

Implementing Industry Data for Fisheries Decision-Making: Workshop Summary Report

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Abbreviations

ABC:	Acceptable biological catch
AP:	Advisory panel
APSD:	Analysis and Program Support Division of GARFO
BOEM:	Bureau of Ocean Energy Management
CFMC:	Caribbean Fishery Management Council
CINAR:	Cooperative Institute of the North Atlantic Region
EBFM:	Ecosystem-Based Fishery Management
EIS:	Environmental Impact Statements
GARFO:	Greater Atlantic Regional Fisheries Office
MAFMC:	Mid-Atlantic Fishery Management Council
MCFA:	Maine Coast Fishermen's Association
MRIP:	Marine Recreational Information Program
MSA:	Magnuson-Stevens Act
NEFCS:	Northeast Fisheries Science Center
NEFMC:	New England Fishery Management Council
NMFS:	National Marine Fisheries Service
NOAA:	National Oceanic and Atmospheric Administration
NRCC:	Northeast Region Coordinating Council
OFL:	Overfishing limit
PDT:	Plan Development Team
PRA:	Paperwork Reduction Act
RIR:	Regulatory Impact Reviews
SSB:	Social Sciences Branch of the NEFSC
SSC:	Scientific and Statistical Committee of the NEFMC
SSS:	Social Science Subcommittee of the SSC
TOR:	Terms of Reference
URI:	University of Rhode Island
VTR:	Vessel trip reports

1.0 Executive Summary

The New England fishing industry generates substantial volumes of socioeconomic and operational data, yet this information remains largely disconnected from the science and management processes that determine fishing quotas, rebuilding plans, and other consequential decisions. The CINAR-funded workshop, “Implementing Industry Data for Fisheries Decision-Making,” was held March 23-24, 2026, at the University of Rhode Island to examine barriers to using industry-based data and to develop pragmatic strategies for integrating it into fisheries decision-making.

This workshop was the second of two CINAR-funded workshops on the role of social science in New England fisheries management. The first workshop (May 2024, Woods Hole, MA, “Workshop 1”) examined barriers to the use of social science research more broadly and led to the formation of a Social Science Subcommittee (SSS) of the New England Fishery Management Council's Scientific and Statistical Committee (SSC; see [final report](#)). The second workshop (“Workshop 2”) focused on data originating from the fishing industry, prompted by several converging developments: the reduction of federal scientific capacity at the National Marine Fisheries Service, including social science capacity; the Council’s adoption of a revised Risk Policy that creates new entry points for socioeconomic considerations; and persistent frustration from industry participants that the data they provide, collect, and report is not meaningfully incorporated into the decisions that affect their livelihoods.

Workshop 2 participants included SSC members, Northeast Fisheries Science Center Social Sciences Branch (NEFSC/SSB) researchers, Council staff, academic social scientists, groundfish sector managers, fishing industry representatives, and community-based fishing organizations. Case study presentations highlighted the range of industry data already being generated—including detailed sector annual reports submitted to the Greater Atlantic Regional Fisheries Office (GARFO), qualitative and quantitative input from advisory panels, cooperative research products, and cost and operational data from individual fishing businesses—as well as innovative approaches such as the integration of oral history data into ecosystem modeling and AI-assisted content analysis of advisory panel reports and qualitative interview data.

Workshop 2 identified barriers to the use of industry data that cluster around interrelated and mutually reinforcing themes. (a) Existing industry data streams—most notably the groundfish sector annual reports submitted to GARFO since 2010—lack standardized formatting and structured questions, making systematic analysis difficult. (b) Industry information is often treated as supplementary or anecdotal, held to a higher evidentiary standard than biological data despite the latter’s own substantial uncertainties. (c) Socioeconomic and industry data are structurally relegated to the back end of the decision process, appearing in impact analyses prepared after catch advice has been developed rather than informing the scientific and management decisions that precede them. (d) Informant fatigue and mistrust limit the efficacy of some data collection efforts; fishermen are repeatedly asked to provide data through surveys, advisory panels, and cooperative research, but rarely see how their input influences outcomes. (e) Institutional inertia and legal constraints—including the litigation history of New England fisheries management, the single-species structure of the assessment process, and the procedural requirements of the Paperwork Reduction Act (PRA)—create resistance to incorporating new types of data. f) Finally, the recent withdrawal of federal scientific capacity at NOAA has reduced the frequency of stock assessments and limited the SSB’s ability to develop socioeconomic data products, increasing both the urgency and the difficulty of integrating industry data.

Workshop 2 also identified concrete strategies for overcoming these barriers which coalesced around four themes:

Standardizing and activating existing data streams. Groundfish sector annual reports can be restructured with a uniform set of questions, developed in collaboration with sector managers and social scientists, to produce consistent, analyzable data on quota lease prices, operating costs, and other crew- and fishery-related issues. Inconsistencies between SSB and GARFO data products can be addressed through similar interagency coordination.

Integrating socioeconomic information into the science-to-management pipeline. Socioeconomic information is often used towards the end of management processes, but Workshop 2 participants identified several opportunities for incorporating industry data at multiple points earlier in the process. Terms of reference (TORs) for review of stock assessments could explicitly call for socioeconomic data products, creating institutional demand that does not currently exist. Data updates—which are replacing full management track stock assessments for many stocks—could be expanded to include socioeconomic and ecosystem indicators alongside population dynamics data. The revised Risk Policy provides a formal mechanism for weighting socioeconomic factors in the determination of acceptable biological catch (ABC) relative to overfishing limits (OFL).

Deploying fishery performance reports and AI analysis tools. Participants noted that New England could draw on the Mid-Atlantic Fishery Management Council's (MAFMC) advisory panel fishery performance report approach to produce its own analogous products. Automated data compilation tools could also be leveraged to synthesize existing data from vessel trip reports (VTR), dealer reports, permit and sector data, public comments, and other sources into accessible, regularly updated summaries that characterize the economic health and operational conditions of each fishery, as well as conceptual models diagramming ecological and socioeconomic interdependencies in the multi-species system.

Strengthening connectivity and communication across the management system. Improved coordination among the SSB, GARFO, Council staff, Plan Development Teams (PDTs), industry, and the SSC—particularly around what socioeconomic data products exist, what analyses are feasible, and what questions management needs answered—was identified as essential. Industry participants noted that communicating how data is used in decisions (e.g., citing industry data in the rationale where appropriate) is critical to sustaining stakeholder engagement.

Workshop 2 concluded with a discussion of next steps, including the preparation of a summary report to be reviewed by the participants and presented to the SSC; the possibility of an agenda item at a future Council meeting to communicate findings and inform the Council's strategic planning process; and continued development of the recommendations above. It should be noted that Workshop 2 was a bottom-up initiative led by SSS members and collaborators rather than a Council or NEFSC action, and its recommendations are nonbinding, with implementation depending largely on the voluntary efforts of participants and the broader communities they represent.

2.0 Workshop Context and Overview

This workshop builds on a trajectory of efforts to enhance the role of social science in New England fisheries management. An earlier workshop, “Implementing Social Science Methods for Fisheries Decision-Making” (May 2024, Woods Hole, MA, “Workshop 1”), examined barriers to the integration of social science information broadly, with an emphasis on research-based social science products developed by the NEFSC Social Sciences Branch (SSB) and academic collaborators. Workshop 1 produced a [report](#) identifying barriers in data infrastructure, scale/format mismatch, understanding and communication, process/institutions, and multi-objective management. Three non-mutually exclusive approaches were identified: enhancing social science use in existing processes, establishing an SSC subgroup for social science, and building a more connected social science ecosystem. A key institutional outcome was the formation of the Social Science Subcommittee (SSS) of the SSC, which has since begun meeting regularly to develop social science advice for fisheries management and to advance Workshop 1's recommendations.

The second workshop (“Workshop 2”) shifted focus to a complementary but distinct question: how can data generated by, or characterizing, the fishing industry itself be better integrated into the science and management processes that shape fisheries decisions? Workshop 2 explored the many instances where such information was developed, volunteered, or co-produced by industry, identifying where and how barriers to the effective use of the information are encountered. The purpose was to develop pragmatic solutions that overcome barriers to the use of industry information and thereby improve fisheries decision-making.

