



New England Fishery Management Council

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MEETING SUMMARY

Groundfish Plan Development Team

Webinar

Tuesday, May 14, 2019

The Groundfish Plan Development Team (PDT) met to discuss Amendment 23/Groundfish Monitoring, Framework Adjustment 59 (to be initiated by the council), and other business, as necessary.

Meeting Attendance: Jamie M. Cournane PhD (Chair), Chad Demarest, Dan Caless, Dan Linden PhD, Liz Sullivan, Mark Grant, Matthew Cutler PhD, Melissa Errend, Paul Nitschke, Robin Frede, and Tim Cardiasmenos, Libby Etrie (Groundfish Committee member); and the audience included Maggie Raymond, Jackie Odell, and Gib Brogan.

The meeting began at approximately 10:00 am.

Key Outcomes:

- The PDT discussed the results of the SSC Sub-Panel review of the PDT analyses of Groundfish Monitoring for Amendment 23/Groundfish Monitoring.
- The PDT worked on the draft dockside monitoring alternative for Amendment 23/Groundfish Monitoring.
- The PDT briefly discussed likely items for inclusion in Framework Adjustment 59 (to be initiated by the Council in June).

Amendment 23/Groundfish Monitoring

Discussion on the results of the SSC Sub-Panel review of the PDT analyses of Groundfish Monitoring

The PDT reviewed the SSC Sub-Panel's overall conclusions. In the executive summary, the report states that the four analyses comprehensively,

...create a weight of evidence that disproved the null hypothesis, namely that there is no effect from the presence of an observer on a fishing trip. In other words, the work taken collectively show that there is an observer effect, and therefore managers need to account for this when basing management off information derived from observed trips. The analyses suggest that estimates of discards on unobserved trips derived from discards rates on observe trips may not be accurate, and likely to be an underestimated reflection of actual discards. (p. 3).

In addition, the peer review panel concluded that the analyses presented could not quantify the magnitude of the problem. They suggested that management needs to account for this observer effect. Specific to Term of Reference 8—“Are the data, methods, and analytic tools sufficient for the Council to identify and analyze monitoring alternatives for the Northeast Fishery Management Plan Amendment 23 management action?”— the reviewers made the following general conclusions (p. 18):

- Observed trips are not representative of unobserved trips.
- It is not appropriate to use estimates of discards from observed trips to estimate discards on unobserved trips, at least not without some adjustment.
- Observers should not be deployed using a coefficient of variation (CV) standard based on observed trips.
- The direction and magnitude of the observer effect appears to vary by stock/species.
- A combination of the presented methods may be helpful to the Council to correct for introduced bias or ensure adequate monitoring and enforcement.

The PDT agrees with the majority of the panel’s overall conclusions, but is uncertain about the peer review panel’s recommendation about how to apply the methods to estimate or correct for bias given the inherent issues with the current data. The PDT feels that there is a circular problem when trying to use observed or unobserved data to make inferences about what is (or is not happening) when an observer is onboard given that behavior changes in many ways.

Conclusions specific to each analysis

Analysis 1: Methods to explore discard incentives of groundfish stocks

Overall, the peer review found that while the analysis cannot estimate the magnitude of illegal discarding, it is an indicator of when, and under what conditions, discarding may have been incentivized. Furthermore, the reviewers concluded that this analysis, or even a simpler analysis using the ratio of quota price to ex-vessel price, may be a useful tool to identify high discard incentive stocks and suggested that these stocks are where management should focus its monitoring and enforcement efforts. In addition, the reviewers agreed with one of the main conclusions of the report, namely that this method may severely underestimate discard incentives.

The peer review found that the methods used in this analysis are generally well described and conclusions are based on sound theoretical and analytical techniques but felt some assumptions should be made more clear, namely the decision to exclude observed trips, and who the decision-maker is (i.e., whose perspective is modeled—crew or captain?) The PDT analysts agree with the conclusions and feel both these assumptions can be fully addressed in subsequent applications. The PDT clarifies that the analysis was conducted at the perspective of the hired captain.

The PDT also agrees with the suggestion that it may be useful to look at discard incentives for some stocks at a finer level, specifically by quarter and grade, and for trips within each sector or across ports.

