GROUNDFISH MANAGEMENT TEAM REPORT ON OFF-YEAR SCIENCE IMPROVEMENTS

The Groundfish Management Team (GMT) discussed science activities necessary to prepare for the next stock assessment cycle and possible projects to resolve scientific issues that play a significant role in groundfish decision-making. The GMT identified the reconstruction of historical catch series for stock assessments and coordination of sampling goals for federally managed species.

Reconstruction of Historical Catch Series

Assessment authors are increasingly mining historical data, including landings and discard estimates, in order to provide the SS2 model with a better perspective on virgin biomass. This parameter, B_0, is extremely important in establishing a stock's current state of depletion, which can result in adjustments in harvest policy (40-10) or can trigger rebuilding requirements as mandated by the Magnuson-Stevens Act.

Also, to construct catch histories for species not identified to species level in historical catch data, assessment authors must arrive at some (often ad hoc) method of apportioning that catch to the species level. The need to resolve historical catch estimates is an issue across both recreational and commercial fisheries; and reconstruction of these historical catch data is no small task. This catch data mining exercise might be repeated from author to author, resulting in potentially redundant effort and disparate estimates of historical catch. This may not be the best use of our stock assessment resources, especially given the number of Council-managed groundfish species and the limited pool of stock assessment scientists.

Recommended Solution

Historical catch in itself does not change; only our estimate of it does. Undertaking a multistage process to resolve estimates of total catch for future use, across species and data sources, could potentially save stock assessors countless hours spent on catch data assembly that could instead be devoted to model exploration. This effort would face the same challenges of uncertainty in magnitude and species composition in many catch records that every assessment author faces. The difference would be that those uncertainties could be resolved in a deliberative process and made available for wider use, rather than individual assessors repeatedly struggling with the (same) issue. In order for this approach to be successful, there would have to be a buy-in to the concept and methodology at the front end, so that there would be a buy-off on the catch history produced as a result.

Potential Process

Given the amount of time that has been required to construct a catch stream for a single species, the magnitude of this exercise is likely larger than one might anticipate upon first consideration. One of the initial tasks would seem to be a "literature review" of completed stock assessments to compile all data sources that have been used for historical catch. This list should also be expanded to include any additional data sources that may be informative. This process could be expedited by an inter-agency meeting to identify potential sources of historical catch information. It would also be useful to consider a process by which this "official" historical catch database could be revised as new data sources or new perspectives became available. This

should be structured in such a way that the changes are made comprehensively, not within individual assessments.

Depending on staffing and available resources, state or federal agencies could accomplish this task. A contractor with background and experience with West Coast data sources may be able to assist in the reconstruction process. Contractors would need to have detailed knowledge and access to institutional resources with respect to understanding the datasets available, the market categories and sampling methods used. If a contractor or academia conducted the work, a commitment to full involvement in the process by agencies housing historical catch data would be integral to success of the effort. Additionally, industry input into the nature of historical fisheries could prove valuable in providing perspective and ground-truthing assumptions on catch.

The uncertainty associated with historical catch is unavoidable, and is often one of the primary axes of uncertainty in stock assessments. Ideally, this uncertainty could be somehow quantified, or at least described, in developing a summary of historical catch data so that it could be profiled in assessment results, rather than having to construct different catch streams within the assessment. It's only by relieving assessment authors of that task will the full utility of this effort be realized.

Coastwide Coordination of Sampling Goals

The GMT also recommends that an effort to better coordinate groundfish biosampling and age reading priorities across agencies be undertaken as part of off-year science improvements. Differences in sampling regimes are often warranted and there is not likely to be a one-size-fits-all coastwide approach to standardizing sampling methods. However, some level of coastwide coordination of sampling methodologies, and perhaps more importantly coordination of priorities for species that are or will be assessed and managed as coastwide stocks, is necessary.

Given the increasingly limited resources we are able to direct toward biosampling and ageing, it seems prudent that we strategically direct those resources where they will be most effective in meeting the needs of groundfish stock assessments. Currently, state agencies develop tasks and priorities for their port sampling and age reading staff relatively independent of one another. Tracking success in achieving annual goals, or any inseason adjustment of priorities, is typically an isolated effort. Since most of our groundfish assessment needs are coastwide, coordination of sampling priorities should likewise be conducted on a coastwide basis.

Sampling methodologies have been discussed within the Pacific Fisheries Information Network (PacFIN) arena, usually at the annual Pacific Coast Fisheries Data Committee (PCFDC) meeting. However, the meeting priorities are typically centered on the data itself, coding issues, getting new data onto PacFIN, electronic tickets, etc. It would be worthwhile to have an additional meeting focused on coordinating groundfish biosampling and age reading priorities.

The GMT recommends that managers from the states and tribes, charged with establishing sampling priorities (both commercial and recreational), meet with representatives from the National Marine Fisheries Service (NMFS) Science Centers to develop a sampling plan that best meets the needs of planned groundfish stock assessment efforts. This process should be informed by the research and data needs compiled from past assessments and STAR Panel

reports as well as by direct input from stock assessment scientists. The NMFS Northwest Fisheries Science Center might be most effective in coordinating this effort.

GMT Recommendations

1. Request that the Council ask the Northwest Fisheries Science Center, in cooperation with the Southwest Fisheries Science Center, to consider, as part of off-assessment year science improvements, a multi-stage process to develop a comprehensive, historical database for commercial and recreational catch across all species of Council-managed groundfish.

2. The GMT recommends that managers from the states and tribes, charged with establishing sampling priorities (both commercial and recreational), meet with representatives from the NMFS Science Centers to coordinate and prioritize sampling goals for federally managed species.

PFMC
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