Workshop 2 goals:

- Develop shared understanding of existing tools and data sets from industry or meant to characterize industry.
 - Explore a range of barriers to use industry data in decision processes.
 - Identify characteristics of barriers and brainstorm approaches to address them
 - Identify where (at what stage) each barrier exists within the science-to-decision-making process, and the nature of the barrier (e.g., data format, scale, robustness, repeatability, conceptual alignment, units of analysis).
 - Brainstorm approaches to address barriers and enhance consideration of industry information in decision-making.
 - Develop initial recommendations for follow-up (to be summarized in Workshop 2 report).
 - Strengthen connections and dialog for future opportunities.
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Workshop 2 was held March 23-24, 2026, at the Robert J. Higgins Welcome Center, University of Rhode Island (URI), Kingston, RI. It was organized by members of the SSC’s SSS and, like Workshop 1, was supported by the Cooperative Institute of the North Atlantic Region (CINAR). Participants included NEFSC Social Sciences Branch (SSB) researchers, NEFMC members and staff, groundfish sector managers, fishing industry representatives, academic social scientists, and staff from community-based fishing organizations. A full participant list can be found in [Appendix A](#).

Workshop 2 consisted of a day and a half of presentations, case studies, facilitated breakout sessions, and plenary discussions. An abbreviated agenda can be found in [Appendix B](#). Workshop 2 identified barriers to the use of industry data and identified concrete strategies for overcoming these barriers.

As emphasized in the opening presentation, Workshop 2 was not a Council- or NEFSC-originated action item; rather, it represents a bottom-up effort by SSS members and collaborators to harness collective experiences and expertise. Recommendations emerging from this process need not be considered through any formal institutional process, and implementation will rely in part on continued voluntary efforts by the participants and the broader communities they represent.

3.0 Understanding Barriers

Workshop 1 developed a typology of barriers to the use of social sciences in fisheries management organized around six categories: redirecting capacity/prioritization, data infrastructure, data mismatch (scale/format/units), understanding and communication, process/institutions, and multi-objective management. Workshop 2's focus on industry-derived data surfaced many of the same barriers, but with important additional dimensions reflecting the particular challenges of incorporating data that originates outside the formal scientific enterprise. In this section, we summarize and categorize the barriers identified through the presentations, plenary discussions, and breakout groups, noting that these barrier types are in many ways inter-related and mutually reinforcing.

Lack of standardization in existing data streams

Workshop 2 devoted considerable attention to the groundfish sector annual reports as illustrative of the challenges of working with unstandardized industry data. These reports, submitted annually to GARFO by each groundfish sector since 2010, are a potentially rich longitudinal data source covering operational activity, catch composition, lease prices, costs, and qualitative assessments of fishery conditions. However, each sector manager prepares their report differently, resulting in narrative portions that vary widely in depth, format, and content. While the quantitative components—consisting of a spreadsheet provided by GARFO covering the number of sector members, pounds caught, species, and prices—are reasonably consistent, the accompanying qualitative sections have no standard template, no required questions, and minimal guidance on what information to include.

This lack of standardization creates significant challenges for anyone attempting to use the reports systematically. It is also unclear who, if anyone, systematically reviews these reports once they are submitted. Industry participants expressed that they had received no feedback on the reports and had no indication that the information was being used. This creates a self-reinforcing cycle: without evidence that the data matters, there is little incentive to spend time and effort improving it, and without improved data, there is little basis for systematic use.

Similar standardization issues affect other industry data streams. Most NEFMC advisory panels discuss fishery performance periodically, but the questions vary and the feedback is within a meeting summary, with content and depth varying depending on AP composition and turnover. Public comment letters contain valuable data but are typically one-off, tied to a specific decision point, and lack the consistency and frequency needed for temporal analysis. Cooperative research products may not be designed for

integration with management or assessment processes and thus may have scopes (e.g., temporal, geographic) that limit their use in decision-making.

Treatment of industry data as supplementary or anecdotal

A central theme was that industry-generated information is routinely treated as supplementary to, rather than constitutive of, the knowledge base for fisheries decision-making. Multiple participants described experiences in which detailed, data-rich information provided by the industry was received but ultimately omitted from analyses and assessments, not referenced in decision documents, or acknowledged only superficially. The characterization of industry knowledge as “anecdotal” was identified as both a symptom and a cause of this marginalization: once information is labeled anecdotal, it becomes easier to dismiss, regardless of its empirical content, temporal depth, or consistency with other evidence.

“The biological data are riddled with uncertainty, and we live with that. We have a hard time accepting that with the industry information.”
- *Workshop participant*

This barrier emerges at multiple stages in the science-to-management process. During the stock assessments, there is reluctance to incorporate industry generated data that does not conform to the quantitative formats and statistical frameworks and/or assumptions used in population dynamics models. At SSC meetings, industry testimony during public comment periods is heard but arrives too late to inform the analytical work that has already been completed. At the Council level, although members recognize the importance of understanding conditions on the water, in the absence of formal analyses, the Council relies on public testimony, which is constrained by the financial and logistical barriers that limit consistent participation by fishermen.

A related observation, echoing a theme from Workshop 1, was that biological data products are routinely accepted for use in management despite substantial uncertainty—e.g., missing age data, spatial and temporal gaps in trawl survey coverage, wide confidence intervals around biomass estimates—whereas industry-derived and social science data are held to a higher standard of certainty before being considered credible. This asymmetry in uncertainty tolerance creates a structural disadvantage for socioeconomic data, which, given its more diverse collection methods and qualitative dimensions, will often carry greater acknowledged uncertainty than established biological data streams.

Relegation to the back end of a decision process

Closely related to the previous barrier is the structural positioning of socioeconomic and industry information at the “back-end” of the management process. Workshop 2 participants reiterated Workshop 1 participants’ observation that socioeconomic data typically appears in Environmental Impact Statements (EIS) and Regulatory Impact Reviews (RIRs), which are prepared after the biological science has been completed and, more crucially, after the catch advice has been set. This sequencing means that industry information informs the documentation of decisions already made, rather than the making of those decisions.

In concrete terms, front-end integration would mean that socioeconomic and industry data inform the development of catch advice at the SSC, for example through inclusion in data updates, terms of reference for assessment or SSC review, or the Risk Policy’s commercial characteristics factors. Back-end positioning,

by contrast, limits industry data to post-hoc impact analysis that, as one participant put it, “*feels like an appendix.*”

Several participants noted that the revised Risk Policy presents a genuine front-end pathway, but that its potential will remain unrealized without the data products and analytical infrastructure to support it. The commercial characteristics now included in the Risk Policy framework could draw on exactly the kind of information contained in groundfish sector annual reports, SSB performance measures and other indicators, as well as advisory panel input. But its usefulness is realized only if those data are compiled, standardized, and made available to the SSC in advance of its deliberations.

Stakeholder fatigue and mistrust

Industry participants described a cycle of engagement and disengagement driven by repeated requests for data and little evidence of impact. Fishermen are asked to participate in surveys, respond to advisory panel questions, provide testimony at public hearings, and contribute to cooperative research, often all involving the same or overlapping questions across different programs and agencies. When this input does not appear to influence outcomes, frustration accumulates.

“The industry has been asked the same questions for years, yet the issues they raise persist and the data they provide appears to go unused.”
- Workshop participant

Stakeholder fatigue is compounded by concerns about how data will be used. Some fishermen are wary that their own operational or financial information could be used against them—for example, to justify more restrictive regulations or to shift quota allocations. The legacy of contentious management decisions, particularly in the New England groundfish fishery, has created deep-seated skepticism about whether participating in data collection serves the industry’s interests. Others noted that fishermen may deliberately underreport or hedge their responses as a protective strategy, possibly due in part to inadequate communication of the importance of data collection.