Analysis 2: Methods to evaluate observer effects in the groundfish fishery

The peer review panel found that the methods and conclusions of the analyses were sound to evaluate observer effects, however it was strongly recommended that some of the measures be

standardized by trip duration in order to better standardize the results for comparison. They also recommended that it should be clarified what the expected direction of impact is for each metric (i.e., would an observer effect likely increase or decrease kept catch?). The PDT discussed how it was clear in the report that this was a suggestion to make the conclusions more robust, but it was not expected to change the stated conclusions. In addition, the reviewers suggested that some of the modeling decisions be better justified by sensitivity or other analysis—such as that UUU/UOU sequences must be within 45 days apart. The PDT discussed how these modeling decisions may be more transparent, but are confident that they best balance trade-offs between the underlying similarity of trips and maintaining sufficiently large sample sizes.

Analysis 3: Methods to predict groundfish catch in the presence of observer bias

The peer review found this analysis to be well documented, methodologically sound, and underlying assumptions and justifications were appropriate from the hypothesis tested. In order to improve the predictive capacity of the model, the peer review panel made several recommendations. Firstly, they recommended that additional explanatory variables might improve performance, such as VMS data, or data from the industry-based cod survey. The reviewers also suggested potential ways to include trips that did not report landing any cod. Additionally, they suggested that the inclusion of all kept catch (“K_all”) is potentially problematic because part of this catch is what is being estimated by the model, namely cod catch. The PDT discussed tradeoffs associated with excluding kept catch in the model, most notably that it is a very good predictor of effort compared to other available variables (e.g., trip length, vessel length, horsepower). The lead analyst agreed that it may be useful to exclude this variable for one gear and gear type combination as a test to see how the model performs without it. Finally, the peer reviewers also discussed how the reference model, which describes pollock catches, was identified as insufficient to determine the robustness of the method because it used the same variables as the cod-specific model. The lead analyst stated that this is not accurate because covariate stocks included in the model were specific to pollock and not those used in the cod model.

Analysis 4: Methods to evaluate groundfish catch ratios

Similar to the other analyses, the peer review concluded that this analysis was useful as it supported general conclusions that observed trips are not representative of unobserved trips. The reviewers suggested that conclusions would be more robust with the inclusion of variance measures and statistical testing, as well as calculating ratios at the individual trip and aggregated gear level. The reviewers suggested that with these improvements, potential magnitudes of the discard problem might be estimated but noted that the analyst is the best judge as to whether calculation of magnitude is appropriate based on knowledge of the data and analysis. The PDT agreed while some of these improvements are possible, the value of these improvements might be limited given that the ultimate estimation of a magnitude is severely flawed given that the PDT assume that observed trips are not representative of unobserved trips and unobserved trip information may be incomplete or biased.

Overall, the PDT agrees with the peer review’s assessment of the work and recommendations for improvement, but recognizes that there are distinct differences between improvements necessary for academic publishing versus those needed for management application. The PDT also is wary of conflating or confusing conclusions with respect to resolving issues of legal discard estimation

(of sub-legal fish) and issues with respect to illegal discarding of legal sized fish (bias in catch estimates).

The PDT found a possible typo in the Executive Summary of the report. In the last sentence of the third paragraph, it reads "However, since a key difference is shorter duration of unobserved trips, this may explain at least part of the differences in other variables such as kept catch." The PDT believes this should say either shorter duration on observed trips or longer duration on unobserved trips.

Revisions to the draft alternatives as directed by the Council in April, especially the dockside monitoring alternative

The PDT discussed the draft alternatives development, in particular the dockside monitoring alternative. See attachment #1 (*Development of Alternative 4.2.1.1 Dockside Monitoring Program*) for an overview. The PDT wrote the text so that it could be easily included in the revised draft alternative for the June Council meeting – if the Committee chooses to recommend all or a portion of the text.

Other related work

Mr. Demarest is preparing an analysis of multiple broad stock area (BSA) fishing by groundfish sector vessels to examine potential strategic fishing and reporting behavior, potentially driven by quota cost differences across BSAs. The analysis examines whether or not, for certain stocks, and at certain times, the current regulations governing stock area reporting adequately attribute actual catch to stock area with accuracy sufficient to support stock assessments and appropriately allocate fishing effort using quota market prices. The PDT would likely review this at a future meeting over the summer.

Framework Adjustment 59 (to be initiated by the Council)

The Council is expected to initiate Framework Adjustment 59 to include:

1. 2020 total allowable catches (TACs) for US/Canada units of Eastern Georges Bank (GB) cod, Eastern GB haddock, and GB yellowtail flounder,
2. 2020-2022 specifications for most groundfish stocks, and
3. Other management measures.

One of the possible other management measures may be the 2019 Council priority to address commercial/recreational allocation issues if raised by new Marine Recreational Information Program (MRIP) data.

