Atlantic States Marine Fisheries Commission

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Committee on Economics and Social Sciences

January 31, 2024, 12:30 PM – 4:00 PM

Meeting Summary

Attendees: *S. Lovell, A. Scheld, J. Montanez, J. Holzer, S. Ebbin, M. Russell, J. Walsh, J. Hadley, S. Sethi, T. Scott, E. Frimpong, G. Parsons, L. Williams*
Staff: *P. Campfield, G. White, J. Patel*
Guests: *L. Colburn, C. Weng, B. Murphy, A. Bianchi*

NOAA Social Indicators *(L. Colburn)*

Presentation Summary: The presentation covered social indicators and the ways that they were derived on a national scale. L. Colburn mentioned that fishing communities are multi-dimensional and emphasized the importance of place-based analysis. For some background, consistent indicators were needed across the nation and mandated by the NEPA and MSA social impact assessments. NOAA wanted something that could characterize place-based communities and was feasible with the available resources for regional, national, and international comparisons. It also wanted indicators that could be used to track climate change and be used in integrated ecosystem assessments. They began with a conceptual model that tracked fishing community vulnerability, resilience, adaptation, and response to provide a baseline. They asked what was the ability of a community to respond to this baseline and disturbances.

From there, L. Colburn described the process of development for the indicators and how theory, data, and analysis all fed into regional indicators before a ground truthing method was used in communities in that region to test the indicators before expanding. Overall, they developed 14 indicators over 5 categories for 24 states all based on secondary data. It was also noted that gentrification can be one of the biggest threats to fishing communities. The most touched-upon indicators were the fishing dependence indicators, which were broken up into commercial fishing (engagement, reliance) and recreational fishing (engagement, reliance). Several data sources were used for this project including MRIP data for the Northeast and NEFSC performance metrics to drill down to species or groups managed at a federal level. It was also mentioned that indicators, although important, aren't only dimension that should be considered here. Environmental justice indicators and gentrification indicators were created using census data. Sea level rise risk indicators were also developed. By considering all indicators together, they developed a broader characterization of a specific place. Some caveats included that the best available secondary data may not tell the whole story of a community since social vulnerability and resilience is multifaceted. Additionally, indicators must be used in a setting that is contextually relevant and many not address how dependent is a community on a specific species if that data is not already available.

Discussion: Some members were curious about the process of ground truthing for the development of these indicators. The character of fishing communities changes quickly, but when developing the ground truthing process, a short survey was created and the project leads talked to community members, government officials, and the public to ask them to describe the community. This series of questions was used to tease apart the relevance of the indicators and this process was repeated in each region in the U.S. It was found that the way in which indicators are used varies. For example, the SE regional office consistently includes them in all products. NE mostly uses fishing dependence indicators instead of the other 4 categories.

There was a question of how these indicators account for history. For example, how climate change has impacted the American Lobster fishery on Long Island over time. The indicators don't account for history explicitly since it would involve ground truthing them on a regular basis, but they do help to determine how decisions are made on a management level by taking into account pounds caught, value, and permitting. Another question was posed about an example of change brought about by these indicators. A data call was made a few years ago to see this and the most important piece of information that came out of that was that the indicators have given socioeconomics (the human element) a place at the table alongside other scientific fields when it comes to fisheries management. The final discussion point revolved around multivariate analyses and asked if PCA was used to see how variables cluster in communities. PCA was used to calculate the indices. There were 5 tests and criteria for each index and each index must meet the threshold to be considered valid. Cluster analysis was used to pick communities and to understand which communities to ground truth.

Further Reading: See L. Colburn's presentation, Pollnac et al. 2015, the Commercial Fishing Performance Measures , the NOAA Social Indicators for Coastal Communities, and indicators map.

NEFMC Study *(L. Williams)*

Presentation Summary: This presentation was focused on a project conducted at the NEFMC. Fisheries management is managing the human use of a renewable but exhaustible resource, so understanding the human dimensions is essential. The overarching question was to answer what information the council members needed to know about communities and stakeholders. There were 19 semi-structured interviews and the transcripts and notes were analyzed for themes (needs/recommendations, negatives/challenges). The results indicated that when available, Council members were willing to seek out data. They were interested in community dependence and performance reports for specific species.

The Council members mentioned that since an earlier iteration of this project in 2012, their comfort level with discussion socioeconomics was improving. For challenges, they noted a wide range of needs for management, but much of what they described was lacking in the existing data due to the voluntary nature of much information, distrust/survey fatigue, and fishermen not being able to envision themselves in the analyses. Council members were specifically interested in things like distribution of employment, ownership demographics, and how management decisions will impact these factors.

From the study, it was recommended that including and considering socioeconomic information earlier on and more iteratively in addition to considering the interaction of biological and social uncertainty may be a good first step. Additionally, it was noted that Council members often had trouble understanding who on the Council may be available to help them answer their questions in regards to these issues.