These dynamics also raise questions about representativeness and equity: advisory panel composition depends on who applies, and the fishermen most able to attend meetings are not necessarily those most affected by management decisions. Participants asked how advisory panel-style questions could be extended to reach industry members who are unable to participate in person.

The case study presented by the Maine Coast Fishermen’s Association (MCFA) highlighted both the depth of these concerns and potential models for addressing them. MCFA’s experience with Bureau of Ocean Energy Management (BOEM)’s offshore wind siting process provided an example of it being helpful for data contributors to see how their information was weighted and used in a specific decision, even if they disagreed with the ultimate outcome. Conversely, when the pathway from data provision to decision is opaque, mistrust deepens.

Institutional inertia and legal constraints

Multiple breakout groups identified the institutional inertia of the SSC and Council as a barrier to incorporating new types of data. This conservatism embedded in the process is not arbitrary; it reflects a rational response to the litigation history of New England fisheries management, the legal requirements of the Magnuson-Stevens Act (MSA), and the need for consistency across stocks and over time. The region’s status as data-rich (relative to other U.S. fisheries management regions) has, paradoxically,

reinforced a narrow definition of what counts as usable data. When robust biological data are available, the case for incorporating less standardized or non-quantitative socioeconomic data can seem weaker.

The MSA's mandate to prevent overfishing and rebuild depleted stocks constrains the amount of discretion available to decision-makers. As one participant noted, *"You get freedom when things are good,"* but many New England groundfish stocks are currently in rebuilding plans that leave little room for the kind of multi-objective balancing that socioeconomic data would support. The perception that socioeconomic considerations tend only to make ABCs more conservative—rather than enabling a more informed weighing of risks—creates resistance from both industry and some managers.

Closely related is the single-species framework of current fisheries management, which is not just an analytical convention but a structural barrier to incorporating industry data. Fishermen manage portfolios of permits, quotas, and species, making decisions that depend on lease prices, regulations, market conditions, and seasonal patterns across stocks simultaneously. When industry representatives describe their operations to the SSC or in advisory panel testimony, it is often in terms of these interactions—how cutting one stock's quota cascades through lease decisions, effort allocation, the ability to fish other stocks, and the viability of their businesses. Yet the assessment and management process is organized stock by stock, with few formal venues for considering cross-stock effects. For example, trip-level fishing costs are difficult to attribute to individual stocks, and the recent transition of Atlantic cod from two management units to four—reflecting an updated understanding of five biologically distinct populations—makes it even more challenging to compile time series of socioeconomic data matching the current management units.

Another procedural barrier identified by participants, as in Workshop 1, is the Paperwork Reduction Act (PRA). Federal agencies cannot easily establish new, sustained data collection programs, including standardized survey questions embedded in sector reports, without triggering PRA review, which can be lengthy and with uncertain outcomes. This limits the ability to collect social science data on a regular, repeatable basis, pushing such collection to academia and other non-federal institutions that face their own capacity constraints. Participants also noted that GARFO, which receives and manages much of the industry-submitted data, lacks dedicated social science staff, meaning its data systems are designed for compliance and monitoring rather than for research or analytical use.

Withdrawal of federal capacity

Recent reductions in NOAA staffing have affected both population dynamics and social sciences capacity, reduced the frequency of management-track assessments, paused research track assessment, and limited the SSB's ability to develop and maintain socioeconomic data products. Participants noted that this withdrawal of capacity increases uncertainty across the board (biological as well as socioeconomic), and with heightened uncertainty, the case for bringing additional data sources to bear becomes stronger, not weaker. The Caribbean Fishery Management Council (CFMC)'s experience was cited as an instructive contrast: with limited biological data and hundreds of species managed under broad categories, the CFMC has often depended on fishery-dependent data and industry knowledge as primary inputs rather than supplements. While the New England context is very different, the principle—that data-limited situations demand broader consideration of available information—resonates with the reduced assessment capacity at present.

4.0 Options for Addressing Barriers

The second day of Workshop 2 was devoted to developing concrete strategies for overcoming the barriers identified on the first day. Three breakout groups worked on complementary themes: (1) thinking in terms of multiple stocks, connectivity, and industry input for single-stock processes; (2) activating information already collected, particularly groundfish sector annual reports; and (3) front-end positioning of industry information in the decision-making process. In the synthesis below, we organized the proposed approaches thematically, drawing across all three groups and the plenary discussions.

Approach 1: Standardize and activate existing industry data streams

1.1 Standardize groundfish sector annual reports

Perhaps the most immediately actionable set of recommendations concerned the groundfish sector annual reports—a data source that already exists, has temporal depth back to 2010, and covers most of the New England groundfish fleet, but is currently underutilized due to inconsistent formatting and unclear pathways for use.

Participants proposed restructuring the annual report template to include standardized questions developed collaboratively by sector managers, SSB members, and SSC social scientists. The current report format includes a GARFO-provided spreadsheet (covering members, landings, species, and prices) and a narrative component with minimal guidance. A revised template could retain the spreadsheet component while adding structured questions on topics identified as high-priority: lease prices (by species and market category, and in consistent units); operational costs; crew shares, dynamics, and availability; gear and spatial patterns; and qualitative assessments of fishery conditions and outlook. A Google Form or similar online tool was suggested as one mechanism for standardization.

Two important caveats were raised. First, sector managers must be involved in designing any revisions, as they are the ones who will be responsible for completing the reports. Second, standardization alone is insufficient; the data must have identified users and purposes (addressed below), or the exercise risks adding burden without benefit.

1.2 Identify users and purposes

A key question that emerged repeatedly was: who will use standardized sector annual report data, and for what purpose? Workshop 2 participants identified several concrete applications. SSB researchers could use standardized lease price and cost data to improve models of fleet profitability and the economic impacts of quota changes. PDTs could draw on the reports to inform analyses accompanying management actions. The SSC could use compiled report data in Risk Policy deliberations, particularly for the commercial characteristics factors. AI-assisted synthesis tools (discussed below) could extract temporal patterns from the narrative components.

The two primary analytical applications identified were: (1) understanding the relationship among lease prices, catch composition, and stock dynamics—information that is directly relevant to assessing the economic impacts of quota decisions; and (2) providing input for the Risk Policy, where socioeconomic well-being and fairness are written into management goals but lack adequate metrics or data.

1.3 Improve consistency between SSB and GARFO data products

Participants noted discrepancies between the socioeconomic data produced by the SSB and the monitoring data maintained by GARFO, including differences in how fishery participation is defined (e.g., the threshold for what constitutes a participant in a given FMP) and how data are reported. Resolving these inconsistencies, through better communication and coordination between the two offices, would improve the reliability and credibility of socioeconomic data products.

Approach 2: Integrate socioeconomic data into science-to-management pipeline

2.1 Formalize and expand inclusion of socioeconomic data in SSC materials

Workshop 2 participants discussed the inclusion of relevant socioeconomic data in materials reviewed by the SSC alongside biological analyses as a way of establishing a recurring entry point for socioeconomic information. Particularly with many stocks now receiving data updates rather than full management-track assessments, participants considered opportunities to develop complementary socioeconomic analyses to data updates to generate a more interdisciplinary product to inform SSC decisions more holistically. Specific indicators that could accompany biological data include fleet participation and vessel counts, revenue and price trends, lease price dynamics, effort patterns, and relevant context from groundfish sector annual reports or advisory panels.

2.2 Include terms of reference for socioeconomic review

A structural change that could formalize the demand for socioeconomic data is the inclusion of socioeconomic topics as terms of reference (TORs) for SSC review, PDT analyses, or stock assessments. Currently, TORs for the SSC and for assessments are focused primarily on biological questions. Adding TORs that explicitly call for socioeconomic data products—such as a review of commercial fishery characteristics, an assessment of fleet profitability trends, or a summary of industry-reported conditions—would create institutional expectations that such data be prepared for and reviewed by the SSC. This approach could be advanced through the Northeast Region Coordinating Council (NRCC) process. Participants noted that the momentum from Workshop 2 and the SSC's ongoing work could help identify and advocate for specific TORs, particularly given the revised Risk Policy's emphasis on commercial characteristics.

