



## Social Science Planning Team Minutes

November 6, 2019 Teleconference

*The Social Science Planning Team (SSPT) held a teleconference to continue progress on the Economic Data Reporting (EDR) data collection framework, review recent work on the data gap analysis, discuss approaches to using qualitative data in the Council process, and plan for the May 2020 in-person meeting.*

Committee Members in attendance:

Steve Kasperski, <b>Chair</b> (AFSC)	Mike Downs (SSC; Wislow Research)	Seth Macinko (Univ. Rhode Is.)
Sally Bibb (NMFS AKR)	Jim Fall (ADF&G)	Sarah Marrinan (NPFMC)
Courtney Carothers (UAF)	Mike Fey (AKFIN)	Matt Reimer (SSC; UAA)
Sam Cunningham (NPFMC)		Marysia Szymkowiak (AFSC)

Others in attendance:

Raychelle Daniel	Brian Garber-Yonts	Joe Terry
Sabrina Devereaux	Stephanie Madsen	Stephanie Warpinski
Lauren Divine	Scott Miller	
Ben Fissel	Kim Sparks	

### EDR Data Collection Framework

The SSPT received a presentation from Brian Garber-Yonts (AFSC) on a document titled *Conceptual Framework for Economic Data Reporting Revisions*, which was prepared by himself and Steve Kasperski.<sup>1</sup> The document is a scoping analysis that supports ongoing SSPT assessment and planning of a process for developing recommendations to the Council regarding EDR program revisions. At the May 2019 meeting the SSPT reviewed an April 2019 discussion paper<sup>2</sup> that synthesized the Council's previously stated purpose and need regarding social and economic information, and its analytical processes and decision outcomes over the course of EDR program development. That initial synthesis revealed considerable confusion regarding fundamental conceptual issues, objectives, and decision variables.

The document reviewed at the November SSPT meeting attempts to clarify conceptual issues, identify and define the multi-faceted problem the SSPT and Council are trying to solve, and outline a decision framework for developing and evaluating alternatives for social and economic data collections that address Council needs and priorities. The document concludes with a brief outline of the scope of best practice considerations related to survey design, information management, social and economic analyses, and a few examples of economic data collection efforts and analytical applications comparable to the EDR program that might serve as working models toward which the EDR program could be developed.

<sup>1</sup> Document available on the SSPT's electronic agenda for this teleconference: <https://meetings.npfmc.org/Meeting/Details/964>, Agenda Item 1.

<sup>2</sup> Agenda Item D5, "Alaska Region Economic Data Reporting Programs," available at: <https://meetings.npfmc.org/CommentReview/DownloadFile?p=1f542e61-0dfc-465e-92eb-f7f00ab70edc.pdf&fileName=D5%20EDR%20Discussion%20Paper.pdf>.

In short, the document and discussion highlighted the need to develop a process for updating the EDR program to include best practices and maximize utility of the resulting data. Another key conclusion of the discussion was the need for a more robust approach to assessing the cost and non-monetary burden on those who are subject to EDRs, noting that burden is not fully accounted in the number of hours spent filling out the forms.

The SSPT discussed the operationalization of the EDR Framework and the potential utilization of the tier system suggested in the document. The discussion amongst SSPT members revealed mixed perceptions about the utility of the tier framework in evaluating current data collection systems. Nevertheless, there was consensus about the overall need for the SSPT to work on developing a framework for prioritizing data collections. It was also expressed that, no matter the framework or method, EDRs should be focused on addressing identified data gaps.

One of the central concerns with the application of the tier framework was the lack of a clear analog between how a tier system is used in stock assessment and OFL/ABC specifications and the application of a tier system to inform Council decision-making based on social and economic data collections. The application of tiers in stock assessments is based in a risk assessment framework that informs how the Council *can* make decisions about OFL/ABCs for stocks. Without a clear analogous framework or outline of the potential consequences of using poor social and economic information for making a management decision, the application of tiers to social and economic data could be problematic. Moreover, there was discussion about how to classify social and economic data as “poor” (or good). While some cases are clear, there are many instances where information that is more granular – and more expensive or burdensome to collect – is not inherently more useful for decision-makers. Any given data element has a unique utility curve that expresses the cost and benefit of collecting more information, and the marginal costs and benefits of collecting a particular data element vary from one to the next. In other words, not all pieces of information or worth pursuing to the same depth of rigor and detail depending on the intended question or issue the data are meant to inform.

