New England Fishery Management Council
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MEETING SUMMARY

Research Steering Committee

Hotel Providence, Providence, RI
Wednesday, December 3, 2014

The Research Steering Committee met on December 3, 2014 in Providence, Rhode Island to review cooperative research reports and make recommendations to the Council for management use, if appropriate.

MEETING ATTENDANCE: M. Alexander (Chairman), V. Balzano (Vice Chair), E. Goethel, D. Preble, J. Hoey, M. Pol, L. Etrie; (Absent – T. Alexander, D. Beutel, G. Brogan, B. DuPaul, T. Platz, E. Meredith,); M. Jacob, A. Applegate (NEFMC staff); R. Silva (NMFS GARFO staff); Cheryl Corbett (NEFSC). In addition, approximately 2 members of the public attended.

KEY OUTCOMES:

- Outcome #1: Phase I of the large mesh belly panel research study took place on Georges Bank with 40 paired tows of 30 minutes during one trip lasting six days. Results show that the large mesh belly panel significantly reduced the yellowtail flounder bycatch (72.3 percent), and the windowpane bycatch (50.9 percent). The catch of whiting remained the same between the control and experimental net. The squid catch increased by 20 percent in the experimental net compared to the control net.
- Outcome #2: Phase II of the large mesh belly panel research study took place on Cultivator Shoal with 42 paired tows of 15 minutes during one trip lasting five days. Results show that the large mesh belly panel significantly reduced the yellowtail flounder bycatch (80.7 percent), and the windowpane bycatch (59.3 percent). Whiting and squid catch remained the same for the experimental and control net, showing no statistical significance in results of whiting and squid catches between the two nets.
- Outcome #3: Based on the results of the final report for Phase I (Georges Bank) of the large mesh belly panel cooperative research project and the draft report for Phase II (Cultivator Shoal), the committee made recommendations to the researcher for further analysis on the work completed, and plans to review the final report for Phase II before making any recommendations regarding the research results and use of the selective trawl gear in accountability measures for the small mesh fishery.
- Outcome #4: The Research Steering Committee agreed that the Northeast Research Set Aside programs needs to be unique to address the needs of declining stocks and the current status of the fishery. The Committee also agreed that who the Council assigns to the management review panel is crucial to productive feedback of research proposals.

AGENDA ITEM #1: BRIEF OVERVIEW OF RECENT MANAGEMENT DECISIONS REGARDING ACCOUNTABILITY MEASURES IN THE SMALL-MESH FISHERIES (STAFF PRESENTATION – M. JACOB)

Staff presented information on existing sub-ACLs (annual catch limits) and accountability measures in the small mesh fishery. Currently, the small mesh fishery has a sub-ACL (annual catch limit) for the Georges Bank yellowtail flounder stock. Regulations under the US/CA Resource Sharing Understanding requires a pound-for-pound payback for each subcomponent fishery that caused the overage if the total ACL for that stock is exceeded. Northeast Multi-Species Framework 51 also established accountability measures for Georges Bank yellowtail flounder in the small mesh fishery if the sub-ACL is exceeded. These accountability measures include the use of selective trawl gear on Georges Bank (i.e. use of Ruhle Trawl, Separator Trawl, etc.). An approved list of selective trawl gear is provided in the code of federal regulations. However, the National Marine Fisheries Service's Regional Administrator may approve additional gear based on the gear approval process outlined in 50 CFR 648.85(b)(6). This information served as background information for committee members as they review reports on cooperative research completed by Cornell University (Emerson Hasbrouck) on gear modification studies to reduce flatfish bycatch in the small mesh fisheries.

AGENDA ITEM #2: PRESENTATION ON FINAL REPORT: "LARGE MESH [BELLY] PANEL IN SMALL MESH FISHERIES AS A METHOD TO REDUCE YELLOWTAIL FLOUNDER BYCATCH IN SOUTHEAST GEORGES BANK." – FINAL REPORT.