Upcoming assessments

- 1) US/Canada: The Transboundary Resource Assessment Committee convenes July 9-11 at DFO, St. Andrews, New Brunswick, Canada to assess Eastern GB cod, Eastern GB haddock, and GB yellowtail flounder.

2) Operational Assessments: The peer review of the operational assessment is scheduled for the week of September 9 at NEFSC, Woods Hole, MA. A one-day Assessment Oversight Panel (AOP) meeting in Woods Hole (tentatively scheduled for June 20) will review the operational stock assessment plans for the 14 multispecies groundfish stocks as listed below:

1. American plaice - Gulf of Maine / Georges Bank
2. Atlantic cod - Georges Bank
3. Atlantic cod - Gulf of Maine
4. Haddock - Georges Bank
5. Haddock - Gulf of Maine
6. Windowpane - Gulf of Maine / Georges Bank
7. Windowpane - Southern New England / Mid-Atlantic
8. Winter flounder - Georges Bank
9. Witch flounder - Northwestern Atlantic Coast
10. Yellowtail flounder - Cape Cod / Gulf of Maine
11. Yellowtail flounder - Southern New England / Mid-Atlantic
12. Atlantic halibut - Northwestern Atlantic Coast
13. Pollock - Gulf of Maine / Georges Bank
14. White hake - Gulf of Maine / Georges Bank

The GB yellowtail assessment will be completed through the TRAC and NEFSC will provide data updates directly to the Groundfish PDT for the remaining five stocks (Southern New England/Mid-Atlantic winter flounder, Gulf of Maine winter flounder, redfish, wolffish and ocean pout). These five stocks (among others) will be assessed in the next cycle in 2020.

The new MRIP recreational catch data will be considered in several stock assessments this year (GB cod, GOM cod, GOM haddock, pollock) and this information would be used to examine commercial/recreational allocation issues. Other stocks with recreational catches without stock assessments in 2019 (Southern New England/Mid-Atlantic winter flounder, Gulf of Maine winter flounder, and wolffish) would continue to include the old MRIP recreational catch for monitoring purposes. Monitoring of the annual catch limits (ACLs) for stocks with old or new MRIP recreational catch should match this assessment cycle.

Other Business

No other business.

Table 1 summaries follow-up tasks. The Groundfish PDT meeting adjourned at approximately 1:00 p.m.

Table 1- Follow-up task from May 14, 2019 Groundfish PDT meeting.

Task	Name(s)	Due Date
Draft meeting summary	Jamie, Melissa, Robin	5/14/2019
Review draft meeting summary	PDT	5/15/2019

Groundfish PDT Development of Alternative 4.2.1.1 Dockside Monitoring Program

The PDT worked on tasking to develop details of a dockside monitoring program for the commercial groundfish fishery (Section 4.2.1.1: Dockside Monitoring Program). Specifically, the PDT addressed the task of developing options for a dockside monitoring (DSM) program in Amendment 23 (A23) that address the following issues identified with the previous DSM program in 2010 and 2011 and in the PDT's DSM discussion document. The PDT developed these options and identified areas where additional clarification and analysis may be needed.

Who pays for dockside monitoring?

These measures would include two options for funding of dockside monitoring: one with DSM structured as a dealer responsibility, and one structured as a vessel responsibility in which sectors and common pool vessels would be responsible for the costs of DSM.

Sub-Option 1:

Dealers would be responsible for the costs of dockside monitoring and each would directly contract with third-party dockside monitor providers. Dealers would be required to implement an independent third-party dockside monitoring system for monitoring landings. The details of the dockside monitoring system must be provided in the dealer's dockside monitoring plan. Each dealer would prepare a monitoring plan that covers the specifics of how the required DSM program will be implemented at their location (e.g., site plan, safety plan) that must be approved.

- One consideration is how often the dockside monitoring plans would need to be reviewed and approved, and by whom.

Alternatively, this measure could create a single dockside monitoring program for all dealers to use, contracting through an independent third-party dockside monitor provider. This may provide some simplification to program implementation compared to having individual dealers contract with dockside monitor providers. Unlike some other regions, NMFS does not have authority to collect funds for monitoring costs. Accordingly, if this approach was pursued, NMFS would set up and administer the program, but dealers would be directly billed by the provider. This would require substantial additional work to develop this in accord with applicable laws.