2.3 Activate the revised Risk Policy

The revised Risk Policy was repeatedly identified as a promising near-term pathway for front-ending socioeconomic information. The Policy now includes commercial characteristics among the factors that can influence where ABC is set relative to OFL, creating institutional demand for data on fleet economics, participation, and community dependence. However, the Risk Policy's potential as an on-ramp for socioeconomic data will remain unrealized without specific data products to populate its socioeconomic factors. Participants discussed the need to define what data inputs the commercial characteristics require, who will compile them, and how they will be presented to the SSC. The convergence of the revised Risk Policy with Framework 68 to the Northeast Multispecies FMP (which will revisit groundfish ABC control rules) creates a concrete, near-term opportunity to operationalize this approach and to establish a model that other FMPs can follow.

Approach 3: Deploy fishery performance reports and AI analysis tools

3.1 Formalize fishery performance reports for New England

Drawing on the Mid-Atlantic Fishery Management Council (MAFMC)’s Fishery Performance Report model, participants discussed developing analogous products for New England fisheries. These reports would summarize information collected during advisory panel meetings using a standardized set of questions. Analogous to the MAFMC model, these reports can be accompanied by an information document synthesizing other existing data—e.g., from VTR, dealer reports, permit data, sector data, SSB performance measures, and other sources—into regularly updated, accessible summaries characterizing each fishery’s economic health and operational conditions. An automated approach to compiling these information documents, building on existing SSB data tools and metrics, was discussed as a way to make the effort sustainable without large additional staff commitments. Fishery Performance Reports and information documents could serve multiple purposes: informing SSC deliberations, supporting PDT analyses, and providing a reference document for Council members and the public.

3.2 Conduct AI-assisted synthesis and conceptual mapping

Tarsila Seara (SSB Chief) demonstrated how AI-assisted content analysis could be applied to the MAFMC’s advisory panel Fishery Performance Reports, which have used consistent questions since 2013. Using MAXQDA’s Tailwind tool, the analysis extracted recurring topics and generated summary reports, and results were used to produce conceptual maps of persistent challenges across more than a decade of reports. The analysis revealed that many of the same issues (e.g., low market prices, climate-driven distribution shifts, regulatory frustration, MRIP concerns) have been raised consistently for 10+ years, providing temporal depth that transforms what might otherwise appear as one-off complaints into documented patterns.

Participants proposed applying similar methods to New England data, including sector annual reports, public comment letters, and SSC meeting notes. AI tools can analyze large volumes of qualitative text far more rapidly than manual coding, making it feasible to synthesize information that might otherwise be underutilized or remain disconnected from its larger context. Several participants noted that AI-assisted analysis could also be applied to Council meeting minutes, cooperative research reports, and other existing text-based records to identify patterns and track whether issues raised by industry are being addressed. The temporal depth is a notable advantage: a single year’s complaint might appear anecdotal, but the same issue documented across years of reports constitutes a systematic finding.

Participants also proposed applying AI-assisted conceptual mapping to visualize inter-dependencies across stocks, showing how changes in catch limits for one stock cascade through lease markets, effort allocation, revenue streams, fleets, and communities. Such models could be built up incrementally, with understudied linkages highlighted as funded research opportunities, and could eventually support Ecosystem-Based Fishery Management (EBFM). They could ultimately represent a more useful way to help SSC members and Council staff understand the system-level implications of single-stock decisions. Some participants suggested that this approach needs “rebranding”: fishermen already describe their operations in multi-species terms during SSC testimony, so framing multi-stock analysis as a formalization of what industry already knows could build support. The data updates process, which already covers multiple stocks sequentially, could be a natural venue for presenting multi-stock socioeconomic context.

Approach 4: Strengthen connectivity and communication across the management system

4.1 Connect SSB, GARFO, Council staff, and the SSC

The data inventory and SSB presentations revealed that many participants were unaware of the full range of socioeconomic data products available, including the crew survey, cost survey, performance measures website, vessel profit snapshots, environmental variability risk indicators, community profiles, and the forthcoming SSB metrics catalog. SSB participants acknowledged this as a visibility problem and expressed uncertainty about which of their products were most useful to Council processes and how to ensure they reach the right audiences at the right time. Improving this connectivity requires regular, structured communication between the SSB and the SSC/SSS, between the SSB and Council staff, and between the SSB and GARFO's Analysis and Program Support Division (APSD).

4.2 Leverage existing institutional channels

Concrete mechanisms for improving communication were proposed. SSB researchers could present at advisory panel meetings, strengthening the dialog between data producers and industry stakeholders. The SSC's SSS meetings could serve as a regular venue for reviewing socioeconomic data products and identifying needs. Council staff preparing SSC presentations could be asked to include more socioeconomic context alongside biological information. The Council's annual work priorities process could incorporate recommendations emerging from this workshop. Lastly, SSC members with social science expertise could serve as "stock leads" for socioeconomic issues, analogous to the biological stock leads who help prepare colleagues for ABC-setting discussions.¹

4.3 Obtain confidential data access for SSC members

Participants noted that a policy allowing SSC members access to confidential data (strictly for SSC-related use) went into effect in January 2025 but had not been widely operationalized ([50 CFR 600.415](#)). Enabling SSC members to work with confidential industry data—including detailed sector report data, individual vessel-level information, and lease transaction records—could significantly expand the analytical possibilities for socioeconomic review. The next step is to follow up with the Council's Executive Director on the status of this access.

4.4 Demonstrate impact to industry

Industry engagement will not be sustained if participants cannot see how their data influences outcomes. The BOEM offshore wind example, in which fishermen were shown how their spatial data inputs were weighted in siting decisions, was cited as a positive model. Participants suggested that similar feedback loops are needed within the fisheries management process to show sector managers how their annual reports inform analyses, present advisory panel members with summaries of how their input was incorporated and communicate to the broader industry how socioeconomic data influences Risk Policy deliberations and other decisions. As one participant put it, the industry needs to see data used "*in the decision-making mode*," not just in reports filed to meet regulatory requirements.

¹ Given the number of social scientists in NEFMC-SSC compared to the number of stocks the SSC handles, assigning a social science lead to each stock being discussed might not be the most ideal option. That said, it could be a worthy topic to be picked up at future SSS meetings.

4.5 Build trust through cooperative research

Drawing on his experience as both a sector manager and Council member/Chair, Dan Salerno highlighted the role that cooperative research has played in building trust between industry and science. When fishermen participate in survey design, data collection, and data analysis, they develop confidence in the results and a sense of ownership over the process. Noting that this trust does not transfer automatically across programs (e.g., fishermen who trust the cooperative research process may still be skeptical of surveys or management-driven efforts), participants expressed support for expanding a collaborative, transparent model of engagement with reciprocal benefits for those contributing valuable time and data.

5. Preliminary Conclusions

Workshop 2 confronted a persistent paradox: the New England fishing industry generates extensive data through sector reports, cooperative research, advisory panels, and daily operations, yet this information remains largely disconnected from the decision-making processes that most directly affect the industry's future. While the barriers to integration are real—institutional, procedural, cultural, and technical—Workshop 2 surfaced both an appetite for change and concrete strategies for achieving it.

Several features of the current moment make these strategies more tractable than in the past. The SSC's Social Science Subcommittee (SSS), formed as an outcome of Workshop 1, provides an institutional home for advancing socioeconomic priorities. The revised Risk Policy creates a formal front-end pathway for industry and socioeconomic data. The shift toward data updates as a primary assessment product opens the door to more interdisciplinary approaches. And the reduction in federal capacity, while deeply concerning, has made the case for diversifying the informational basis for fisheries decisions both more urgent and more broadly accepted.