Emerson Hasbrouck presented the final report of Phase I of the cooperative research project that utilized a large mesh belly panel to reduce flatfish bycatch on Georges Bank in the small mesh fisheries. The Committee reviewed the draft report at the Research Steering Committee meeting on August 8, 2014. Results from the study on Georges Bank shows highly significant results for both yellowtail and windowpane flounder on Georges Bank using a modified standard trawl net with a large mesh belly panel on a standard trawl net (3-bridle, 4-seam standard box trawl). The experimental net and control net (standard trawl net) were fished simultaneously using a twin trawl onboard the fishing vessel *Karen Elizabeth* (Point Judith, RI). There was no vessel effect since the tows took place simultaneously on the same vessel using a twin trawl to test the control net and the experimental large mesh belly panel net.

This study quantified number of fish caught in both nets separately, and reported on the following species: yellowtail flounder, windowpane flounder, squid, and whiting. Phase I of the study took place on Georges Bank with 40 paired tows of 30 minutes during one trip lasting six days. The primary target species were squid, yellowtail flounder, and windowpane flounder.

Results show that the large mesh belly panel significantly reduced the yellowtail flounder bycatch (72.3 percent) and the windowpane bycatch (50.9 percent). The catch of whiting remained the same between the control and experimental net. The squid catch increased by 20 percent in the experimental net compared to the control net. There was a difference of approximately five pounds per tow for squid catch, which resulted in a 20-percent overall increase in the squid catch for the experimental net.

Discussions on Final Report:

Day and night differences: Most tows occurred during the day (33 day tows and 7 night tows), which raised concerns among Committee members regarding the variability of flatfish bycatch results based on the effects of light on flatfish behavior during the day and night. A Committee

member explained that in the whiting fishery, flounder catch at night is less than during the day, and whiting catch is greater during the day than at night. Mr. Hasbrouck explained that logistically, they would need to have doubled their crew size in order to perform more tows during the night. Technical reviewers also raised this concern regarding the effect of light on the catch rates. Comparison between day and night tow results was performed. The results indicated that of the four species of concern (squid, whiting, yellowtail and windowpane flounder), only yellowtail flounder showed a statistically significant difference between the day and night tows. However, only five of the seven night tows caught yellowtail flounder; therefore, no accurate inferences can be made regarding the difference in day and night tows from such a small number of tows at night.

Tow location and depth: A Committee member raised concerns regarding the depth at which the tows took place. The Committee member stated that squid boats in the study area fish at depths of 90 fathoms. However, the research tows did not take place at these depths because the primary focus of the research was to quantify bycatch rates, and the secondary focus was to quantify catch rates of squid or whiting. Mr. Hasbrouck explained that this was a judgment call to move the study site to an area with higher catch rates for yellowtail and windowpane flounder.

Consensus statement: The Committee reached the following consensus: (1) the report received sufficient technical review; (2) the project accomplished its goals and objectives; (3) the reports could be improved to add time of day information for each tow, and more details on the net configuration should be provided, to allow for scalability of the gear for use with smaller or larger nets; (4) that additional research suggested during discussions of the report is beyond the scope of this cooperative research study, but additional analysis would help to alleviate some concerns raised; and (5) based on the technical review of Phase I of the large mesh belly panel study, a Committee recommendation can be made. However, Committee members decided to delay recommendation until after the final report for Phase II is reviewed by the technical reviewers and the Research Steering Committee (in that order, preferably). The Committee plans to meet prior to the Council meeting on April 21-23, 2015.

Agenda item #3: Presentation on "Large Mesh [Belly] Panel in Small Mesh Fisheries as a Method to Reduce Yellowtail Flounder Bycatch in Cultivator Shoals"– Draft report

After addressing some of the concerns and questions regarding the final report, Mr. Hasbrouck presented the draft report results of the research study on Cultivator Shoal. Forty-two paired tows (15 minutes per tow) were conducted during a five-day trip. Phase I and II used similar research design, including the experimental and control net. The primary target species were whiting, yellowtail flounder, and windowpane flounder. Results from the study on Cultivator Shoal shows highly significant results for both yellowtail and windowpane flounder on Cultivator Shoal. Results show that the large mesh belly panel significantly reduced the yellowtail flounder bycatch (80.7 percent), and the windowpane bycatch (59.3 percent). Whiting and squid catch remained the same for the experimental and control net, showing no statistical significance in results of whiting and squid fisheries. There was a slight increase in squid catch in the experimental net, but this difference is not statistically significant. Mr. Hasbrouck explained that the tow length was reduced from 30 minutes to 15 minutes to allow time to work through the high-volume catches.

