

A23 Review Metrics PDT discussion notes

May 26, 2022

Should we plan on the first two fishing years of A23 for the review being FY2022 and FY2023, considering A23 will not be implemented until after May 1?

- FY2022 target coverage is 99% until A23 implementation, still allows for review of comprehensive monitoring coverage target
- Review of other elements of A23 affecting coverage like the 71 30 exclusion will have to be evaluated separately since these won't be in place until after May 1; review of exclusions may need to begin with FY2023 depending on timing of implementation
- The review is to focus on coverage rates, but may want to consider the suite of A23 measures and how these impact coverage
- The review is based on 100% coverage target and not 100% realized coverage – the difference between target and realized coverage is one of the metrics to analyze
 - Acknowledge that not expecting 99% or 100% realized coverage in FY2022 – given it will take time to build up observer staff. Do expect higher realized coverage than FY2021 (~34%)
 - Realized coverage will also be impacted by how many vessels decide to opt into EM - there are vessels waiting to participate in MREM once A23 is implemented, GARFO plans to track how many vessels/sectors are in EM and separately calculate the achieved coverage rate for ASM vessels in each sector
 - Realized coverage will likely increase over the fishing year as observing staffing ramps up – may want to look at realized coverage at various points throughout the year, NMFS does monitor in-season to work with providers and sectors to achieve coverage targets
- This year how achieved coverage is calculated will change ex. NEFOP limited trips count beginning in 2022
 - GARFO producing a matrix for calculating achieved coverage which will be shared when available

Which years to use for a pre-A23 comparison?

- Don't eliminate any years for analysis at this stage - even FY2020 with low observer coverage due to COVID waivers will be useful for understanding the relationship between catch and observer coverage. FY2020 could serve as a low coverage year as a comparison to FY2022 which will be a high coverage target year.
- How far back to go? The fishery has changed a lot since 2015 – should consider more recent years being more representative of current fishery conditions
- Consider starting with FY2016 – first year with ELM exemption which changed monitoring coverage in the fishery, FY2016 and forward reflective of current fishery conditions
- Could consider several sets of years to compare – FY2022/2023 with 100% coverage target, FY2020/2021 with 40% target (CV analysis done but coverage set higher to account for bias) plus COVID impacts, and FY2016-2019 (coverage based on CV)

Summarize market conditions for each year and how these relate to pre/post A23:

- Include data from FW63 AE – trends in landings, revenue, quota prices
- Maybe get input from the Groundfish Advisory Panel on their observations

Initial brainstorm of possible metrics and indicators (to be refined over the course of this work):

- First look at distribution of vessels in EM vs ASM, what types of vessels select into EM vs ASM, and also exclusions – may impact pool of trips available for analysis of certain factors and require disaggregation when conducting analysis
- Coverage targets, achieved coverage rates, what factors influenced achieved coverage, what's going on in the fishery (catch, effort), extent to which monitoring is impacting fishery performance
 - Achieved coverage
 - By coverage type and sector
 - Selections
 - Acceptance rates
 - Waiver counts by reason (PTNS coverage outcome reason and standard categories)
 - Canceled notifications
 - Coverage equitability
 - between sector
 - within sector
 - Catch/effort
 - Catch
 - Number of trips
 - Trip length
 - Trips in other fisheries
 - Seasonality of trip types (potentially distinguishing NMS v monk/mults combo trips)
 - Gears used (by VTR gear code)
 - Use of exemptions
- Influence of coverage on discards as well as kept catch - see if there's a change with 100% coverage
- Re-run PDT bias analyses – dependent on how many vessels opt into EM vs ASM, also if realized coverage is close to 100% may not be possible or may need to modify analyses
- Changes in total effort, quota trading prices – caveat that still have impacts of bias
- Look at whether quotas become more binding under higher coverage
- Changes in fishing costs – from observed trips, will lose this data with EM? Only from NEFOP trips for those trips since no ASM, expect changes in operational costs but may not get this data from EM trips
- Spatial distribution of the fleet – are there changes with higher coverage
- Correlations between stocks and species – compare to previous correlations conducted within trips between different stocks and species, related to bias, illegal discarding, should see changes from pre-A23, determine value of higher monitoring for costs; potential for changes in size distribution - can look but suspect will be lots of noise in data
- Track refusals, other observer incidents – look at trends, whether there are specific segments of the fleet responsible, affects whether coverage is uniform