Potential next steps. Workshop 2 identified a set of near-term actions that can be pursued without waiting for new institutional mandates or additional funding:

- Initiate a collaborative process among sector managers and SSB and SSC social scientists to develop a standardized template for sector annual report components.
- Apply AI-assisted synthesis tools to existing bodies of qualitative data (e.g., sector reports, fishery performance reports, public comment letters, advisory panel records) to demonstrate their analytical value and temporal depth.
- Advance the development of fishery performance reports for New England, building on existing SSB data tools and the MAFMC model.
- Operationalize SSC member access to confidential data (50 CFR 600.415), in coordination with the NEFMC Executive Director.
- Identify specific socioeconomic TORs that can be proposed for SSC review or inclusion in data updates, beginning with fisheries where the Risk Policy's commercial characteristics are most immediately relevant (e.g., groundfish under Framework 68).
- Pursue an agenda item at a future Council meeting to communicate Workshop 2's findings and recommendations, contributing to the Council's strategic planning process.

Longer-term, participants were enthusiastic about the idea of conceptual models that capture the influence of various socioeconomic, ecological, environmental, and biological factors on a stock's health. Such an influence diagram could increasingly be quantified using data from industry, academic studies,

and other sources, and be broadened to include the inter-connectivity across species and even other shoreside sectors that may affect fishery employment or other feedback.

The organizers of Workshop 2 have prepared this summary report for review by workshop participants and subsequent presentation to the SSC. This report, together with the ongoing work of the SSS, is intended to inform both bottom-up actions by workshop participants and future institutional or policy changes that may emerge from continued dialog with the Council, NEFSC, and GARFO. Participants also expressed interest in developing the workshop's findings into an academic paper for broader circulation.

The discussions and mapping of identified barriers and approaches to address them (Table 1) reflect a shared recognition that the challenge of improving fisheries decision-making in New England is not principally one of data scarcity but of institutional design—creating the processes, formats, and feedback loops that allow existing data to inform the decisions it was collected to inform. Workshop 2 represents a step towards that goal.

Acknowledgments

The conveners thank the Cooperative Institute of the North Atlantic Region (CINAR) for funding Workshop 2; Kaycee Coleman for facilitating; the University of Rhode Island for providing meeting space; and participants from the NEFMC, the NEFSC Social Sciences Branch, the fishing industry, and academic institutions for sharing their expertise and experiences in constructive discussion.

Table 1. A mapping of barriers to proposed approaches identified by Workshop 2 participants.

Barrier	Sub-Approach	How Sub-Approach Addresses Barrier
<u>Lack of standardization in existing data streams</u>	1.1 Standardize groundfish sector annual reports	Restructure sector annual reports with standard questions developed collaboratively by sector managers, SSB, and SSC social scientists.
	1.2 Identify users and purposes	Define concrete users and analytical purposes for standardized data so that standardization adds value rather than reporting burden.
	1.3 Improve consistency between SSB and GARFO data products	Resolve inconsistencies between SSB socioeconomic products and GARFO monitoring data through improved interagency coordination.
	3.1 Develop fishery performance reports for New England	Synthesize disparate sources (VTR, dealer reports, permit and sector data, SSB performance measures) into consistent, regularly updated products.
	3.2 Conduct AI-assisted synthesis and conceptual mapping	Use AI-assisted text analysis to extract patterns from unstandardized narrative sources where formal standardization is not feasible.
<u>Treatment of industry data as supplementary or anecdotal</u>	1.2 Identify users and purposes	Tie industry data to concrete analytical applications (e.g., lease-price/stock-dynamics modeling, Risk Policy inputs), shifting it from supplementary to integral.
	2.2 Include terms of reference for socioeconomic review	Create formal institutional demand for socioeconomic data products through SSC, PDT, and assessment TORs.
	2.3 Activate the revised Risk Policy	Operationalize the commercial characteristics factors so that socioeconomic data directly informs ABC determination.
	3.2 Conduct AI-assisted synthesis and conceptual mapping	Document recurring patterns across years of industry input, transforming individual statements into systematic findings with temporal depth.
	4.4 Demonstrate impact to industry	Show concretely how industry data influences decisions, countering the perception that input is collected but unused.
<u>Relegation to the back end of a decision process</u>	2.1 Formalize and expand inclusion of socioeconomic data in SSC materials	Include socioeconomic data in materials reviewed by the SSC (e.g., data updates), creating a recurring front-end entry point.
	2.2 Include terms of reference for socioeconomic review	Position socioeconomic data at the assessment and SSC review stages, before catch advice is finalized.
	2.3 Activate the revised Risk Policy	Provide a structured mechanism for socioeconomic data to inform ABC at the front end of the management process.

<u>Stakeholder fatigue and mistrust</u>	4.2 Leverage existing institutional channels	Strengthen communication between data producers and industry stakeholders through advisory panel presentations, crew survey field staff, and other established channels.
	4.3 Obtain confidential data access for SSC members	Enable nuanced and protective analytical use of sensitive industry data by SSC social scientists.
	4.4 Demonstrate impact to industry	Provide visible feedback loops showing how industry data influences outcomes, drawing on models such as BOEM's spatial data weighting in offshore wind siting.
	4.5 Build trust through cooperative research	Involve industry directly in survey design, data collection, and analysis, building ownership over results.
<u>Institutional inertia and legal constraints</u>	2.2 Include terms of reference for socioeconomic review	Embed new requirements within existing TOR structures, working within rather than against the institutional process.
	2.3 Activate the revised Risk Policy	Take advantage of the revised Risk Policy as a new institutional opening for socioeconomic considerations in catch advice.
	3.2 Conduct AI-assisted synthesis and conceptual mapping	Address the single-species/multi-species mismatch through AI-assisted conceptual mapping that visualizes cross-stock interdependencies.
	4.1 Connect SSB, GARFO, Council staff, and the SSC	Strengthen communication links among the agencies and bodies whose siloed practices reinforce inertia.
	4.2 Leverage existing institutional channels	Advance new practices through existing venues (AP meetings, SSS meetings, work priorities process) rather than requiring structural reform.
<u>Withdrawal of federal capacity</u>	1.1 Standardize groundfish sector annual reports	Leverage data already collected by non-federal entities by improving existing reports rather than launching new federal collections.
	3.1 Develop fishery performance reports for New England	Build performance reports on automated compilation tools to make the effort sustainable without large additional staff commitments.
	3.2 Conduct AI-assisted synthesis and conceptual mapping	Use AI tools to analyze large volumes of qualitative text rapidly, expanding analytical reach beyond what manual coding allows.
	4.3 Obtain confidential data access for SSC members	Expand analytical capacity by enabling SSC academic members to use data/conduct analyses federal staff do not have time for.
	4.5 Build trust through cooperative research	Expand cooperative research partnerships that bring industry and non-federal capacity to bear on data needs.

Appendix A: Workshop 2 Participants and Organizers

Aubrey Church	Cape Cod Commercial Fishermen's Alliance
Matt Cutler	NEFSC-SSB
Vito Giacalone	Northeast Seafood Coalition (NSC)
Dana Grieco	NEFSC-SSB Affiliate
Susan Inglis	Commercial Fisheries Research Foundation (CFRF)
Min-Yang Lee	NEFSC-SSB
Hannah MacDonald	Maine Coast Fishermen's Association (MCFA), Director of Policy and Innovation
Kiera Morrill	NEFSC-SSB Affiliate
Robert Murphy	NEFSC-SSB
Jackie Odell	Northeast Seafood Coalition (NSC) / NEFMC member
Dan Salerno	NEFMC Vice Chair/Sector V/XI manager
Tarsila Seara	NEFSC-SSB Chief
Sarah Smith	University of Rhode Island (URI)
Kanae Tokunaga	Gulf of Maine Research Institute (GMRI)
Samantha Werner	NEFSC-SSB
Anna Birkenbach	University of Delaware / SSC-SSS member
Kaycee Coleman	Rutgers University
Rachel Feeney	NEFMC staff
Kevin St. Martin	Rutgers University / SSC-SSS member
Mateja Nenadovic	University of Rhode Island / SSC-SSS member
Hirotsugu Uchida	University of Rhode Island / SSC-SSS chair