L. Williams also mentioned a post-hoc analysis of how groundfish and scallop information was related to this process. More on this can be found in her presentation slides. She also mentioned that making use of reports (TOR, SER) to gain a lay of the land to establish a baseline may be an important step to identifying research needs and questions related to the specific projects. This is being considered for the NEFMC's ongoing efforts to include socioeconomics in their risk policy structure.

Discussion: A question was raised to describe how exactly Council members have become more comfortable with social science over time. The Council has put more investment in long-term staff that they could lean on to answer some of those questions. This continues to be a challenge with turn-over, however. This project helped influence the post-hoc analysis L. Williams developed and can help build bridges across organizations. The challenge continues to be that what the Council asks for doesn't exist and there is lack of funding to collect this data. The final question in the discussion revolved around how current decisions are made and it was revealed that most Council members and Commissioners may rely on their own experiences.

Further Reading: See L. Williams' presentation and https://www.nefmc.org/library/january-2020

Potential State-Related Projects

Management Decisions to Economic Costs (*P. Campfield)*

Presentation summary: This presentation revolved around the sampling and survey deficiency impacts on fisheries socioeconomics. When data are insufficient, the Commission has to make more restrictive decisions. There has been projected data deficiencies in fishery port sampling in the Northeast due to higher costs of sampling. P. Campfield proposed the question of what this means for future stock assessments and how decreased port sampling can lead to greater uncertainty in estimating stock status. For example, fishery-independent survey sampling can have reductions due to vessel outages and offshore wind energy displacement. The Commission has a proposal in development to explore impacts of data deficiencies on fishery harvest levels, revenues, and communities. The logic was that data deficiencies lead to increased assessment uncertainty and management risk, which lead to lower quotas and ACLS that can result in socioeconomic impacts. The questions for the CESS were as follows: 1) Are the analytical methods available to estimate social and or economic impacts due to fisheries data deficiencies? 2) Are SE data available to conduct analyses? What additional SE data need to be collected?

Discussion: One CESS member asked if the methods of sampling stayed the same even in reduced sampling. This is a NMFS designed survey with the intent to collect representative samples. More information about the survey design can be found here and here. Another point

was made about the impact of sampling on specific species stock assessment. For example, a 20% decrease of sampling for 1 species may be drastic compared to another species. In the case of bluefish vs. golden tilefish, bluefish has a lot of data sources, but golden tilefish relies only on port sampling and CPUE. P. Campfield also clarified that in terms of impacts, the Commission was specifically interested initial economic effects (revenue).

For Question 1, CESS members stated that if the change in uncertainty can be quantified, one can better determine which socioeconomic effects they will have. Knowing marginal change due to lower sampling would be the first piece of important information. Additionally, the use of the R&U policy at ASMFC level may have a more explicit rules-based linkages.

There was a question of the Commission was interested in this for all species or just for a subset. Perhaps there is a proxy way to express the data. It was clarified that the Commission was interested in this for all Commission-managed species that port sampling covers since it would help advocate for greater funding at a federal level.

Further Reading: P. Campfield's presentation and Holzer 2017

Next Steps: P. Campfield and J. Patel will be in touch if this proposal gets funded to talk about potential ways forward for this project through the CESS.

Review of the ASMFC Executive Committee Meeting and Potential Upcoming Tasks *(J. Patel)*
Presentation Summary: J. Patel presented at the Executive Committee Session at the 2024 ASMFC Winter meeting to asked Commissioners what potential project ideas they had for the CESS. The follow is a list of ideas that were brought up by specific states at the meeting: incorporation of socioeconomic indicators into the risk and uncertainty policy framework (RI), a review of existing socioeconomic models (RI), the impact of import/exports on aquaculture, especially for eel (DE), how economic multipliers scale for species that require greater or lesser processing (MA), the impacts of offshore wind on fisheries revenue (MA, coastwide), and angler surveys regarding red drum, speckled trout (spotted seatrout), and Southern flounder fisheries (GA).

There was also a larger interest in potentially looking at increased fishing efforts as seen by real-time fishing posts. By looking at these posts, there is the possibility of increased efforts in recreational fisheries for wave 1 and 2 in northern states due to warmer weather or increase in popularity of the sport. The Commission has an interest in understanding the long-term impacts of this on Commission-managed species and how this will impact long-term management decisions. ACCSP is already working with MRIP to increase wave 1 sampling for the upcoming year.

Species-specific needs are as follows: For Jonah crab, the technical committee was tasked with identifying possible market and economic indicators for the fishery and drivers of catch other than population dynamics. For horseshoe crab, there is a workshop next year, where they may want to understand the socioeconomic impacts of different management strategies for the DE

Bay bait fishery. For spiny dogfish, in May, the Commission will likely be putting out a management document based on a proposed addendum and would like to include some socioeconomic information. For tautog, one of the fisheries management plan coordinators expressed interest in quantifying the economic impact of the tagging program. As tautog is sold live, there has been anecdotal evidence that tags meant to dissuade illegal catch could be physically harming the fish and reducing market value.

