

SSC Minutes October 2016

C-4 Observer Program 2017 Annual Deployment Plan

The SSC heard a presentation by Craig Faunce (NMFS-AFSC) providing an overview of the draft 2017 ADP for observers in the BSAI and the GOA to support the estimation of groundfish catches, discards, and related biological attributes. No public testimony was received. The SSC commends the author of the draft ADP for the thoroughness and clarity of the plan, and notes the progress of program development that has nicely balanced the use of statistical theory and pragmatism.

The draft ADP includes a useful evaluation of the performance of alternative partial coverage trips stratification and sampling allocation schemes based on simulated observer deployment. The evaluation considered two performance metrics. The first is the proportion of trips that are observed within each stratum (coverage rate) and the second is a gap analysis that considers the probability that the design will result in either greater than 1 or greater than 3 samples within each NMFS area stratum.

Key NMFS recommended characteristics of the 2017 ADP include:

- The sampling strata are defined to include 3 gear type (hook-and-line, pot, trawl) vessels and 2 delivery methods (tender and no tender), resulting in 6 total strata.
- The strata sampling rates (observer deployment rates) are determined using an optimization procedure bounded by cost and based on minimizing the variance of estimated discarded catch.
- The no-selection pool is composed of fixed-gear vessels less than 40 ft LOA and with vessels fishing with jig gear (handline, jig, troll, and dinglebar troll gear) and the electronic monitoring (EM) selection pool.

The SSC offers the following comments and recommendations:

- The draft 2017 ADP is responsive to many of the SSC comments and recommendations on the 2015 Annual Report and the 2016 ADP. The SSC appreciates the author's attention to past SSC input.
- Following past concerns expressed by the SSC regarding differences in fishing behavior and sampling difficulty associated with tendered trips, **the SSC endorses the recommendation to redefine sampling strata to include both gear type and delivery method.**
- **The SSC endorses trip-based assignment of observers and the allocation of sampling rate based on optimizing to reduce variance in discard estimates.**
- As described in the SSC minutes of the June 2016 meeting, the SSC recommended that the analysts consider survey design performance related to estimation of quantities informing key program goals such as management for PSC. **The SSC continues to recommend developing performance metrics related to PSC management.** In addition to suggestions on how to develop performance metrics provided in past SSC minutes, analysts might consider evaluation of allocation schemes considering variance in the estimation of PSC for high profile species and those that have historically triggered major fishery closures.

- **The SSC recommends that ongoing work to improve the estimation of catch/ discard and associated variances be given a high priority.** Further, with Electronic Monitoring (EM) Integration moving forward, the SSC notes that the inclusion of EM-derived data into this work is essential. Of particular interest are how 1) to include sufficient biological information when such information will no longer be available on trips observed with EM methods, and 2) how the low level of participation in the current voluntary ODDs reporting of eLanding report IDs will impact assessment of data from the EM strata.
- **The SSC recommends that EM be integrated into the ADP as soon as possible so that trade-offs associated with EM deployment and human observer coverage can be incorporated into the survey design optimization and planning.** The SSC notes that our support for moving the EM Integration EA/RIR/IRFA forward for final review assumed that future observer survey design would be informed by both the human and electronic observing methods.
- The overall observer deployment rate during 2017 is substantially lower in 2016 because there has been a reduction of funds available to support the observer program. The SSC understands that the outlook for future funding for the observer program is to remain at a level below recent years. With this reduced funding, the observer sampling rates will continue to be sustained at reduced levels and **the SSC is very concerned about spatial coverage gaps and the potential for bias in estimated discards, and associated impacts to fishery management. The SSC strongly recommends that the Council and/or NMFS seek additional funding sources for the observer program.**
- The SSC notes that evaluation of observer survey design alternatives would be facilitated by reporting additional details on catch/discard variance and sampling cost by stratum and overall. Additionally, comparisons of survey designs based on techniques that employ optimization methods for sample allocation should be compared to those designs assuming proportional sample allocation in terms of total variance of the estimated discard. This addition will show the degree of improvement in precision measured by total variance. As such, **the SSC requests that future ADPs include summaries of the cost and catch/discard variances used for optimization for each stratum and allocation design alternative.**
- While NMFS and the SSC continue to strive for best survey designs, the SSC understands that changes in observer survey design impact not only direct costs to the observer program, but also indirect costs associated with modifications to catch accounting and estimation programs.
- The SSC heard a proposal from the NMFS observer program to consider biennial reviews of the observer deployment plan. While the SSC recognizes the value of carefully considering survey design changes to maintain a maximum amount of consistency, with EM integration imminent there are multiple major design changes anticipated in the next 2-3 years. Thus, while the SSC does not believe transition to a biennial deployment plan review is currently appropriate, it may well be appropriate following EM integration. **However, the SSC recommends that all changes to survey design should be considered carefully and that design consistency through time is highly desirable.**
- **The SSC endorses all NMFS recommendations contained in the 2017 ADP.**