Appendix B: Workshop 2 Agenda

Monday March 23, 2026

10:00	Welcome - <i>Hiro Uchida</i>
10:05	Introductions - <i>What do you want out of the workshop?)</i>
10:35	Workshop Rationale and Agenda Overview - <i>Kevin St. Martin</i>
10:50	Social Science Subcommittee Inventory Project - <i>Kaycee Coleman & Tarsila Seara</i>
11:15	Break
11:30	NEFSC Social Science Branch Inventory Project - <i>Tarsila Seara</i>
11:55	Case studies of industry engagements with science and management <i>Dan Salerno - NEFMC Vice Chair/Sector V/XI</i> <i>Hannah MacDonald - Maine Coast Fishermen's Association</i> <i>Kiera Morrill - NOAA-affiliate (NEFSC-SSB)</i>
12:50	Lunch
1:50	Industry Participants' Experiences - <i>Anna Birkenbach</i>
2:35	Topics for breakout group discussions - <i>Mateja Nenadovic</i>
2:50	Breakout Groups - <i>Dive in further on specific barriers and challenges</i>
3:50	Break
4:05	Report Outs and Initial Discussions - <i>Kaycee Coleman</i>
4:50	Wrap-Up / Reminders for Tuesday - <i>Kaycee Coleman</i>
5:00	Adjourn

Tuesday March 24, 2026

9:00	Welcome Back / Agenda Overview - <i>Hiro Uchida</i>
9:05	Framing from social science workshop and how to think of solutions - <i>Kevin St. Martin</i>
9:15	Actions & Pathways to Address Barriers - Discussion Breakouts - <i>Kaycee Coleman</i>
10:40	Break
11:10	Actions & Pathways to Address Barriers - Report-Outs - <i>Kaycee Coleman</i>
12:10	Wrap up / next steps - <i>Organizers</i>
12:25	Lunch/Adjourn

Appendix C: Industry Data Inventory

Dataset	Focus	Year(s)	Variable Types	Variables Included	Barriers	Notes	Link
eMOLT	To monitor climate-driven environmental changes, validate oceanographic models, and assist in fisheries management	2001 - present	location, oceanographic	TowID, Segment_type, Time, Latitude, Longitude, Depth, Temperature, Sensor_type, Model, Data_provider, QC_vessel_region, QC_gear_type, QC_date, QC_location, QC_speed, QC_global_range, QC_temp_spike, QC_rollover, QC_temp_stuck, QC_ROC, QC_clima, QC_mud	Limited dataset	Started with lobster pots but has expanded to other gear as well as other oceanographic sensors (oxygen)	http://www.emolt.org/
Study Fleet	Collect high-resolution, tow-by-tow data on catch, effort, and environmental conditions	2006 - present	location, fishing effort, oceanographic	Time, Latitude, Longitude, Temperature, Oxygen, Salinity	Limited dataset (50 vessels)		https://www.fisheries.noaa.gov/new-england-mid-atlantic/science-data/cooperative-research-northeast
Vessel Trip Report (VTR) Data	Mandatory submissions from federally permitted commercial and for-hire fishing vessels used to collect critical, real-time data on catch, effort, and location	1996 - present	Vessel & Operator Information, Trip details, Fishing effort, Catch and disposition	Vessel Name, USCG Documentation or State Registration, NMFS Vessel Permit Number, Date and time sailed, Date and time landed, # of crew, # of angles (party/charter), Gear code, Meshing/Ring size, Gear Quantity, Gear Size, Fishing depth, Number of Hauls, Chart Area, Latitude, Longitude, Tow/Soak Time, Species code, Kept, Discarded, Dealer Permit Number, Dealer Name, Date sold, Offloading port for each species (city/state), Operator permit number, Operator Name, Operator Signature, date signed	Currently only based on federally permitted boats. Proprietary and confidential. "Rule of Three" filtering		https://www.fisheries.noaa.gov/new-england-mid-atlantic/resources-fishing/vessel-trip-reporting-greater-atlantic-region
Electronic Monitoring	Supports fishery management and science.	2010 pilot, fully implemented 2022	Catch by species, Fishing time and location, Catch handling & Catch counting		Currently two programs in the Northeast are in the groundfish fishery.		https://www.fisheries.noaa.gov/new-england-mid-atlantic/commercial-fishing/electronic-monitoring-northeast
Automatic Identification System (AIS)	Collision-avoidance and safety tool.	Started in the 1990s, mandated on all new ships made after 2002.		MMSI, Base Date Time, Latitude, Longitude, SOG, COG, Heading, Vessel Name, IMO, Call Sign, Vessel Type, Status, Length, Width, Draft, Cargo, Transceiver Class	Not all fishing vessels have up to date AIS. Can be turned off by captains. Includes more than just fishing vessels.		https://marinecadastre.gov/accessais/ or https://coast.noaa.gov/digitalcoast/tools/ais.html

Dataset	Focus	Year(s)	Variable Types	Variables Included	Barriers	Notes	Link
Vessel Monitoring Systems (VMS)	Monitoring compliance, tracking vessel positions, and managing large-scale fishing effort in the Exclusive Economic Zone (EEZ)	1998 - present	Vessels, times, and locations	Latitude, Longitude, Declaration, code, UTC, Date and Time, Speed Over Ground (SOG), Doc# (vessel ID), Average Speed, heading, declaration code, gear category, vessel length group, time spent in area, environmental data, catch & landing data	Proprietary and confidential. Scheduled broadcast, not updated automatically. "Rule of Three" filtering	Started with the scallop fleet, was expanded in the 2000s to other vessels like groundfish	https://www.fisheries.noaa.gov/topic/enforcement/vessel-monitoring
Dockside monitoring for groundfish		2010 - 2013			Groundfish only.	The general program was eliminated.	
Dockside Monitoring for maximized retention electronic monitoring		2023 - present			Groundfish only. Duplicate dataset to dealer data.	The general program was eliminated but it continues for vessels utilizing Maximized Retention Electronic Monitoring instead of a human observer.	https://www.fisheries.noaa.gov/new-england-mid-atlantic-commercial-fishing/northeast-groundfish-monitoring-program
NOAA Voices Oral History Archives	Record unique life experiences and how those lives are shaped by experiences in our climate, weather, fisheries, oceans, and coasts.	2003 - present		Can search by collection, affiliation, interviewer , year and location.			https://www.noaa.gov/noaa-collections/noaa-voices
Industry - Funded Monitoring in the Atlantic Herring Fishery		2021 - 2023	Monitoring to improve data accuracy and track catch limits				https://www.fisheries.noaa.gov/species/atlantic-herring/industry-funded-monitoring
Marine Recreational Information Program (MRIP)	Recreational fishing data.	1981 - 2025, preliminary 2026 estimates	Catch Data, Effort Data, Participation Data, Fish level catch and weight,	<i>Catch Level:</i> <i>Strat_id</i>: Identifier for the design stratum. <i>Psu_id</i>: Identifier for the primary sampling unit (site-day). <i>Id_code</i>: Identifier for the angler trip. <i>Wp_catch</i>: Post-stratified sampling weight for use in weighted estimation. <i>Trip Level:</i> <i>Strat_id</i>: Identifier for the design stratum. <i>Psu_id</i>: Identifier for the primary sampling unit (site-day). <i>Id_code</i>: Identifier for the angler trip. <i>Wp_int</i>: Post-stratified sampling			https://www.fisheries.noaa.gov/data-tools/recreational-fisheries-statistics-queries

