



## Partial Coverage Fishery Monitoring Advisory Committee

### REPORT

*January 31, 2023: 8:00am-4:00pm AKDT*

*Committee members present: Nicole Kimball (Chair), Julie Bonney, Dan Falvey, Luke Szymanski, Stacey Hansen, Abigail Turner-Franke, Bob Alverson, Kathy Hansen*

*Members Absent: Tom Evich, Caitlin Yaeger, Julie Kavanaugh*

*Agency Staff: Sara Cleaver (NPFMC), Anna Henry (NPFMC), Jennifer Mondragon (NMFS AKR), Gwynne Schnaittacher (NMFS AFSC), Jennifer Ferdinand (NMFS AFSC), Lisa Thompson (NMFS AFSC), Phil Ganz (NMFS AKR), Tom Meyer (NOAA GC), Maggie Chan, Jason Gasper (NMFS AKR), Craig Faunce (NMFS AFSC), Jennifer Cahalan (PSFMC), Geoff Mayhew (NMFS AFSC), Alex Perry (NMFS OLE), Joel Kraski (NMFS AKR), Steve Barbeaux (NMFS AFSC), Cindy Tribuzio (NMFS AFSC), Dan Goethel (NMFS AFSC), Josh Keaton (NMFS AKR), Gwynne Schnaittacher (NMFS AFSC), Mike Vechter (NMFS AFSC), Cara Rodgveller (NMFS AFSC), Heather Nibert (NMFS AFSC)*

*Other Attendees: Wayne Walter, Ernie Weiss, Haley Anderson*

### 1. Introduction

The chair of the Partial Coverage Fishery Monitoring Advisory Committee (PCFMAC) opened the meeting, gave an overview of the agenda, and attendees introduced themselves. This meeting was hybrid; it was hosted and available to join remotely and with an in-person option at the Alaska Fisheries Science Center (AFSC) in Seattle. The purpose of this meeting was for the PCFMAC to receive updates on the Partial Observer Coverage Cost Efficiencies Integrated Analysis for the Draft 2024 Annual Deployment Plan (ADP).

In September 2022, the NMFS analytical team provided the PCFMAC with a presentation on the components of six draft monitoring designs for potential inclusion in the 2024 ADP. At that meeting, the committee highlighted the importance of receiving a comparison of the different proposed designs based on a past example fishery year under several budget scenarios. This would provide a way for the committee to see the data coming out of the 2021 fisheries (for example) and what would be captured under each proposed design using different budget scenarios.

In October 2022, the Council concurred with the PCFMAC's recommendation for analytical staff to provide further description and evaluation of the proposed deployment designs, evaluation criteria, and underlying assumptions for the partial coverage cost efficiencies analysis at a meeting in early 2023. This meeting provided that additional opportunity for the PCFMAC to provide input to the analytical team on work thus far. This report focuses on feedback the committee provided and the timeline for future work.

### 2. Contract for Observer Coverage in the Partial Coverage Category

The committee had a question about the timing of the new contract for observer coverage in the partial coverage category and whether the results of this analysis will inform the next contract. The timing of the current contract, which expires August 16, 2024, is not flexible, but NMFS stated that the request for information (RFI) went out on January 30 with a draft performance work statement for the next contract.

This is an opportunity for potential vendors and the general public to weigh in on the specifics of the performance work statement which can be found at: <https://sam.gov/opp/e6915f02722046cd8cf7e091af0fc286/view>. Public comment closes February 17 but could be extended if requested. The length of the new contract will be one year with four option years, similar to previous contracts.

### 3. Status Update on Partial Observer Coverage Cost Efficiencies Integrated Analysis

Ms. Jennifer Ferdinand, Mr. Geoff Mayhew, Mr. Phil Ganz, Dr. Craig Faunce, Ms. Jennifer Cahalan, and Ms. Jennifer Mondragon provided an update on the Partial Coverage Integrated Analysis for the Draft 2024 ADP. This analytical work evaluates a suite of monitoring deployment designs to achieve the Council's goal of spending observer fee revenues (fixed as a percentage of ex-vessel revenue) more efficiently such that greater coverage and/or improved data are achieved using both observers and electronic monitoring (EM). Presentation of analytical progress on this work to the PCFMAC is intended to help identify trade-offs between different monitoring deployment designs, incorporating implementation of pelagic trawl EM and new 100% coverage requirements under the BSAI cod trawl CV LAPP.

The mechanism for the cost efficiencies analysis is the 2024 ADP, meaning the stratification and allocation elements together will formulate a complete, statistically robust sampling design for the 2024 ADP. At this meeting, the analytical team provided a more detailed description of the stratification and allocation schemes and some of the metrics that would be used to evaluate them. The stratification schemes discussed were:

- **Status quo:** Three gear-based deployment strata (hook-and-line, pot, and trawl) and monitoring tool (EM or observer).
- **Status quo + FMP strata:** This would provide different rates by FMP, with the potential to obtain more samples in areas with less effort.
- **Status quo + paired EM/observer:** A subset of trips selected for at-sea EM monitoring would be required to additionally carry an observer.
- **Status quo + dockside sampling of EM pot:** Observers provide shoreside monitoring of catch from EM pot vessels. This would require maximized retention of catch.