Some SSPT members were unsure whether a tier system could be clearly applied to the analytical framework that is used by staff when developing documents for the Council process. There was some concern that a tier system might frame pieces of information in terms of an intrinsic value or trustworthiness in a way that does not reflect the analytical utility or practicality of that information and the cost at which it was collected. Also, whereas information tiers in stock assessment constrain what decisions the Council can make, the Council must make management policy choices regardless of whatever the quality of the *best available* social and economic information might be.

The SSPT also identified potential benefits of a tiered information framework. Some members discussed the particular utility of the tier system in identifying differences in current data availability across the three overarching FMP goals related to social science information – efficiency, equity, and stability. Other members noted that there could be synergies in going through the process of applying a tier framework to data collections and the goals of the Data Gap Analysis. It was agreed that the discussion regarding the development of a tier framework for social and economic data (or the development of some other framework for prioritizing these data collections) should feed into the identification and prioritization of data gaps. Whereas stock assessment guidelines provide basic information requirements that determine tier classifications, the analysts conducting social and economic analyses are simply seeking the best available information to assess policy objectives such as National Standard 8, for example. Any framework should be providing feedback on whether the “bedrock” level of data needed to make basic assessments is being collected and provide a consistent set of social and economic metrics that could be utilized regularly in analyses.

The SSPT recommended that the discussion about identifying a framework to prioritize social and economic data collections – including, but not limited to tiers – should be continued at the SSPT’s May 2020 Annual Meeting and culminate in a focused workshop to occur later in the year. The SSPT chair

will work with Council staff to determine the appropriate timing of that workshop and identify available resources.

## Data Gap Analysis

Steve Kasperski led a discussion regarding the ongoing Data Gap Analysis (DGA) project, progress made since May 2019, and some of the remaining issues that need to be addressed. While the SSPT itself expressed some frustration over the length of time it has taken to develop the DGA – currently in its fourth iteration – members recognized that many of the issues encountered in the development of the DGA are cross-disciplinary and difficult to resolve yet critical for addressing analytical challenges for Council analyses. Thus, while progress has been slow, the development of the DGA thus far represents a significant contribution to advancing the application of social science in the Council process. To aid in the progression of the DGA, subgroups of the SSPT will address some of the remaining issues in between SSPT meetings.

Discussion of the current DGA draft focused on Section 3.4 (non-economic benefits derived from commercial fisheries), Section 5 (data requirements and gaps for subsistence fisheries), Section 7 (additional data requirements and gaps by unit of analysis), and the data gap summary tables. For Section 3.4 and Section 5, the SSPT agreed that additional work is needed to flesh out the different dimensions of well-being associated with non-economic benefits of commercial fishing and subsistence, respectively. For example, a discussion of cultural dimensions in commercial and subsistence fisheries that includes specific examples would make the point that understanding the role of culture in fisheries involves understanding deeper cultural connections to work and place. There was also a suggestion that multi-attribute variables, which are used extensively in the literature, could also be discussed in these sections. The SSPT thought that Section 7 of the DGA should be retained in the document despite having some overlap with other sections. Members of the SSPT will take on responsibilities for developing these sections for the next SSPT meeting.

The SSPT discussed the scope of the data gap summary tables in the DGA document. For example: should the tables be a data catalogue or should they only highlight data gaps? Currently, the tables are too detailed and unwieldy. The tables would benefit from some structure that facilitates the eventual prioritization of data gaps moving forward. One idea posed by the SSPT was to organize the tables into broad conceptual data gaps and then identify the types of metrics that could be used measure such concepts (for example, following the approach taken in Breslow et al., 2016). Ultimately, the tables should be able to organize a discussion regarding the most important metrics and the data that are needed to produce such metrics. Members of the SSPT thought that there was some overlap here with the EDR framework that is being developed concurrently.