- Number of incidents by broad category.
 - PTNS notification compliance tracked as a separate incident
 - Compare notification compliance over time compared to notification compliance under the 100% coverage target - has compliance increased?
- Cancellations on PTNS with dayboats, waivers – compare how much trips cancel with and without a waiver issued
- Impact of MREM on size distribution of kept catch – outside bias/coverage level analysis; are there changes in targeting or converting discards to landings, ex-vessel price changes
 - So far not many small fish landed under EFP, might this change with operational program, dealers no longer allowed to report X3 (mixed sublegal and terminal market category)
 - Compare high volume MREM to high volume ASM, day-vessel to day-vessel, etc.
 - Mortality rate assumptions
- Social indicators – do we interpret whether Council review process is about evaluating catch data or also looking at social indicators, and if so, what would those be?
 - Observer refusals, PTNS issues might fall under here - reflect attitudes about monitoring
 - What other info is collected, observer comment cards – typically specific concerns about species ID, etc. or positive feedback on observer performance
 - Observer recruitment success
 - Observer retention
 - Observer average seaday accomplishments
- Safety issues – observer safety incidents tracked and categorized, could summarize and show trends; are there ways to track safety concerns from vessel crew in terms of sampling set up on deck, EM installation?
 - FMO is working closely with OLE to update and evaluate OLE’s observer support action plan on a quarterly basis.
 - Sampling setup alone won’t be tracked as an incident, but could pull similar info. Out of catch estimation methods used. For ex, is there a change in how observers sampled the hauls - was it more difficult to get actual weights? Do we see increased usage of other catch estimation methods?
- Ways to look at how EM may improve accuracy in terms of removing human error
 - Look at secondary review of video reviewer
 - Observers do have review of species ID, change to observer trip review this year, tier 1 and tier 2 review, designed to be flexible going forward
- How often observers observe on the same vessel and any impacts of that in terms of sampling strategy and recorded catch.
- Management uncertainty buffers and coverage target evaluation – evaluate assumption of 100% coverage removing management uncertainty
- Look at other regions with 100% monitoring programs (ex. west coast groundfish) to see if any have review processes to get ideas for metrics

Background Information:

From A23 review alternative:

The Council has discussed how the scope of the review would be different if 100 percent coverage levels are selected compared to lower coverage levels. The Council selected a sector monitoring standard of 100 percent in this action, and so a review process would be more limited because there would be comprehensive monitoring. The review would likely include metrics such as discard estimate CVs and a measure of how catch (discards and landings) changed following comprehensive monitoring.

On the other hand, the Council also selected a lower monitoring standard of 40 percent coverage in the event that federal funds are not available to reimburse industry costs for higher monitoring coverage, and it would likely be necessary to include additional metrics in a review to ensure monitoring targets are being met and they are effective. For example, the review process with lower monitoring standards would likely include analyses of whether the program is operating in a way the Council intended, is catch accurately being measured, is there is evidence of bias, are monitoring standards being met, etc.

Goals and Objectives of the Groundfish Monitoring Program:

Goal 1: Improve documentation of catch

Objectives:

- Determine total catch and effort, for each sector and common pool, of target or regulated species.
- Achieve coverage level sufficient to minimize effects of potential monitoring bias to the extent possible while maintaining as much flexibility as possible to enhance fleet viability.

Goal 2: Reduce cost of monitoring

Objectives:

- Streamline data management and eliminate redundancy.
- Explore options for cost-sharing and deferment of cost to industry.
- Recognize opportunity costs of insufficient monitoring.

Goal 3: Incentivize reducing discards

Objectives:

- Determine discard rate by smallest possible strata while maintaining cost-effectiveness.
- Collect information by gear type to accurately calculate discard rates.

Goal 4: Provide additional data streams for stock assessments

Objectives:

- Reduce management and/or biological uncertainty.
- Perform biological sampling if it may be used to enhance accuracy of mortality or recruitment calculations.

Goal 5: Enhance safety of monitoring program

Goal 6: Perform periodic review of monitoring program for effectiveness

Goals and Objectives of Amendment 23:

This action would maintain the current goals and objectives of the groundfish monitoring program described above (Section 3.3.2), but consider measures to better address Goal #1: improve documentation of catch, described as “improved catch accounting” during the scoping process for this action. The objectives associated with that goal are: 1) determine total catch and effort, for each sector and common pool, of target or regulated species; and 2) achieve coverage level sufficient to minimize effects of potential monitoring bias to the extent possible while maintaining as much flexibility as possible to enhance fleet viability.

Target and realized observer (NEFOP and ASM) coverage levels for the groundfish fishery for Fishing Years 2010-2021.

Fishing Year	NEFOP target coverage level	ASM target coverage level	Total target coverage level	Realized coverage level
FY 2010	8 %	30 %	38 %	32 %
FY 2011	8 %	30 %	38 %	27 %
FY 2012	8 %	17 %	25 %	22 %
FY 2013	8 %	14 %	22 %	20 %
FY 2014	8 %	18 %	26 %	25.7 %
FY 2015	4 %	20 %	24 %	19.8 %
FY 2016	4 %	10 %	14 %	14.8 %
FY 2017	8 %	8 %	16 %	17.3 %
FY 2018	5 %	10 %	15 %	14.6 %
FY 2019	N/A†	N/A†	31 %	21.9%**
FY 2020	N/A†	N/A†	40 %	11.6%**
FY2021	N/A†	N/A†	40 %	N/A*

“N/A” indicates that the information is not available.

† NEFOP rates are stratum-specific starting in FY 2019.

*Realized coverage not available; fishing year still underway.

**Observer coverage requirements suspended from March 20, 2020 through August 13, 2020 due to COVID-19.

From Sector Program Review (2020-2015):

Recommendations for future reviews:

Monitoring and Enforcement

- Improve catch accounting under the sector system. Partial at-sea observer coverage does not ensure full catch accounting and allows for non-compliance with reporting requirements.
- Improved monitoring programs to ensure accuracy of catch (kept & discards).
- Explore reasons why observer/ASM target coverage levels are not met and develop potential solutions to better achieve target coverage rate.
- Develop automated comparison reports of fishery dependent data (observer/VTR/dealer data) that are available to sector managers to better monitor fishing behavior and vessel stock BSA reporting.
- Development of data streams and metrics for download by sectors to monitor fishing behavior (observed vs unobserved trips).
- Analysis on sector participant specific incidents investigated by OLE during the relevant evaluation period.