

Issues related to integrating multiple monitoring tools:

1. **Identify conceptual framework for an integrated, cost effective approach to partial coverage that can be supported by fees.** A conceptual framework would help provide context for current and future recommendations by the subgroup and FMAC and provide something for the Council to formally approve and work toward. Having Council review and comment on the conceptual framework would also help coordinate and prioritize tasks, and inform funding requests.

Priority: HIGH

Tasking: _____.

Key information needed: Core elements of such a framework will likely include:

Fixed Gear--An EM and zero selection optimized program supported by port sampling and some minimum level of observer coverage necessary to meet CAS and stock assessment needs;

Trawl Gear

Near Term:

- EM coverage on pelagic trawl with maximized retention and dockside monitoring;
- Continued human observer coverage on non-pelagic trawl.

Long Term:

- A regulated GOA trawl bycatch management program - removes all GOA trawl vessels from the partial coverage sector.

Next Steps: Subgroup defines conceptual framework and scope of document needed, and then makes recommendation to FMAC for referral to Council.

2. **Optimizing fixed gear EM**—There are 6 parts to this issue:

- a) 2020 Fixed gear EM pool size— This is likely the final year for fixed gear equipment start-up funding. After 2020, there will be an EM contract that likely incorporates equipment amortization.

Industry is proposing a 2020 target of **200** fixed gear vessels in EM pool with priority on HAL boats. This would be 30 more boats or a 17% increase.

Priority: HIGH

Tasking: Ongoing part of DRAFT ADP process?

Key information needed: _____

Next Steps: Subgroup recommends 2020 fixed gear target EM pool size to FMAC for referral to Council.

- b) EM cost analysis—Fixed gear EM will be paid for by fees in 2020.

Priority: HIGH

Tasking: Ongoing part of DRAFT ADP process?

Key information needed:

- Estimate recurring cost to maintain current EM pool (may not include SWI in 2020 but will by 2021)
- Estimate cost scaling as EM pool increases

- Estimate data review and storage costs—need separate HAL and POT data review costs

Next Steps: NMFS provide update on EM contract process in June. Have subgroup review the cost methodology?

- c) Port sampling –A preliminary evaluation will be important to understand limiting factors on EM pool size and future observer sea day demand for the fee analysis in October. Long-term, the feasibility and cost of port sampling will influence whether an EM optimized program for fixed and pelagic trawl gear will be feasible.

Priority: _____

Tasking: NEW.

Key Information needed:

- Feasibility of using port sampling data to provide proxy weights for EM discard piece counts. Currently CAS uses annual proxy weights by area from observer data.
- Biological sampling needs that can be supported by port sampling.
- Gaps that would still require some level of at-sea sampling (and options for meeting these data gaps; such as viabilities for halibut and potentially sablefish DMR)
- Scope of port sampling program to meet catch accounting vs. biological samples needs. (# ports, amount of sampling by port, staffing, integration with trawl port sampling program)
- Contracting options for port sampling program, preliminary cost estimates and ability to cross train trawl port samplers.
- Pilot program needs prior to operational testing.

Next Steps: Subgroup considers recommendation to develop a discussion paper on port sampling that is paired with the appropriate amount of at sea human coverage to FMAC for referral to Council.

- d) EM cost Effectiveness – Is there a better way to structure the present EM fixed gear sector to create cost efficiencies and meet monitoring objectives?
- i. Present EM fixed gear Pool – Vessels are equipped with systems but these systems are only used when the vessel’s trips are selected by ODDS. Is this system cost effective or is there a better system to utilize sunk capital for equipment and infrastructure to support the EM fixed gear sector?

Priority: _____

Tasking: NEW

Key information needed:

- Number of trips selected by ODDs for each vessel in the EM pool
- Capital costs for installation, support and maintenance of each EM system
- Evaluation of the present EM fixed gear mechanics versus a restructured system that creates efficiencies resulting in cost saving and increased coverage rates

- Potential to pass some EM costs on to vessel in addition to fee. (i.e. fee covers annual license, data review, 24 hr support line, annual VMP update, and one site visit/year. Additional services are paid for by vessel)

Next Steps: Subgroup consider priority, timing, and next steps.

- ii. Zero selection—Zero selection has significant effect on # of vessels in EM pool, seaday, and equipment costs but minimal impact on # of trips in sample frame. Preliminary work has been done based on 2013-2016 data. Implementation of new zero selection criteria is non-regulatory, so could be done through 2021 or 2022 ADP.