Dataset	Focus	Year(s)	Variable Types	Variables Included	Barriers	Notes	Link
Marine Recreational Information Program (MRIP)	Recreational fishing data (cont.)			weight for use in weighted estimation. <i>Month</i>=99. <i>KOD</i>="xx". Last 4 characters of <i>psu_id</i>="0000". Last 4 characters of <i>strat_id</i>="99xx". <i>Id_code</i>=first 15 digits of appended (year wave sub_reg st fl_reg mode_fx m onth kod "0000"), with <i>area_x</i> appended Fish Level: <i>Strat_id</i>: Identifier for the design stratum. <i>Psu_id</i>: Identifier for the primary sampling unit (site-day). <i>Id_code</i>: Identifier for the angler trip. <i>Wp_size</i>: Post-stratified sampling weight for use in weighted estimation for the size dataset. Contains an additional adjustment for situations in which only a subset of landed fish have been measured for an angler trip. Household Level: <i>Stratum_ID</i>: Identifier for the design stratum. <i>HH_ID</i>: Unique household identifier. <i>Final_wt</i>: Final survey weight used in weighted estimation. Person Level: <i>Stratum_ID</i>: Identifier for the design stratum. <i>HH_ID</i>: Unique household identifier. <i>Person_ID</i>: Person identifier unique within each household. <i>Final_wt</i>: Final survey weight used in weighted estimation.			
Gulf of Maine (GOM) Longline Surveys	Collaborative initiative between NOAA and the commercial fishing industry. Monitor rough and rocky habitats. Used to inform stock assessments.	2014 - present. Annually, Spring and Fall.	Water and Current Data, Video Habitat Assessment, Catch Lengths and Weights, Biological Samples, Electronic monitoring	Biological Sampling: CRUISE, STATION, COMMON_NAME, SVSPP, LENGTH, WEIGHT, SEX, MATURITY, FISH_ID, GONAD_WT, LIVER_WT, GUTTER_WT, COMMENTS, AGE, EST_LENGTH, AUDIT_FLAG Catch: CRUISE, STATION, COMMON_NAME, SVSPP, SEX, LENWT, LENNUM, CATCHWT Damage fish otoliths: CRUISE, STATION, COMMON_NAME, SVSPP, FISH_ID, OL, OW Length: CRUISE, STATION, COMMON_NAME, SEX, LENGTH, ENTRY_ORDER, NOTES, VESSEL, EST_LENGTH, AUDIT_FLAG Station: CRUISE, STATION, STATION_ID, TRIP_ID, EFFORT_NUM, STRATUM, ASSIGNED_STRATUM, BOTTOM_TYPE, AREA, BEGIN_SET_TIME, END_SET_TIME, BEGIN_HAUL_TIME, SOAK_DURATION_DH, DECDEG_BEGLAT_SET,			https://www.fisheries.noaa.gov/new-england-mid-atlantic/science-data/gulf-maine-bottom-longline-survey or https://catalog.data.gov/dataset/gulf-of-maine-cooperative-bottom-longline-survey-database

Dataset	Focus	Year(s)	Variable Types	Variables Included	Barriers	Notes	Link
Gulf of Maine (GOM) Longline Surveys	Collaborative initiative between NOAA and the commercial fishing industry. Monitor rough and rocky habitats. Used to inform stock assessments (cont.)			DECDEG_BEGLO_N_SET, DECDEG_ENDLAT_SET, DECDEG_ENDLON_SET, DECDEG_BEGLAT_HAUL, DECDEG_BEGLO_N_HAUL, DECDEG_ENDLAT_HAUL, DECDEG_ENDLON_HAUL, STATION_TYPE, STATION_ASSIGNMENT, GEAR_EVALUATION, GEAR_DAMAGE, GEAR_INTERACTION, INTERACTION_TYPE, ENVIRONMENTAL_CONDITION, DATA_ACQUISITION, SET_NOTES, HAUL_NOTES, CATCH_NOTES, BOTTOM_VIDEO, WINDDIR, WINDSP, WAVEHGT, SWELLHGT, VESSEL_NAME, CURRENT_INSTR_ID1, CURRENT_INSTR_ID2 Station evaluation: STATION_CODING_CAT, CATEGORY_DESCR, CODE_VALUES, DISPLAY_VALUES, CODE_DESCR Otolith length prediction data: CRUISE, STATION, SVSPP, INDID, OL, OW, LENGTH, SEX			
New England Fisheries Management Council Public comments	Public comments from council initiatives are archived in the council's library.	At least from 1999 - present		Public comments span across several document types.	Some documents are migrating from their archive website to their current website.		https://www.nemc.org/library?page=1
Northeast Multispecies Groundfish Sector Reports	Used to monitor catch in the fishery against annual catch limits and used to ensure vessel compliance with fishery regulations and requirements	2010 - present	Sector, Trip issues report, incident reports	Trip issues report: Action, trip issue ID, Case ID, week end date, vessel permit no., trip ID, event date, issue type, fishing year, date entered, descriptions Incident report: Date, Vessel, Captain, Owner, Investigator, Violation, Outcome	Sector reports are prepared for the council and are not public.		https://www.fisheries.noaa.gov/s3/2026-05/20260513-sector-report-guide-fy-2026-2.pdf and https://www.fisheries.noaa.gov/new-england-mid-atlantic/commercial-fishing/fishing-year-2026-sectors

Dataset	Focus	Year(s)	Variable Types	Variables Included	Barriers	Notes	Link
Northeast Fisheries Observer Program	Data are used to support stock assessments, reduce bycatch, supports scientific research, FishWatch, used to explore new or smaller fisheries, document species, and for special collections.	1972 - present	Catch and discard data, protected species interactions, fishing effort and gear data, biological and economic data.				https://www.fisheries.noaa.gov/northeast-atlantic/fisheries-observers/northeast-fisheries-observer-program
NOAA commercial fishing crew survey	Assess social and economic well-being of commercial fishing vessel crews.	2012, 2018, & 2023	Commercial fishing vessel crew demographics, Participation and practices, Views on fishery management, Job satisfaction, Well-being over time		Not annual.		https://www.fisheries.noaa.gov/northeast-atlantic/socioeconomics/2026-commercial-fishing-crew-survey
Groundfish Sector leasing, prices, annual catch entitlements and transfers		2010 - present					https://www.fisheries.noaa.gov/northeast-atlantic/commercial-fishing/sector-management-northeast-multispecies-fishery

Appendix D: Workshop Overview Slides

CINAR Workshop:

Implementing Industry Data for Fisheries Decision-Making

March 23-24, 2026
Robert J. Higgins Welcome Center,
University of Rhode Island (Kingston)

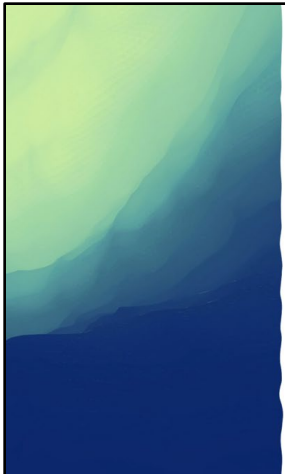




Workshop Goals

1. Develop shared understanding of **existing tools and data sets** from industry or meant to characterize industry.
2. Explore range of **barriers** to using industry data in decision processes.
3. Identify **characteristics** of barriers and **approaches** to address them.
 - a. Identify *where* (at what stage) each barrier exists within the science-to-decision-making process, and the *nature* of the barrier.
 - b. Brainstorm approaches to address barriers and enhance consideration of industry information in decision-making.
4. Develop initial **recommendations** for follow-up.
5. Strengthen **connections** and **dialog** for future opportunities.

3



Workshop Rationale

Why Now?

Agenda Overview

Now is the time? Needs that cannot be ignored...

- **SSC** momentum to better address socio-economic concerns.
- Re-working and re-activating **Risk Policy**.
- Revision of MSA **National Standard 8 - Communities** (and 4, 9)
- NOAA Fisheries' **Stock Assessment Improvement Plan (SAIP)** highlights need for holistic stock assessments that incorporate more socioeconomic data and methods.
- **Climate change** is altering options for fishing communities concerning where/when/what to fish.
- Ongoing **industrial change** and community crises - access, consolidation, working conditions, decline in services, socio-cultural transformations.
- Extraordinary **withdrawal of capacity** at NEFSC SSB and Council.

8

Activating Socio-Economic Information

- All agree on **more** data, **more** engagement, **more** capacity...
- Workshop 1: began by noting that **much has been** done.
 - Enhanced capacity (NEFSC, SSC, etc.).
 - Funded initiatives (Crew Survey, Community Profiles, Indicators Development, etc.).
 - Many workshops, reflections, comparisons to other regions, etc.
- Focus was **understanding barriers** to integration and use of data and expertise. Why the **persistent limited use**?
- **Outcomes**: SSS, better communication across SSC, council staff, SSB...
- Workshop 2: we focus on **understanding barriers** to **industry generated** socio-economic data.

