workshop. Among the outcomes were a five-year strategic plan and consensus on four strategic goals. Importantly, no one left the room until there was an implementation strategy in place. Eight working committees were formed, and are already taking steps to implement the plan.
- A workshop bringing together NOAA Fisheries' Atlantic Highly Migratory Species Management Division and the Southeast Fisheries Science Center to better understand the different processes employed by each for reporting Large Pelagics Species information used for stock assessments and management. In addition to the relationship building and information sharing that occurred at the workshop, one of the tangible products was a list of 26 action items for process improvements.
- A series of quality management training sessions for the Atlantic States Marine Fisheries Commission. The six-part workshop included participants from commission leadership, team leads, and staff. It kicked off with an overview of what QM/CI is, and when and how it can be applied to everyday work, then progressed through a suite of QM/CI tools: Five whys, Kanban, Flowcharts, Data flow diagrams, and—in true QM/CI fashion—ended with a Retrospective exploring participants' views of how the trainings went and areas for improvement. To keep things fresh and relevant, the workshop used a mix of real-world exercises and situations drawn from daily life, like when to eat dinner and how to plan a vacation. Facilitated by PSG members, the series was well-received by attendees, and can be replicated across other groups and regions.
- A workshop and continued consultant support for the Alaska Region to help define how the region will do business process documentation, including process mapping, metric definition and monitoring, and document maintenance. Following the workshop, the consultants helped AKR map multiple high-level strategic processes.



Credit: NOAA Fisheries



Credit: NOAA Fisheries

FIS CASE STUDY: COLLABORATING WITH INDUSTRY ON GREATER ATLANTIC ELECTRONIC REPORTING

The Greater Atlantic Regional Fisheries Office is now virtually paperless when it comes to reporting and permitting. Getting there took a lot of work—and collaboration—by NOAA, our partners, and fishers.

For more than 35 years, Captain Sonny Gwin has fished commercially out of Ocean City, Maryland. He targets lobster and sea bass on the *F/V Skilligalee* alongside two crew members. Like all captains, he must submit reports on his fishing activity to different reporting entities.

For most of his career, this meant filling out a federal paper logbook, with copies for the state and dealers. He had to submit it by mail, generally on a monthly basis. This also meant stacks and stacks of paper in his shop, some dating back decades. A member of the Mid-Atlantic Fisheries Management Council, Gwin faced the decision in 2018 on whether to support mandatory electronic reporting in the Greater Atlantic region. He voted in favor of the new technologies that would allow data submission from smartphones and tablets.

“BETTER DATA FASTER”

“Managers saw the potential for electronic technologies to gain better data faster,” says Barry Clifford, Greater Atlantic Region Fisheries Dependent Data Coordinator. Instead of receiving logbooks in the mail monthly or weekly, they could receive data on a rolling basis. They could also greatly reduce the amount of time and effort required for quality assurance. That includes the time needed to manually enter data and to send logbooks back and forth in the mail to captains when corrections were needed.

For NOAA Fisheries, there were two key challenges to implementing the requirements for electronic reporting. The first was on the technology side. “To scale it up for the entire fishery, we had to develop more robust infrastructure and applications, along with establishing support staff and help desks, so we had to make a commitment as an organization to find those resources,” says Clifford.

The Greater Atlantic Regional Fisheries Office built its own mobile submission application, Fish Online, and published technical specifications online for others to develop applications. Meanwhile, the Atlantic Coastal Cooperative Statistics Program SAFIS eTRIPS/mobile application was deployed and authorized for eVTR submission by GARFO in 2015. ACCSP collaborated with GARFO and NOAA Fisheries Highly Migratory Species Division to refine SAFIS eTRIPS/mobile to dynamically ask the right questions, at the right time, across a vessel’s active federal permits. This allows submission of a single electronic report to satisfy reporting requirements of multiple federal permits for users of SAFIS eTRIPS/mobile.

Currently, there are a total of six applications approved for use by GARFO. This is one of the advantages of NOAA’s approach. Independent software developers have the information they need to bring apps to market, and fishers have options to choose the one that works best for them.



Credit: Sonny Gwin

WORKING TOGETHER WITH THE FISHING COMMUNITY

The second implementation challenge was training and outreach to educate the industry. The initial plan for a year-long rollout was interrupted by COVID-19. GARFO had to pivot from in-person workshops, dock visits, and trade shows to virtual seminars and other online options. Many fishers turned to their children and grandchildren to help them navigate the new technical options.

NOAA Fisheries staff, particularly port agents, convened dozens of webinars with FishOnline training and SAFIS eTRIPS/mobile training provided by staff at the ACCSP. The port agents also staffed a help desk that received up to 30 calls a day, while the ACCSP 24/7 SAFIS help desk saw call numbers increase by up to 50 percent.