Finally, there was some discussion over whether more analysts should be in attendance at the SSPT meetings to provide insight into data gaps as they relate to Regulatory Impact Reviews and other Council documents. The objective of the DGA is to identify questions that need to be answered through data collections or better use of data that are already collected. The SSPT is reliant on both practitioners and decision-makers to provide feedback on what questions are not currently being answered but would meaningfully enhance analytical products from the Council-process point of view. Industry feedback on the needs and uses of social and economic data should also be considered and the SSPT hopes to get that feedback on the data collected in the EDR program during the workshop planned for the second half of 2020.

Public testimony on this agenda item suggested that the DGA should document and share how tribal representatives who are effectively engaging in the Council process are doing so, and how vessel operators (captains) can best share their “local knowledge” in the Council process.

## **Qualitative Social Science Approaches and Utility for the Council Process**

Courtney Carothers, Mike Downs, and Jim Fall gave a presentation on qualitative methods, examples of their utility, and opportunities/challenges in connecting them to the Council process.<sup>3</sup>

The presenters highlighted that fields like anthropology and economics make different assumptions and take different approaches to “how we know what we know,” and that those assumptions inform the research and analytical approaches that are selected. In economics, for example, analysis is often framed around hypothesis testing conducted through random sampling. In other social science fields it is often appropriate to approach data without a hypothesis or preconceived notion. In other words, there are cases in which inductive reasoning is more appropriate than deductive reasoning. An investigator might not be interested in finding a mean (average) value, but rather is seeking to identify outliers and gain a deeper understanding of that subgroup. In some cases, a “rapid assessment” using ethnographic tools is the best approach to characterize a group of resource stakeholders and analyze how a management action might impact them. The presenters also noted that western science approaches are not required to validate “deep knowledge” gleaned from indigenous knowledge systems that have been carefully interrogated and recorded. A key takeaway from this discussion is that the research question at hand should drive which methods the analyst chooses to use.

The presenters provided examples of qualitative information being used to make resource management decisions in Alaska. Thoughtful interaction with stakeholders in a roundtable setting and systematic documentation of community resource management over time led to more informed conclusions about issues such as the compatibility of subsistence walrus hunting near a sustainable haul-out and the ability to target non-breeding loons, which impacted a decision not to list the species under ESA. Systematic documentation over time in multiple communities can allow qualitative information to overcome the “anecdotal” label that sometimes leads to valuable information being dismissed by decision-makers. In fact, this type of data collection was used by the Council to craft appropriate regulations to define subsistence halibut use (e.g., qualification, bag limits, and whether or not to allow proxy fishing).

The presenters facilitated discussion of the ways that analysts could approach defining the “substantial engagement and dependency” of fishing communities, which is often a necessary part of Council analyses. Qualitative information provides opportunities to go beyond the number of active vessels registered in a community or pounds landed at local processors. Qualitative information can tell a decision-maker what a fishing fleet means to a particular community. Examples include linkages between commercial vessels and access to subsistence uses that are not apparent in the fishery data that are often relied upon, or the hiring or inclusion of local or family labor (which might vary seasonally). Qualitative information is more easily extended to capture linkages to onshore support service businesses. Qualitative information can help elucidate the impact of individuals who come to a community to work as a fish processor and establish the different types of impacts associated with “enclave” processing facilities, community-integrated facilities, workers who bring their families, etc. A qualitative approach can also extend to analysis of the scale of impacts; for example, whether the loss of some vessels might endanger the opening of the local school, or how reduced fishing opportunities affect a municipality like Seattle, WA and smaller communities within the area. The analytical process could benefit from defining and collecting basic data on metrics for community well-being and exposure to social disruption over time in

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<sup>3</sup> The presentation slides are available on the November 2019 electronic agenda (Agenda Item 3), at <https://meetings.npfmc.org/Meeting/Details/964>.

order to assess causal linkages to specific Council actions. Finally, the time-series collection of participation data – in its many facets – could serve as an indicator of ecosystem change in addition to social change.