The allocation schemes discussed were:

- **Equal rates:** All strata are allocated the same sampling rate, proportionate to the number of trips in the strata. This acts as a baseline to which all other designs can be compared.
- **Status quo:** 30% Fixed-gear EM strata trips, 33.3% Trawl EM strata deliveries, and observer strata with 15% minimum rate and option days focused on minimizing between-trip variance of groundfish discards, halibut PSC, and Chinook PSC.
- **Proximity:** Based on spatiotemporal arrangement of fishing effort within each stratum with the implied assumption that trips near to each other have similar characteristics. This method allocates more sample effort to strata with more dispersed or lower fishing effort.
- **Cost-weighted:** Balances the need to capture a variety of fishing effort with sampling costs. This method allocates more sample effort to strata with a higher proportion of boxes (each box represents 200km and 1 week) with low probability of being sampled or those with lower sampling costs.

The committee was not provided budget scenarios, likely coverage rates, or evaluation of the monitoring deployment designs against the proposed metrics at this meeting. The analytical team is planning to provide evaluation of most of these designs to the FMAC in May and the Council in June unless there are designs that become untenable as the analysis progresses.

**The committee recognized the fixed budget scenario resulting from the annual observer fee and reiterated the need for the suite of monitoring designs to be presented under hypothetical high, medium, and low budget scenarios in order to compare the designs and their resulting coverage rates.** These should be provided in May/June. The analytical team notes there are many caveats to providing draft rates, largely due to rates being influenced by factors beyond those determined in the ADP (i.e., budget and fishing effort). Furthermore, the analysts reiterated that higher coverage rates do not necessarily equate to higher quality data and therefore are not reliable criteria to compare monitoring designs.

The following sections summarize discussion topics from the meeting and include the PCFMAC's recommendations. Requests for specific information to be brought back to the committee at the next meeting are also described.

*a. Adding Stratification by FMP Area*

This change could apply to any of the proposed sampling designs. Currently, sampling strata are defined by monitoring tool and gear type (e.g., pot, longline, fixed gear EM, trawl, trawl EM). NMFS is considering adding FMP area to the strata to allow finer adjustment of sampling rates for strata on which it is often difficult to obtain data (e.g., Aleutian Island (AI) pot). **The committee recommended that it is worth continuing to look at adding stratification by FMP. For May/June, the committee would like more information on the following:**

- **The number of trips in which vessels harvest across multiple FMP areas on a single trip.** If many vessels harvest in both FMP areas in the same trip, NMFS would be less likely to continue analyzing this option.
- **The rules governing vessels if FMP were added to the strata.** This design would require vessels to declare ahead of time in which FMP area they plan to fish, and it is likely that coverage rates would vary between FMPs. For this reason, there could be an enforcement component involved in implementing this type of stratification scheme.
- **Clarification on the data/sampling benefit gained from parsing strata more finely than status quo.**

*b. Adding a Paired EM/Observer Stratum*

Vessels in this stratum would be required to carry an observer and use their EM systems simultaneously on selected trips. This would entail using EM to obtain location and count data, and deploying observers to get biological data, marine mammal data, other data that EM is less effective at collecting. **The committee emphasized for this scheme to be feasible, the coverage rate for the combined strata must be considerably lower than the observer-only strata, otherwise participants would be disincentivized to use EM.**

**In order to provide further perspective on the feasibility of this design, the committee needs further information on the criteria that will be used to exclude fixed gear vessels that cannot accommodate an observer.** Specifically, how many vessels that are currently in the fixed-gear EM pool would qualify to carry both an observer and use EM? The committee discussed how some vessels were incentivized to join the EM strata because they cannot accommodate observers due to bunk space or other limitations. Given this, the committee questioned whether there would be a viable sample size in this stratum to obtain useful data, or if the remaining vessels in this stratum that can accommodate an observer would end up with higher rates and have to take observers on more trips.

*c. Shoreside Monitoring: EM-Pot Stratum*

Dockside sampling of EM-pot vessels could reduce gaps in biological data, but implementation of this stratification scheme would require maximized retention of catch. **While the committee did not eliminate this method as an option, members of the PCFMAC indicated that understanding the specifics of a maximum retention requirement is necessary to provide feedback on the practicality of this design.** The longline fleet has already indicated that maximum retention would not be a viable option for them, therefore it would also be useful to have data on the number of vessels using EM and switching gears between longline and pot, as maximum retention would be required for the duration of the trip.