Leadership within the industry—fleet managers, groundfish sector managers, and individual captains—who adopted electronic reporting early was invaluable in training captains and crew on the various applications.

“A HUGE IMPROVEMENT”

The electronic vessel trip reports have improved reporting timeliness and reduced reporting errors. “Through the use of electronic reporting, we truly do see a huge improvement in the quality of the data. When they are submitted, validation checks are done right then and there,” explains Clifford. “If captains forget to enter a field or put in a bad value, that’s immediately flagged.” Compliance rates for report submissions within the required 48 hours after the end of a trip have improved from 58 percent in November 2021 to 84 percent just a year later. Further, when including late submissions, 98 percent of the reports are received within 7 days.

Many aspects of this project have been funded through the FIS RFP process. Clifford stresses that working with the program means more than just funding. “The program is all about bringing people together to collaborate and learn from one another,” he says. “That’s been a key part of our success to date, and will help us share what we’ve done across NOAA Fisheries in the future.”

FY 2024 FIS/ET/CSP-Funded Projects

For a complete list of all FIS/ET/CSP-funded projects, visit fisheries.noaa.gov/data-tools/fis-supported-projects.

Project Name	Description	Lead Office
Data Improvements, Modernization, and Integration		
Breaking the data bottlenecks: supporting SEDAR stock assessments with a modern and efficient life history data repository, while reducing compilation effort and errors	Creating a life history data repository, so all providers can upload, store, and maintain data. Data can then be retrieved directly in the prescribed template by data analysts, researchers, and data managers during the SEDAR stock assessment process.	Southeast Fisheries Science Center
Alaska marine mammal observer program inventory, analysis and curation of legacy data for extensibility to future fishery-dependent data collection, analysis, and management	Creating a single repository of quality-controlled legacy Alaska Marine Mammal Observer Program data from disparate sources; ensuring legacy database is extensible to the 2024 start of collection of electronic and observer data.	Alaska Fisheries Science Center
Updating the state of Hawaii's online licensing and reporting tools	Creating an implementation plan for modernizing the state of Hawaii's online commercial fisheries reporting system to improve the quality of data collected and increase the efficiency of data processing by the state and its federal partners.	Hawaii Division of Aquatic Resources
Model integration to support marine planning and fisheries management	Building the linkages between the comprehensive fishing effort database and existing/in development economic models at NOAA Fisheries to facilitate the evaluation of socioeconomic trade-offs of fishery operations with other ocean uses.	Northwest Fisheries Science Center
West Coast cost recovery payment tracking tools	Facilitating tracking and verification of required cost recovery payments in the Trawl Rationalization Program and forthcoming Sablefish Primary Fishery cost recovery program.	West Coast Regional Office
Electronic Monitoring Pre-Implementation and Implementation		
Alaska Marine Mammal Observer Program: Proposal to fund electronic monitoring camera systems to increase coverage	Expanding the Alaska Marine Mammal Observer Program's sampling coverage through the use of electronic monitoring camera systems to collect data on marine mammal bycatch incidental to the salmon drift gillnet fishery in southeast Alaska.	Alaska Fisheries Science Center
Improving data quality, statistical robustness, and cost-effectiveness of the Southeast Fisheries Science Center Shrimp Observer Program	Adapting electronic technologies for onboard sampling of the Southeast Fisheries Science Center Shrimp Observer Program as a means of achieving programwide improvements in data quality, statistical robustness, and cost-effectiveness.	Southeast Fisheries Science Center
Fishery-dependent intercept survey of commercial and recreational catch, effort, and size composition in the U.S. Virgin Islands: Pre-implementation to implementation	Adapting electronic technologies to facilitate pre-implementation to full implementation of a fishery-dependent intercept survey of catch, effort, and size composition for commercial and recreational vessels in the U.S. Virgin Islands.	Southeast Fisheries Science Center
Evaluating the effectiveness of electronic monitoring equipment to fill length data gaps in the golden tilefish assessment	Testing the feasibility and efficiency of advanced data collection technology application in the expansion of golden tilefish size distribution data collection, which are key inputs in the stock assessment.	Northeast Fisheries Science Center
The feasibility of electronic monitoring implementation in the Pacific Islands longline fisheries and the use of artificial intelligence models to detect catch events and improve efficiency of video review	Moving toward electronic monitoring implementation by continuing artificial intelligence model development and comparing model detections with observer-collected data.	Pacific Islands Fisheries Science Center
Quality Management and Continuous Improvement		
Identification of best available morphometric conversions for the standardization and automation of datasets used in U.S. stock assessments and fisheries management	Increasing the availability, transparency, and standardization of morphometric conversions used in stock assessment, ACL monitoring, and ecosystem approaches for federally managed species in the Gulf of Mexico, South Atlantic, and US. Caribbean.	Southeast Fisheries Science Center
Assessing and improving data quality of the Alaska Catch Accounting System	Assessing data quality of the Alaska Catch Accounting System, which quantifies the amount and type of catch and bycatch in groundfish and halibut fisheries off Alaska.	Alaska Regional Office
Modern data governance for the Pacific Islands logbook data (year 2)	Improving access to comprehensive, high-quality, timely fisheries information by building a modern database and applications for the Pacific Islands Fisheries Science Center to support fisheries stock assessment, management, and reporting in the region and across the Pacific.	Pacific Islands Fisheries Science Center