Priority: _____

Tasking: NEW

Key information needed:

- Update preliminary work to include 2017 and 2018 data.
- Feasibility and logistics of using previous year effort to establish selection pool.
- Evaluate data quality and management impacts.
- Estimate cost efficiency gains from revised zero selection.
- Scope out periodic supplemental program for remaining zero selection vessels.

Next Steps: Subgroup consider priority, timing and recommendation to FMAC for a discussion paper.

- e) Fixed gear EM optimization forum—No forum currently exists for refinement of pot gear data review protocols, detailed development of fixed gear EM optimization options, or revision of zero selection. There is also no forum to align EM innovation research with operational program needs of trawl or fixed gear EM programs.

Priority: _____

Tasking: NEW

Key information needed:

- Time estimate for fixed gear EM optimization meetings.
- Feasibility of integrating with Trawl EM workgroup, or overlap existing meeting schedules to minimize impact on staff and stakeholders.
- Evaluation of POT EM review protocols, costs, and options
- EM innovation current project status, budget, and proposal development timing.

Next Steps: ??

3. **EM coverage on pelagic trawl with maximized retention and dockside monitoring.** This action is likely to have a significant near-term impact on the # of observer days needed in partial coverage.

Priority: HIGH

Tasking: tasked via Trawl EFP (Council approves EFP in October 2019)

Key information needed:

- Feasibility of a maximized retention program for pelagic trawl.
- Feasibility of dockside sampling to support pelagic trawl EM program.

- Pelagic Trawl EM vessels assigned to zero selection pool. # Trips/days removed from observer pool for pelagic trawl EM & likely number remaining in observer pool in 2020 and 2021?
- Costs estimates for pelagic trawl EM that will be paid by fees after transitioning to regulated program

Next Steps: Discuss EFP timing and how to incorporate this information in 2020 DRAFT ADP. Any recommendations to FMAC needed?

4. **Human observer coverage on non-pelagic trawl.** Council has requested subgroup evaluate ways to improve coverage rates on PSC limited fisheries. Low coverage in GOA non-pelagic trawl fisheries was identified by FMAC and Council as a focus subject for 2017 and 2018 Annual reports, in light of potential for separate coverage category for non-pelagic trawl.

Priority: _____

Tasking: tasked via 2019 Annual report?

Key information needed:

- Evaluate observer effects at finer resolution than gear-level strata, so that observer effects in pelagic and non-pelagic trawl can be investigated (**TASKED Council June 2018 Motion**).
- Evaluate PSC impact of gear/targets with low quality data using new gap analysis.
- Evaluate feasibility of separating pelagic trawl vs. non-pelagic trawl strata for at sea observer days versus the de facto stratification for the Pelagic EM strata versus the number of at sea observer days in general available for trawl gear in 2020 or 2021. This could effect # of observer days (and costs) needed to achieve higher coverage rates on halibut PSC limited fisheries.

Next Steps: Further discussion by FMAC at June meeting and develop recommendation for 2020 DRAFT ADP.

OTHER issues discussed by the subgroup:

1. **New Gap analysis**—The October 2018 Council Motion noted “*subgroup should also continue to provide input on differential deployment base levels by gear type.*” The new gap analysis provides the opportunity to generate new G1 and G3 metrics to evaluate the 15% hurdles, and optimizing days above the base hurdle to meet Council objectives of discards of groundfish, halibut PSC and Chinook salmon PSC. Has this been tasked by the Council or are we recommending new work?

Priority: _____

Tasking: _____.

Key information needs:

- Evaluate utility of new gap analysis in determining the base hurdle coverage rates. (**PARTIALLY TASKED** by October 2018 Council motion to subgroup to “*continue to provide input on differential deployment base levels by gear type*”)
- Articulate data quality cost/benefit implications on PSC closures (**Recommended** by SSC April 2019)

- Status of Plan Team review of at sea observer biological data needed to support stock assessment needs. (Tasked in 2018)

Next Steps: Prioritize refinements and uses for this new tool. Subgroup recommendation to FMAC for further Council consideration.

2. **Improving the 6 bias metrics used in the annual report** – Used to characterize bias and identify issues in each coverage stratum.

Priority: _____

Tasking: already tasked (will not be available for 2020 ADP)

3. **Odds inherited trips and programming issues:**

Priority:

Tasking: already tasked (will not be available for 2020?)