Sub-Option 2:

Vessels would be responsible for the costs of dockside monitoring and would contract with third-party dockside monitor providers. Vessels enrolled in sectors would be covered by a monitoring plan included in their sector's operations plans. Common pool vessels would need to contract directly with providers. Sectors would be required to develop and implement an independent third-party dockside monitoring system that is satisfactory to NMFS for monitoring landings. For common pool vessels, there would need to be detailed dockside monitoring program standards for these vessels to follow, as opposed to individual dockside monitoring plans for each common pool vessel.

Alternatively, this measure could create a single dockside monitoring program for all sectors and common pool vessels to use, contracting through an independent third-party dockside monitor provider. This may provide some simplification to program implementation compared to having individual sectors/common vessels contract with dockside monitor providers. Unlike some other regions, NMFS does not have authority to collect funds for monitoring costs. Accordingly, if this approach was pursued, NMFS would set up and administer the program, but dealers would be directly billed by the provider. This would

require substantial additional work to develop this in accord with applicable laws.

For either option, dockside monitoring would follow cost sharing responsibilities for industry-funded monitoring programs, in which “industry would be responsible for costs directly attributable to the sampling portion of a monitoring program, and NMFS would be responsible for costs directly attributable to the administrative portion of the monitoring program...”¹ If a fixed rate of coverage is required, then vessels would need to limit their trips to the number that can be covered by available funding for shoreside costs. Alternatively, the program would have to address how the fishery would operate if NMFS is unable to fund its shoreside costs for coverage at the specified level.

If there is a discrepancy between dealer and DSM report of vessel landings, which is the “official record”?

As noted in previous PDT discussions, past decisions by NMFS have stated “DSM could not replace dealer reports as official records of landings.”² A major criticism of the previous dockside monitoring program was that because dockside monitoring did not replace dealer reporting or VTRs, dockside monitoring did not produce a new data stream that assisted in the assessment and management of the fishery. The dockside monitoring data may only be considered duplicative if landings are reported accurately by the vessel and dealer. By providing an independent, third-party verification of landed weights by species, dockside monitoring will help to ensure accurately reported landings in the groundfish fishery and give all fishery participants greater confidence that landings are being monitored and reported in an equitable manner throughout the fishery. A major question remains as to whether dockside monitoring data can be used to replace dealer data as the official landings record, for trips that are monitored dockside.

Two ways to handle discrepancies between a dealer and DSM report and to determine which is the “official record” are outlined as options below.

Sub-Option 1:

On the west coast, both the dealer and the dockside monitor submit landings weights electronically to the Pacific States Marine Fisheries Commission (PSMFC). An attempt is made to reconcile any differences, but if they cannot be resolved, the higher value by species is used to be conservative. A similar model could be used to handle discrepancies between the dealer and DSM report for the DSM program developed through A23.

In the case of a discrepancy between dealer and DSM report of vessel landings, this measure would allow for whichever record reports the higher value by species to be considered the official record. For trips not covered by DSM (spot check approach), this measure would allow for a default to the dealer data as the official landings record for these trips. These measures could include recommendations that reporting in a format usable by existing data systems be a contract requirement for DSM providers to meet, so that DSM data could be considered in place of dealer data.

- One consideration is whether the higher value should be used for ACE accounting, for assessments, or for both. There are pros and cons to each approach, and additional work needs to

¹ NEFMC and MAFMC. Draft Environmental Impact Statement for the Industry-Funded Monitoring Omnibus Amendment. September 2018.

² See “180910 Memo from Groundfish PDT to Groundfish Committee re progress on Amendment 23/Groundfish Monitoring”, Attachment #3 “Draft Dockside Monitoring Summary”
https://s3.amazonaws.com/nefmc.org/5_180910_GF-PDT-memo-to-GF-CMTE-re-progress-on-A23-with-attachments.pdf

be done.

Sub-Option 2:

The measure would allow for the dealer report to still be the official record, both for trips covered by DSM and those not covered (spot check approach). There could be a penalty structure in place to incentivize accurate reporting of landings, such that if there is a discrepancy between the dealer and DSM report, there is, for example, a fee paid by the dealer, etc. These measures could include recommendations that reporting in a format usable by existing data systems be a contract requirement for DSM providers to meet, so that DSM data could be easily tracked and compared to dealer data. However, it will require substantial additional work to develop this system to receive, store, and audit DSM data, and to compare DSM data to dealer data and reconcile differences.

