



NOAA FISHERIES

Fisheries Information System Program

The FIS Mission

We work collaboratively through partnerships to improve access to comprehensive, high-quality, timely fisheries information by investing in three broad areas:

- *Data gaps and data quality;*
- *Efficient technology and data integration; and*
- *Effective coordination and communication in the design, collection, and uses of data.*

FIS Program Contacts

Michael Liddel
Program Director
michael.liddel@noaa.gov

Lisa Peterson
Program Coordinator
lisa.peterson@noaa.gov

fisheries.noaa.gov/national/commercial-fishing/fisheries-information-system-program



FIS Face-to-Face Meeting: 2022

The [Fisheries Information System program](#) (FIS) is a state-regional-federal partnership supporting sound, science-based fisheries management. FIS does so by fostering collaboration and funding innovative projects to improve the quality of fisheries-dependent data. [Professional Specialty Groups](#) (PSGs)—cross-disciplinary teams focusing on specific fishery-dependent data challenges—are integral parts of FIS. These groups stimulate communications across regions to develop innovative solutions to fishery-dependent data challenges, reduce duplication of efforts, and enhance operational efficiency.

In August of 2022, FIS hosted an annual meeting in Seattle, Washington, that brought together nearly 50 participants for a joint conference comprising the FIS Program Management Team (PMT) and the four PSGs, which address issues related to electronic technologies, Pacific highly migratory species, software coding, design, and development, and quality management and continuous improvement.

A cornerstone of FIS is collaboration, which, although possible in the virtual environment brought on by the COVID-19 pandemic, is greatly enhanced through face-to-face meetings. This is especially true of FIS participants, who are spread across every region, represent each science center, regional office, and Fisheries Information Network, as well as many states, and constitute a broad cross-section of professional disciplines.

The ambitious four-day agenda of meetings, workshops, guided discussions, and planning sessions included:

- A leadership panel with Dr. Evan Howell, Director of the Office of Science and Technology, and the Northwest Fisheries Science Center leadership team, Dr. Kevin Werner and Nicole Hill.
- A panel discussion with the Fisheries Information Networks (FINs) that offered insights into potential opportunities for future NOAA Fisheries/FIN collaboration.
- A National Data Governance brainstorming session facilitated by the NOAA Fisheries Data Architect Karen Sender.
- A half-day Quality Management and Continuous Improvement training that included hands-on work with QM/CI tools such as environmental scans, Strengths, Weaknesses, Opportunities, and Threats analysis, flow charts, and affinity diagrams.
- A joint session of the PMT and Electronic Technologies PSG. This decades-old PSG was an early promoter of electronic technologies, and has had many successes during its tenure. The collaborations facilitated by the ET PSG have led to many innovations in the field, and spurred development of several regionally specific working groups. Ultimately, it was agreed that the ET PSG had accomplished its original mission and it was an appropriate time for it to sunset.



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Credit: West Coast Region Observer Program

Challenges and Recommendations

Building on these foundations, attendees identified key challenges, along with related recommendations.

- **Challenge:** The immense negative impact of technical debt and legacy data systems, and the pressing need for modernization
 - **Recommendation:** FIS should host a workshop on the topic of legacy fishery dependent data systems modernization. It should include discussions on transition planning to ensure smooth progression through the project lifecycle to avoid accumulating future technical debt. Using the Fisheries Information Management Modernization Workshop as a model, this initiative would provide NOAA Fisheries with aggressive, actionable steps for moving forward.
- **Challenge:** The patchwork nature of data-sharing agreements and the impact on costs and timeliness of providing fishery-dependent data for science and management, and fulfilling treaty obligations
 - **Recommendation:** Building on the significant work undertaken by the HMS PSG on this issue, elevate the importance of data-sharing needs and collaboration among data providers.
- **Challenge:** The lack of an effective interface between information technology professionals and fisheries scientists and managers, which can lead to delays, bottlenecks, and counterproductive actions in the development of electronic data collection, reporting, and sharing, as well as the management strategies the data support
 - **Recommendation:** Working with the Coder and Quality Management and Continuous Improvement PSGs, develop specific, actionable strategies to open lines of communications and dialogue among data users, information technology professionals, and software developers.
- **Challenge:** The need for broader adoption of data governance and quality management and continuous improvement principles to provide a framework for addressing the challenges identified
 - **Recommendation:** As they are further developed, NOAA Fisheries leadership should encourage widespread adoption of both data governance and quality management and continuous improvement frameworks.
- **Challenge:** The need for continual communication to NOAA Fisheries leadership on the status of issues and opportunities related to fishery-dependent data quality to inform decision-making
 - **Recommendation:** FIS should explore providing regular briefings to the Science Board and Leadership Council, elevating the most pressing challenges and potential solutions identified by the PSGs.

In terms of identifying data-dependent fisheries challenges and solutions, and creating opportunities for each PSG to effectively assess successes and lessons learned and plan strategically for the coming year, the annual meeting was an invaluable investment of time and resources. Based on feedback from participants, FIS is evaluating the possibility of future joint gatherings, perhaps alternating with small-group annual meetings to allow for focused discussions on key issues and effective team-building.



Credit: Alaska Department of Fish and Game