9

Addressing Barriers

- Bringing together experiences (not just expertise).
- Focus on **specificity** in identifying **barriers** to use
 - Data formats, units of analysis, and scale (temporal and spatial).
 - Science and management processes (e.g., access and integration).
 - Points of communication and boundaries.
- Consider nuances of **New England** region.
 - Case studies
- Identify **concrete** steps to **operationalize** solutions.
 - Where and how to be effective... mindful of constraints.
 - Solutions are more likely to emerge from understanding barriers.

10

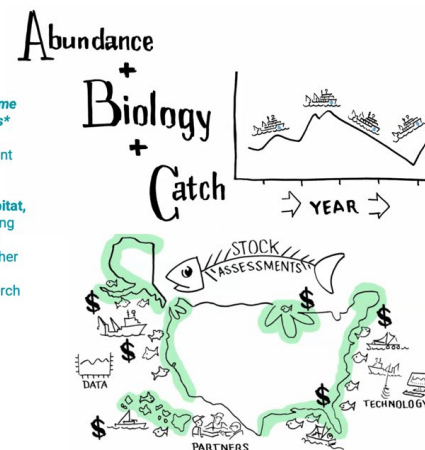
Social Sciences Subcommittee Inventory Project Overview

What generally goes into stock assessments?

Stock assessments are fishery specific so the same data sources/types may not be used in all fisheries

1. **Abundance**: Statistical fisheries-independent surveys
1. **Biology** (e.g., size, age, length, weight, habitat, migration, maturity): May be collected during fishery-independent surveys, tag-recapture studies, or obtained from observers and other fishery sampling programs. Can include academic programs and cooperative research programs.
1. **Catch** (e.g., landings, mortality, effort): Dockside monitoring, logbooks, on-board observers, Electronic Monitoring, and telephone surveys.

Sources: <https://www.fisheries.noaa.gov/topic/population-assessments/fish-stocks>
<https://wildlife.ca.gov/Conservation/Marine/MMA/MasterPlan/Data/Collection>



Industry Data Inventory

- What industry datasets are available?
- What do the data sets look like?
 - E.g., qualitative or quantitative data?
 - Continuously collected or one-time effort?
- How have the data sets been used in fishery decision-making?

Industry Data Inventory

Added from discussion: MRIP, public comments, sector annual reports, GOM longline surveys, sector leasing & prices, transfer of quota/permits, crew survey, crew shared, observer program

- eMOLT (2001-present)
- Study Fleet (2006-present)
- Bycatch
- VTR discards (1996-present)
- Oral History Archives (2003-present)
- Permits (1994-present)
- Biological Port Sampling (1970s, merged with observer program in 2025)
- Vessel Trip Reports (VTR) (1996-present)
- Electronic Monitoring (EM) (2010 pilot, implemented 2022 in groundfish)
- Dockside Monitoring
- Vessel Monitoring Systems (VMS) (1998-present)
- Industry Driven & Funded Research & Monitoring (examples on next slides)

What other data are missing? Are there fishery specific data missing?
As we move forwards, what data can help with ecosystem, dynamic, or adaptive management?

Examples of Industry-Funded, Industry-Driven, or industry collaborative research groups that help inform management

- Atlantic Sea Scallop Survey (since 1979) uses industry vessels and gear to collect data on scallop abundance and distribution
- Industry-funded HabCam (Habitat Camera Survey) (2012) used to set annual catch limits and monitor the sustainability of the scallop fishery.
- Industry-funded scallop observers: (2006) observer data inform stock assessments, monitor commercial gear selectivity, aid in spatial management, and help support a sustainable sea scallop fishery
- Industry-funded monitoring in the Atlantic herring fishery: (2021-2023) monitoring to improve data accuracy and track catch limits
- Industry-funded monitoring programs are also used as part of fishery management plans for Atlantic salmon, deep-sea red crab, Northeast groundfish, and Northeast skates.

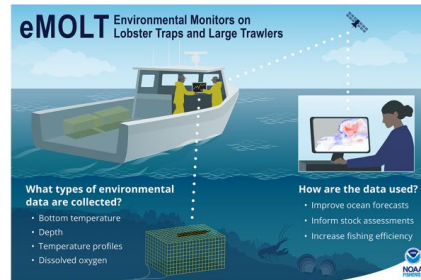
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Examples of Industry-Funded, Industry-Driven, or industry collaborative research groups that help inform management

- Science Center for Maine Fisheries (SCMFIS): (founded 2013) brings together academic scientists and industry partners to reduce uncertainty in biomass estimates, improve assessment models, and address urgent management needs.
- Fisheries Knowledge Trust: (launched in 2020, scoping meetings in 2019) allows fishermen to collaborate directly with researchers, providing granular data while protecting proprietary information. Aims to enhance ecosystem management and inform decision-making—particularly regarding offshore wind impacts
- Commercial Fisheries Research Foundation (CFRF): (founded in 2004) to conduct and support collaborative research and education to achieve sustainable fisheries
- NEFSC Cooperative Research Branch: (1999) partners with the fishing industry to collect high-quality data to improve fisheries management, enhance understanding of ocean ecosystems, and build trust between scientists and industry(e.g., herring, haddock, squid, & wolffish)

Example of how these data are being utilized

- Lobster fishery stock assessments are now informed by eMOLT data
 - eMOLT can be viewed in maps and profiles <https://ccocean.whoi.edu/>
 - eMOLT is also Integrated into regional ocean models (e.g. ROMS)



Example of how these data are being utilized

- Scallop Fishery working towards dynamic management
 - Trust is built through conversations
 - How do we then incorporate these novel, non-traditional methods into dynamic management?

New England Fishery Management Council

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Council Seeks Input at Scallop Strategic Plan Visioning Sessions

The New England Fishery Management Council (Council) has scheduled four Visioning Sessions to gather public input to help shape the development of a strategic plan to guide the future management of the Atlantic sea scallop fishery over the next 25-35 years.

Three of the sessions will be held in person and one will take place virtually. Here is the schedule:

- **Rockport, Maine:** February 27, 2025, 1 p.m. – 4 p.m. at the Maine Fishermen's Forum, Sunset Resort, 220 Warrington Street
- **New Bedford, Massachusetts:** March 4, 2025, 10 a.m. – 4 p.m. at the Whaling Museum, 18 Johnny Cake Hill
- **Philadelphia, Pennsylvania:** March 13, 2025, 10 a.m. – 4 p.m. at the Windsor Suites, 1700 Benjamin Franklin Parkway
- **Webinar:** March 24, 2025, 1 p.m. – 4:00 p.m. Register [here](https://www.nefmc.org/2025-02-18-220924_oxwq.pdf)

For planning purposes please fill out this [Google Form](https://www.nefmc.org/2025-02-18-220924_oxwq.pdf) to let us know if you'll be attending a session. The Rockport, New Bedford, and Philadelphia Visioning Sessions will not have a webinar option.

Source: https://d23hvhsm2fo6d.cloudfront.net/NEFMC-Seek-Input-at-Scallop-Strategic-Plan-Visioning-Sessions_2025-02-18-220924_oxwq.pdf

Example of how these data are being utilized

- Based on **industry feedback about bycatch**, the Surfclam Fishery is now allowed to land mixed catch (MAFMC Amendment 21)
 - PI Daphne Munroe in coordination with industry is researching mixing proportion of catch composition to better inform management
- **Industry-Funded Research:** Surfclam industry is voluntarily supplying yield and location to advance spawning knowledge (PI Daphne Munroe, SCMFIS supported)



Building on Existing Projects and Datasets

- Initiatives and engagements with industry focused on biology or environment could do more.
- Socio-economic issues are intertwined with biological (e.g. change in fishing practices relative to stock or environmental change).
- Data may have multiple roles (e.g. VTR as basis for indicators of adaptive capacity).