This design would not be ready for implementation in the 2024 ADP as it would likely require changes to regulations. If this design provides sufficient data quality and cost savings, an EFP could be initiated to determine what would need to be retained under a maximum retention scenario and to test this approach. Changes could be made to future ADPs after any required impact analyses go through the typical Council process. The committee suggested looking at the catch composition of the past several years to determine what would be feasible to require vessels to retain. Additionally, it would be important to address implementation issues that arise from a maximized retention approach. For example, what would be the impact to processors and are they able to handle catches that would otherwise be discarded under current regulations.

*d. Second Stage/Baseline and Optimization Days*

Each of the new sampling designs allows for two allocation stages, whereby the first stage meets an initial sampling priority and the second stage addresses an additional sampling priority. For example, in the status quo sampling design, the minimum baseline days (15% hurdle) is the first stage and the second stage consists of option days focused on minimizing between-trip variance of groundfish discards, halibut PSC, and Chinook PSC. It is not necessary to have the same baseline coverage rate across strata. The analytical team sought feedback on defining the cutoff criteria and whether the goals for second stage allocation that were previously identified by the Council regarding minimizing variance remain the same. Additionally, if these goals could be accomplished and discards can be estimated by a one-stage sampling design without the need for second stage allocation (e.g., through use of the proximity allocation scheme), there remains a policy choice of whether to spend additional funds to increase coverage on specific fisheries.

The committee discussed the importance of minimizing monitoring effects (sometimes called the “observer effect” where sampled trips are different from unsampled trips) and whether it is possible to set a “baseline” coverage rate to avoid significant monitoring effects and anything above that would go to second stage allocation. One proposed idea was to evaluate coverage rates through time and when there have been significant differences with monitoring effects.

Committee members discussed the merits of status quo priorities of groundfish discards, halibut and salmon PSC and supported adding crab PSC as an additional priority. Overall, the committee emphasized its preference to allow for flexibility in how to spend the option days through a second stage allocation, particularly as the Council’s priorities and data needs change. The committee prefers having the ability to distribute option days in certain high priority fisheries or strata.

*e. Evaluation of Sampling Designs*

NMFS discussed several evaluation criteria that would be used to compare sampling designs, including cost, detection of rare events, inseason management data quality, and stock assessment data quality. Some of the issues identified for stock assessment data quality are the loss of biological samples and lack of length data collected by observers. As part of the May FMAC agenda, the committee looks forward to further discussion of the tradeoffs of precision in weight estimates and using proxies for weights to support EM data in stock assessments. Discussions with stock assessment authors highlighted concerns over using fishery independent

information and applying it to fishery dependent data. The committee would like to better understand the impacts to stock assessments if weights from observer data were not applied to EM data and instead proxy weight data or other sources of lengths were used to convert catch in numbers to catch in weight on fixed-gear EM trips.

#### **4. Design-Independent Ideas That Could Impact Cost Efficiency**

The analysts highlighted several decisions independent of the sampling designs which could impact cost efficiency. The Council motion directing this analysis emphasized evaluation of the zero selection pool (currently <40' fixed gear vessels and all jig vessels). Discussion on the zero selection pool centered on what other criteria for consideration in the zero selection pool would be useful to evaluate. Some ideas included reevaluating the pool based on catch history or quota, noting that the criteria need to be known prior to the start of season and a metric that would not change every year.

In relation to the zero selection pool, the committee discussed the inefficiency created by vessels in the EM pool that have an expensive EM system on board but are not selected for coverage due to low fishing effort. The committee would like to determine the optimum size and composition of the EM fleet. The committee wondered if there would be an option to move these vessels into either the observer pool or zero selection. Moving vessels from EM into the observer pool would require a change to regulations as vessels are currently in the EM pool until the Agency removes them for cause (e.g., for not following specific VMP requirements) or the vessel opts-out. Because the specifics of the zero selection pool can be adjusted outside of the sampling design, it was noted that zero selection could be a potential agenda topic for the September PCFMAC meeting.

#### **5. Public Comment**

No public comment was given at this meeting.

#### **6. Timeline and Future Scheduling**

The next observer-related meeting is the annual FMAC meeting in May (date TBD). Typically, the ADP is not included on the agenda at the May FMAC meeting. However, this year that meeting will provide an opportunity for the FMAC (and subsequently on the June Council agenda) to see evaluation of each sampling design. This will allow the committee to provide recommendations on adjustments to the final suite of monitoring designs. There will not be sufficient time to analyze major changes to the sampling designs after the June meeting. The draft 2024 ADP with draft coverage rates will be available for the PCFMAC at its September 2023 meeting and for the Council in October. The final design will be recommended for implementation at those meetings, and the final ADP will be available prior to the December Council meeting.

**The PCFMAC continues to encourage the analytical team to be in contact in between meetings if they need ground truthing or on-the-water perspective as the work progresses.**