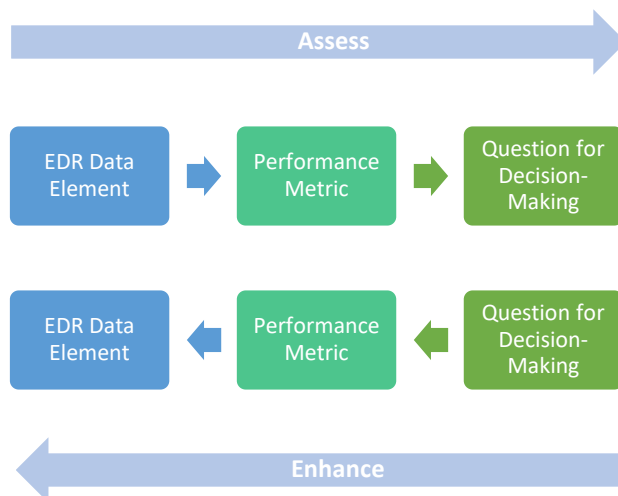
Public testimony on this agenda item noted that those involved with Bering Sea FEP efforts should be aware of this presentation.

## Next Steps

The SSPT members recommend that the Council support a third annual in-person meeting in May 2020. Specific dates and location were not identified during the November teleconference. Based on the SSPT's first two years of experience, the appropriate length of the annual meeting is likely 2.5 to 3 days. While not exclusive, the central topics of the meeting would continue to be the development of a revised EDR data collection framework – as tasked by the Council in its April 2019 motion – and ongoing refinement of the DGA. SSPT members noted during the teleconference that these two items are intertwined to some degree. Individual SSPT members have volunteered to work on specific subsections of the DGA prior to May 2020. The SSPT also maintains a standing agenda item to review “new science” in the applicable disciplines, as brought forward SSPT members.

A subgroup of the SSPT held an internal teleconference on January 21, 2020 to further define the work needed between the present and a May meeting to make the EDR framework discussion fruitful such that it leads into a productive workshop that can be held later in the year. The primary task to be advanced or completed before the May meeting is mapping the “data elements” that are – or could be – collected through EDRs to “performance metrics” that would become routinely available analytical tools. Specific performance metrics need to be defined, but broadly speaking they are the “things people care about.” Ideally, they should serve analysts in a broad range of analyses to support the Council's previously stated need for social and economic information, which is summarized in the April 2019 EDR discussion paper, and/or fill a need that is identified in the DGA. The performance metrics that are most worthy (or with the highest utility) to pursue are those that both inform and are informed by the “questions” that decision-makers are most often asking of social and economic data when addressing statutorily required considerations like National Standards 4 or 8.

The diagram below illustrates a two-way flow of information from EDR data elements (variables collected on EDR forms) to performance metrics (indicators used to assess or monitor social and economic phenomena relative to Council goals and objectives) to the common questions that arise during policy deliberation – and back. Moving from left to right represents an *assessment* of how well the data currently available can answer questions that are important to decision-makers. Thinking in this manner could inform a tier system. For example, if a data element that is integral to answering a key decision-making question is lacking for a certain fishery, the Council could establish a goal to collect better data on that element. (Note: recall that all data elements do not have the same cost/utility curve and thus are worth pursuing to different degrees depending on Council information needs). Moving from right to left represents a way to think about *enhancing* the data that are collected through EDRs, while remaining cognizant of cost and burden. Enhancement could be in the form of gathering additional data elements or fine-tuning the elements that are currently collected.



The work that needs to be completed for May is cataloguing the data elements that are currently collected for each fishery subject to EDRs, identifying the important social and economic questions that inform most Council analyses, and defining performance metrics that link the two. Some of this work has been done in the past, in particular for the original design of the Crab EDRs, and this effort will build from prior work and update it as appropriate. Given the members’ limited time available prior to May, the SSPT is interested in working with the Council – if endorsed – to contract assistance with these tasks in the coming months. SSPT members would work with a contractor to define the key questions for decision-makers and performance metrics, while the contractor would focus on the work required to catalogue data elements and go through the process of building performance metrics that would be proposed for review at a future workshop.

Finally, it was proposed during the November teleconference that the SSPT could invite an external expert in the field of information science or information design to attend the May 2020 meeting and assist the group in finding efficient and effective ways to package data elements to better support decision-making objectives at the least possible cost/burden.