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FY 2023 FIS/ET/CSP-Funded Projects

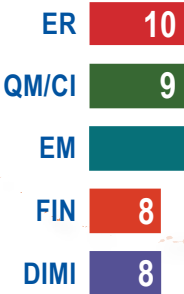
Project Name	Description	Lead Office
Electronic Reporting Pre-Implementation and Implementation		
Automatic capture of Alaskan observer fisheries-dependent data using electronic reporting tools and electronic data gathering systems	Testing and comparing various electronic reporting and electronic data gathering solutions that would serve to replace pen-to-paper data recording, improve efficiency, and reduce data entry time by observers	Alaska Fisheries Science Center
Pacific Islands Regional Office Observer Program electronic reporting: Continue development of an electronic reporting application and platform (Phase 4)	Migrating data collection from the current paper forms in the Pacific Islands longline observer program to a mobile tablet electronic reporting application.	Pacific Island Regional Office
Southeast Region Permits System restructuring	Correcting structural deficiencies in the permit system to re-enable connectivity with other NOAA Fisheries systems and improve the reliability and usability of the data for fisheries management and enforcement.	Southeast Regional Office
At-sea species identification/training module	Developing a tablet-based species identification app that can replace paper data collections and paper-based training materials.	Northwest Fisheries Science Center
Greater Atlantic Regional Fisheries Office dealer data collection modernization	Developing a new data architecture for regulatory reporting by federally permitted seafood dealers to improve performance and quality management of that dataset. This effort will support the development of a Universal Trip ID.	Greater Atlantic Regional Fisheries Office
Integrating third-party electronic logbooks into existing electronic reporting structures	Developing an API with clear documentation in order to receive elogbook data from multiple third-party elogbook options and facilitating development of additional elogbook options for use off Alaska and the West Coast.	Alaska Regional Office
Creel survey electronic reporting application for American Samoa, Guam, and the Commonwealth of the Northern Mariana Islands (Year 4)	Developing a single creel survey electronic reporting application for American Samoa, Guam, and the CNMI to replace the six legacy FoxPro applications.	Pacific Islands Fisheries Science Center
Atlantic seaboard federal vessel/permit registry	Creating a comprehensive vessel registry for all federally permitted vessels in the Atlantic, including the Gulf of Mexico and Caribbean, that obtains and retains data from the three distinct federal permitting systems.	Southeast Regional Office
Expansion of West Coast elogbook applications for West Coast highly migratory species and groundfish trawl logbook programs	Implementing electronic logbook application instances for the U.S. West Coast highly migratory species and groundfish trawl fisheries using a standardized software platform to collect and submit fishery data to the Pacific Fisheries Information Network database.	Southwest Fisheries Science Center
Operationalizing on-demand fishing: Data optimization, visualization, and automation	Continuing development and refinement of the electronic reporting system for on-demand fishing by optimizing data feeds for improving visualization tools for on-demand gear locations; automating gear marking for deployment and recoveries.	Northeast Fisheries Science Center
Fisheries Information Network (FIN) Development		
Data management for alternative gear types in West Coast highly migratory species fisheries	Improving access to and functionality of participation, landing, and revenue data for the deep-set buoy gear fishery for all persons interested in these shared resources; increasing the ease of analysis of data collections for alternative gear types being tested.	West Coast Regional Office
Enhancing efficiency and accessibility of Groundfish Stock Assessment and Fishery Evaluation reporting and data needed to meet program review requirements using the Pacific Fisheries Information Network APEX reporting platform	Enhancing access to and use of data to support understanding and management of fish stocks and fisheries management under the Pacific Fishery Management Council's Pacific Coast Groundfish Fishery Management Plan by deploying a data portal in the Pacific Fisheries Information Network's APEX reporting environment.	Pacific Fisheries Information Network
Alaska Climate Integrated Modeling project dashboard of adaptation and planning tools: Providing data management and delivery of climate-integrated tools and advice to support and inform climate-ready fisheries in the Bering Sea	Developing data management infrastructure for select data products from the Alaska Climate Integrated Modeling project; initiating development of a dashboard providing access to data products and climate-integrated tools and advice.	Alaska Fisheries Information Network
Expanding a centralized data management system to create a coordinated workflow that integrates multisource ecosystem and socioeconomic data to advance tactical applications of ecosystem-based fisheries management	Creating a robust and expanded data management system that coordinates potentially complex, data-driven ecosystem and socioeconomic indicator contributions for informing next-generation stock assessments.	Alaska Fisheries Science Center