Next steps: The long-term goal is to understand what information is out there to help with specific projects and to create socioeconomic indicators for species that we can use to address other projects. Next steps are as follows:

1. Find out what fishery socioeconomic data is available or collected in your states in the next few months.
2. J. Patel and A. Scheld will work to find an online database platform where the CESS can pull together a library or repository for existing socioeconomic publications, reports, data products, etc. and create metadata for Commission-managed species.
3. J. Patel will be in-touch about species-specific projects.

Risk and Uncertainty Tool *(J. Patel)*

Presentation Summary: The Commission began the development of the Risk & Uncertainty Policy in 2016 to better account for the risk and uncertainty that is inherent to Commission management decisions. The Councils have developed risk policies; however, the Commission wanted more flexibility and the ability to incorporate more factors such as socioeconomics and different species needs. Commission's R&U policy helps determine the Commissions risk tolerance level for a given species, based on characteristics of the species, the fishery, and Board preferences. It does not assess the actual risk of different management decisions. A R&U Decision Tool was developed by the R&U Work Group, in collaboration with the Striped Bass and Tautog TCs and the CESS. It combines technical inputs provided by the TCs and the CESS with weightings—how important the Board thinks each of the components is to their risk decision making. Currently, this risk tolerance level is used as the goal probability of achieving the reference points in projections when selecting a harvest level. Generally, the higher probability of achieving the reference point means lower risk tolerance and lower harvest levels. Range of outcomes is broad and depends on weightings chosen by the Board. This is a feature not a bug! It is intended to increase transparency around tradeoff/weighting decisions that are currently made implicitly without being fully articulated in Board discussions.

The flow of the tool is as follows:

1. Meetings with the TC and the CESS to describe the process and the inputs needed from them
2. Survey to collect initial technical inputs from TC.
3. Calculate socioeconomic indicators and circulated to CESS for review/approval
4. Preliminary inputs (technical inputs + socioeconomic inputs) added to tool
5. Meet with the Board to discuss process and walk-through weightings survey. Board inputs averaged to arrive at preliminary weightings.

6. Complete assessment with initial stock assessment inputs provided by staff
7. Review all technical inputs with the TC
8. Create preliminary Risk & Uncertainty Report, detailing all inputs, justifications, and weightings, drafted by staff and reviewed by TC/CESS
9. Preliminary report, decision tool, and weightings reviewed by Board at next ASMFC meeting.
10. Incorporate feedback from the Board into the tool and report
11. Use the goal probability without socioeconomic input with projections to find the preliminary harvest level without socioeconomic considerations
12. Use the difference between the status quo harvest level (i.e., current/last year's harvest level) and the preliminary harvest level without socioeconomic considerations to complete the socioeconomic indicators
13. Use the decision tool to produce a goal probability with socioeconomic considerations
14. Have the Board review and approve this goal probability
15. Determine the harvest level based on this goal probability and use this to develop management options.

The CESS is involved in 5 main steps as outlined below:

1. Review process
2. Meet to go over needed inputs
3. Review socioeconomic indicators and provide feedback
4. Provide feedback on drafted report after board has assigned weights
5. Review final goal probability once socioeconomic indicators have been added to the tool

The tool was tested first on striped bass and tautog. Both of these examples can be seen in the current iteration of the tool. The next species will be red drum.

One minor thing to note: Price and ex-vessel value data rely on a gap-filling process when that data is not provided. In some fisheries a significant (in some cases the majority) of the data is gap-filled and significant errors have been found in some of the gap-filled data (e.g. calculated prices that pulled from price data that had typos and as a result used prices that were orders of magnitude different than the average reported prices). The scope of this issue needs to be evaluated and reviewed by the CESS to determine whether the data is usable as well as whether or not the R&U indicators are still viable. Most of these issues seem to come from commercial fisheries so this may not pose a problem for red drum.

Next steps: The next species that the CESS will be working on for the Risk and Uncertainty policy is red drum later this spring. It is suggested that you review the current iteration of the tool to prepare.

CESS Organization *(A. Scheld)*

Presentation summary: As mentioned in L. Williams' presentation, it's often difficult for Commissioners to understand who to go to with specific questions or how to tackle larger

Commission-level questions. For this reason, it would be good to have a list of CESS member specialties as it pertains to economics or social sciences. By keeping a running list, it'll give us a better idea of who to refer to for specific questions or methodologies.

Next steps: If you have not filled out the spreadsheet, please do so. This way, we can have a running list of people's expertise.

Other Business

Presentation summary: The Northeast Sea Grant Consortium, in partnership with the National Oceanic and Atmospheric Administration (NOAA)'s Northeast Fisheries Science Center is seeking proposals to improve understanding of fishing community interactions with offshore wind development in the U.S. Northeast from the New York Bight through the Gulf of Maine. This is a great potential funding opportunity to tackle an issue brought up by several states about concerns about the impacts of offshore wind development.

Next steps: If you are interested in applying and would want to focus on a Commission-specific species for a portion of this project, please let J. Patel know and we would be happy to help you draft the proposal and inquiry about funding matching. Please see here about more details: https://www.northeastseagrant.com/initiatives/offshore-wind-interactions-2024