Discussions on Draft Report:

A Committee member raised concern regarding the slight variation in the control and experimental gear catch results, and asked whether wing spread may have attributed to the difference between the nets. Mr. Hasbrouck explained that there was a difference of 3 mm in the length frequency of fish, and stated that there was no biological value in these small differences. Mr. Hasbrouck also explained that Pat Sullivan, who worked on the statistical analysis for this report, stated that even if the large mesh belly panel caused changes between the control and experimental net, that may be due to the nature of the net and that is besides the purpose of the net performance (i.e. to reduce bycatch). A Committee member requested information on the wing spread to be made available in the final report.

Dr. John Hoey explained that research design should attempt to get a sense of the worst-case scenario. For example, do we think that this gear performance would change dramatically if a much higher catch was there? Variations in nature, with small sampling would make these minor differences stand out more. Limitations on budget and staff cannot address these types of concerns. We want fisheries operation for one year to exist without 'choke' species triggering closures or more stringent fishing operations. In addition, research activity provides less collateral damage with shorter tows. A Committee member explained that his concerns are not to suggest additional research, but rather additional analysis on the work already completed.

A Committee member asked if the large mesh belly panel gear was easier for fishermen to use. Mr. Hasbrouck explained that according to the Advisory Panel, the large mesh belly panel would be fished more consistently from one boat to another. Dr. Hoey also pointed out that the large mesh belly panel would cost $500 compared to the drop chain, which would cost $800. A Committee member also points out that the large mesh belly panel is cheaper and simpler to install by following the scale for the net by mesh count and hanging ratio.

A Committee member asked why yellowtail flounder bycatch reduction was in the 70-percent range while the windowpane flounder bycatch reduction was in the 50-percent range. Mr. Hasbrouck explained that windowpane flounder may behave differently than yellowtail flounder, and may dive down to escape the net a bit later and may miss the bottom large panels. A Committee member suggested extending the panel back further into the belly.

Additional Input:

Gear Configuration: Andy Applegate commented that relative catch rates should be addressed in addition to absolute catch rates, because fishermen may change fishing patterns. Gear configuration information should be scalable for use by different net sizes, which Mr. Hasbrouck plans to address with the gear experts.

Gear Performance: Ryan Silva asked if adjustments to the gear configuration would affect the gear performance, and how strictly is gear performance being applied? Mr. Silva indicated that this could be an issue with monitoring of this alternative gear performance, which should be done before implementation of this alternative gear for use by the small mesh fishery. Mr. Silva explained that there is no retroactive analysis on gear performance for voluntary use of selective gear. Mr. Hasbrouck replied that the vessel's twin trawl may not be representative of the fleet,

but that the Advisory Panel would speak on that issue. Some earlier studies used two different vessel categories (i.e. small inshore vessel and large offshore vessel) and showed the same results. In addition, Mr. Hasbrouck would provide a better description of the net. A Committee member suggested that a comparison study be done for gear performance prior to implementation. Dr. Hoey stated that survey protocol and design is based on statistical approaches. So, although a comparison trip may be possible, cooperative research staff may not be able to participate in this effort. However, the observer program could be used to observe this type of trip. The research results provide fishermen with the tools (i.e. type of gear capable of reducing bycatch) and they can be accountable to work to fish the net at high performance. Dr. Hoey suggested using the voucher program to look at gear performance. One Committee member stated that all gear alterations must have some mechanism in place to look at gear performance.

Use of selective trawl gear results in other fisheries: Bonnie Brady asked if the large mesh belly panel would be successful in reducing flatfish bycatch in the Mid-Atlantic fisheries. Dr. Hoey stated that without a direct study in the Mid-Atlantic region, the performance characteristics may not yield the same results in some instances (i.e. scup fishery). Ms. Brady explained that the intent would be to use the large mesh belly panel in the Mid-Atlantic region to reduce windowpane bycatch in the scup fishery. Ms. Brady stated that the fishery would also need to receive credit for their voluntary use of selective trawl gear to reduce bycatch in order to avoid a fishery closure when the total annual catch limit is exceeded. A Committee member stated that this needs to be put into a fishery management plan.