How to conduct dockside monitoring in small, remote ports and for small vessels with low harvest capacities

The PDT has discussed the challenges with conducting DSM in small, remote ports, including considerations such as how to handle landings in ports that must be trucked from vessel to dealer scales for weighing, and consideration of lower levels of DSM (e.g. spot checks) for these smaller, less used ports and for smaller vessels with low landings.³

These measures would include options for lower levels of monitoring in either smaller, less used ports or for smaller vessels with low harvest capacities, depending on whether DSM is a dealer-based program or a vessel-based program. Reducing the number of landings subject to DSM in remote areas may increase the cost/landings as economies of scale are further reduced. Also, this could further complicate the issue of staffing remote ports.

The dockside monitoring alternative in Section 4.2.1.1 of the draft A23 alternatives would develop a dockside monitoring program for the commercial groundfish fishery at 100 percent coverage of all trips. The goal, as provided in the Council's rationale, is to establish a dockside monitoring program that allows for independent verification of landings for the entire groundfish fishery, which will ensure accurate reporting by dealers, ensure species are reported correctly, improve the fair market value for landed fish, and add unique value to current enforcement activities. The PDT discussed how options for DSM coverage less than 100 percent would fit in with a goal of accurate landings information, but additional work needs to be done.

The PDT plans to do further analysis to examine port characteristics – including the number of ports, landings weight by port, and species composition by port – in order to understand what constitutes major ports vs. smaller, less used ports. The PDT will also examine data on smaller vessels with low harvest capacities and low landings to understand the characteristics of their catch composition and total harvest capacities. This information may be useful for determining the criteria for which ports or vessels should be considered for lower levels of DSM.

For instances in which catch is offloaded to a truck before weighout at a dealer, the dockside monitor will monitor landings at the dealer where weighout occurs.

Sub-Option 1:

Under a dealer-based DSM program, this option would allow for lower levels of DSM for smaller, less used ports to act as “spot check”. Dockside monitors would be randomly assigned to these ports at 20

³ Ibid

percent coverage.

This option could also include measures to incentivize accurate reporting of landings. For dealers located in remote ports that are subject to occasional dockside monitoring, their DSM coverage rate could increase if their dealer reports are not similar to the DSM reports. However, the PDT recognizes that how well an observed offload dealer report matches the DSM report may not reflect accuracy of unobserved offload reports.

The logistics of getting dockside monitors to remote ports at the correct time to meet an offload remain a concern. The system would involve coordination between the dockside monitor providers and dealers based on hails from groundfish vessels. Alternatively, this could involve the dealer setting times to have groundfish offloads occur, or staffing a dockside monitor at all times the dealer is open. Past experience showed that private monitoring companies were unable, or unwilling, to base operations in areas that served remote ports or had few offloads. Additionally, in small ports it was difficult to find local candidates for employment that did not have a conflict of interest. One possibility to address this issue would be to periodically have unannounced DSM events, similar to a traffic checkpoint, where dockside monitors are temporarily stationed in the vicinity of one or more remote ports and monitor every offload of groundfish in nearby remote ports for a period of time.

Sub-Option 2:

Under a vessel-based DSM program, this option would allow for lower levels of DSM for smaller vessels to act as “spot check”. Dockside monitors would be randomly assigned to these vessels at 20 percent coverage.

Similar to the option above, this option could also include measures to incentivize accurate reporting of landings. For smaller vessels that are subject to occasional dockside monitoring, their DSM coverage rate could increase if their dealer reports are not similar to the DSM reports. However, the PDT recognizes that how well an observed offload dealer report matches the DSM report may not reflect accuracy of unobserved offload reports.

Dockside monitor safety and liability issues associated with fish hold inspections:

The PDT has discussed the concerns with safety and liability issues associated with fish hold inspections that arose with the previous DSM program, as well as the importance of fish hold inspections at the conclusion of an offload to ensure that all landings have been accounted for and independently verified.⁴

These measures may consider that monitors be allowed to access the fish hold of vessels (either directly or using cameras) to verify that all of the retained catch is offloaded and accounted for, which would address the concern with a previous DSM program that fish holds must be inspected at the conclusion of an offload. These measures would require that the dockside monitoring service provider is responsible for providing insurance liability associated with having monitors inspect the fish hold of the vessel, similar to how at-sea monitor and observer providers are responsible for providing insurance liability for at-sea observers on board vessels.

These measures may consider options for fish hold inspections that include alternatives to dockside monitors directly accessing the fish hold, such as the use of cameras, to verify that all of the retained catch is offloaded and accounted for. This option may be particularly well suited for use on vessels with EM systems.

⁴ Ibid