RFP Project Type by Region

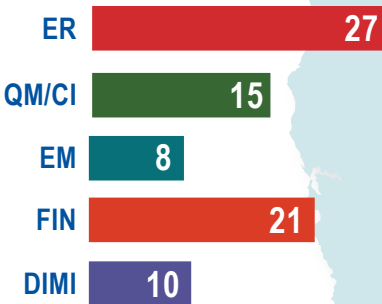
FY 2013-2024

Total: 323 projects*

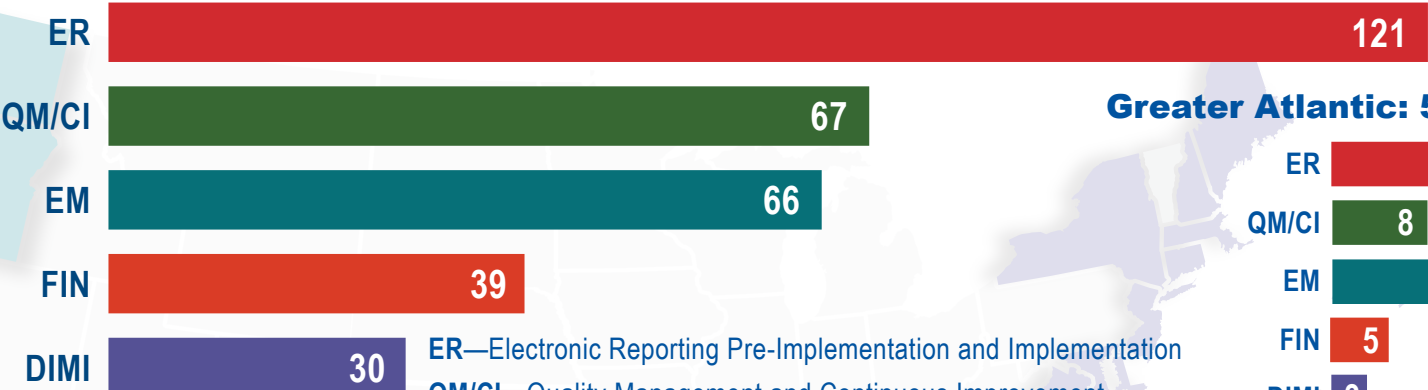
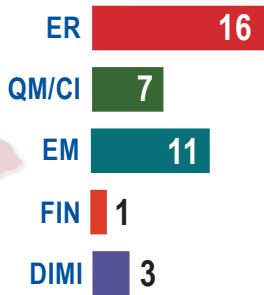
Alaska: 55 projects



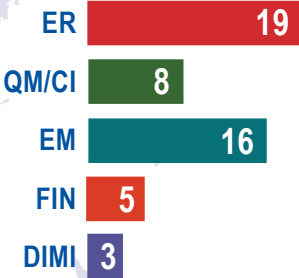
West Coast: 81 projects



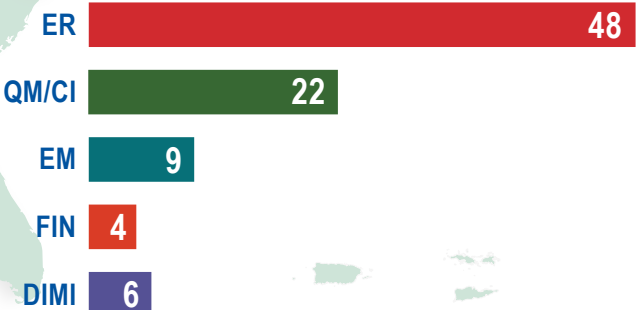
Pacific Islands: 38 projects



Greater Atlantic: 51 projects†



Southeast: 89 projects



ER—Electronic Reporting Pre-Implementation and Implementation
QM/CI—Quality Management and Continuous Improvement
EM—Electronic Monitoring Pre-Implementation and Implementation
FIN—Fisheries Information Network Development
DIMI—Data Improvements, Modernization, and Integration

*Totals include 6 QM/CI, 2 EM, and 1 ER headquarters projects
†Totals include projects awarded to the Atlantic Coastal Cooperative Statistics Program, which also serves states in the Southeast