One Committee member who could not attend the Research Steering Committee meeting provided written comments on the large mesh belly panel reports. The Committee member supported the results and use of this selective trawl gear in the small mesh fisheries to reduce yellowtail and windowpane flounder bycatch. The Committee member also indicated that when he participated in the research for the Eliminator Trawl/Ruhle Trawl, they too had an instance of discrepancy for some night tows where yellowtail flounder bycatch increased at night. Although this result was an outlier in the data results, it did not have much of an impact on the results.

Although the Research Steering Committee was pleased with the technical reviews, some reviewers' suggestions were not sufficiently addressed, such as the difference in tow results during the day and night. Mr. Hasbrouck stated that they have done a good job addressing the goals of the research study, but asked the Committee if these other concerns are important for the results to move forward as a gear modification option for management purposes. A Committee member affirmed that some of these concerns need to be addressed to allow Committee members to feel confident in the results, particularly the work to address the day/night component based on linear model analysis. Dr. Hoey stated that further analysis on seven night tows may present more questions than answers. Mr. Hasbrouck explained that the researchers may not be able to do a lot more analysis with only seven night tows. A Committee member stated that the report as presented does provide all the necessary information, and the additional concerns could be addressed in the technical review responses. A Committee member stated that past gear performance reports did not have this same standard, and those gear modifications are being used today. Mr. Hasbrouck indicated that he would provide raw data to the Plan Development Team.

Committee members concluded that the appropriate deliverables were provided in these reports, but there were reservations regarding other information.

Agenda item #4: **Research Set-Aside Discussion of Possible Improvements**

The purpose of this agenda item is to continue discussion on methods to help address some of the concerns regarding research-set-aside (RSA) procedures.

- Contracts vs. Grants: Dr. Hoey emphasized that the contracts/grants discussion has no merit for changes, because the government has no direct benefit from the RSA program, and therefore it belongs in the grants process versus contracts.
- Are Council priorities adequately addressed: Dr. Hoey mentioned that the attorneys state that there is a legal issue if you do not choose the projects with the highest technical merit in the order they rank based on scoring; this is the case for BREP (Bycatch Reduction Engineering Program), RSAs, SK grants (Saltonstall-Kennedy), and Disaster Relief funds. However, the management panel input is used to justify any modifications to that rank order, which becomes a part of the internal decision memo. Who the Council assigns to the management review panel is crucial, despite the fact that they cannot vote. This panel is also more flexible on the list of members compared to the Mid-Atlantic RSA Committee. Two Committee members do not believe that the Mid-Atlantic RSA program should be used to compare and take guidance from based on their recent issues and the programs vary significantly. A Committee member believes, and many others agreed, that the Northeast RSA programs needs to be unique to address the needs of declining stocks and the current status of the fishery. One Committee member mentioned that some projects may be meritorious, but have little to no immediate value to management and therefore should use other funding, not RSA funds.
- Transparency in the selection process, especially after management input, and transparency to the applicants and industry that do not know the rationale for project selection in some instances: Dr. Hoey stated that NOAA General Council has really clamped down on the release of further information regarding the rationale for the selections made. A Committee member mentioned that the Saltonstall-Kennedy grant program used to have outside groups made up of industry and educators performing these reviews. Mr. Silva clarified that the panel does include outside expertise.
- Technical Review Scoring: Should the relevance to management priority scoring (20 out of 100 points) be increased, decreased, or remain unchanged: One Committee member believes the status quo should be maintained, or an increase to 30% of the overall score. The Federal Funding Opportunity announcement is provided to the reviewers. One Committee member made a final comment that they are uncomfortable with Council staff on the management panel.

One Committee member who could not attend the meeting provided comments regarding the RSA process, stating that the Monkfish RSA program could be improved. The Committee member also stated that although participating fishermen receive compensation for RSA work, it does not provide enough incentive to participate in these RSA programs. Instead, fishermen participate in these cooperative research programs to reduce uncertainty in the bycatch estimates

for a given fishery by providing more accurate information for use as the bycatch estimate to replace the often much higher bycatch estimates provided to the Scientific and Statistical Committee.

The RSC Committee meeting adjourned at approximately 4:30 p.m.