

2020 Reintroduced Observer Coverage in the Partial Coverage Groundfish and Halibut Fisheries off Alaska

Jennifer Ferdinand
Fisheries Monitoring and Analysis Division
Alaska Fisheries Science Center

October 2020
North Pacific Fishery Management Council
Advisory Panel



COVID-19 Impacts to 2020 Monitoring

- March 24, 2020 NOAA Fisheries issued an emergency rule allowing observer coverage waivers if:
 - Local, State, or national governments, or private companies or organizations that deploy observers pursuant to NMFS regulations, restrict travel or otherwise issue COVID-19-related social control guidance, or requirement(s) addressing COVID-19-related concerns, such that it is inconsistent with the requirement(s) or not recommended to place an observer(s); or
 - No qualified observer(s) are available for placement due to health, safety, or training issues related to COVID-19.
- Observer coverage for partial coverage vessels was waived on March 26
 - Waiver for vessels operating from the port of Kodiak was lifted on April 20
 - Waiver for vessels operating from 13 additional ports was lifted on June 28 with a redesigned Deployment Plan



2020 Reintroduced Partial Coverage

- Port fidelity with observers completing port-specific 14-day quarantine periods
 - Quarantine pay negotiated and added to contract
- 14 ports: Akutan*, Dutch Harbor/Unalaska, False Pass, Homer, Juneau, Ketchikan, King Cove*, Kodiak, Nome, Petersburg, Sand Point, Seward, Sitka, and Yakutat
- Shoreside observers being deployed to ensure COVID-19 protocols can be followed while limiting data loss
 - Plant coverage days negotiated and added to contract
 - Vessel observers cannot enter most processing plants to collect biological samples. Several processors will have more observers present in the summer and fall Pollock fisheries to help complete data collections.



2021 *Draft* Annual Deployment Plan

for Observers and Electronic Monitoring in the Groundfish and Halibut Fisheries off
Alaska

Predicted Fishing Effort and Comparison of Alternative Designs

October 2020 – NPFMC - Advisory Panel

Craig H. Faunce¹, Phil Ganz², and **Geoff Mayhew³**

1 National Marine Fisheries Service, Alaska Fisheries Science Center, Seattle

2 National Marine Fisheries Service, Alaska Regional Office, Juneau

3 Pacific States Marine Fisheries Commission, Seattle



NOAA
FISHERIES

2021 DRAFT Annual Deployment Plan

- How NOAA Fisheries intends to assign observer and electronic monitoring resources to vessels in the partial coverage category
- Using a preliminary budget, presents several variants of the partial coverage fishery monitoring program, evaluations, and comparisons
- **NEW** – include effort predictions with $\pm 25\%$ ‘guess factor’
 - (typically in Final ADP)
- **NEW** – Port based trip-deployment (COVID-19) for 13 ports
 - Akutan excluded from list of 14 ports
- **NEW** – ‘Gap Analyses’ simplified and rebranded ‘Similarity Analyses’
- **NEW** – Analysis of data collection for stock assessments (otoliths)



Scenarios

Scenario	Trawl EM EFP	Fixed-gear EM	COVID-19
1	No	None	No
2	Yes	Current pool (169 vessels)	Port-based
3	Yes	'Optimized' pool' (89 vessels)	Port-based

'Optimized' = Approx. **equivalent total number of fished days** (same effort), but with **fewer vessels** (lower equipment costs) that prioritized vessels with history within the EM (58), fish more (≥ 30 days per year), and minimize loss of similarity between observer and EM pool (average weight data).

Allocation Schemes

- Equal rates
- 15% + optimized on Discards, Chinook PSC, and Halibut PSC



Scenarios and Budgets

Scenario 1 : No EM pool, so all funds toward Observer coverage

Scenarios 2 + 3 : With \$1M fixed-gear EM program, budget supports a minimum 2000-day program and on average meets the 15% hurdle **BUT**:

- Affords few option (cheaper) days
- Affords few optimized days

Table B-3

Scenario	Budget (\$ M)			Observer Days			Cost/Day
	Total	Fixed-Gear EM	Observer	Total	Option	Optimized	
1	4.497	0.00	4.497	2,906	906	121	1,547.60



Results - Rates by Scenario and Allocation

C5 2021 Draft AEP - AP PPT
Table B-4
October 2020

Scenario	Trawl EM EFP	Fixed Gear EM	Port-based Deployment	Allocation Scheme	Strata	Monitoring Rate (%)	Percent in Sampling Frame	Programmed Rate (%)
1	No	No	No	Equal Rates	HAL	15.94	100.00	15.94
					POT	15.94	100.00	15.94
					TRW	15.94	100.00	15.94
				15% + Opt	HAL	15.17	100.00	15.17
					POT	14.71	100.00	14.71
					TRW	19.00	100.00	19.00
2	Yes	'Current' EM Pool	Yes	Equal Rates	HAL	15.46	84.62	18.27
					POT	15.46	62.62	24.71
					TRW	15.46	91.75	16.85
				15% + Opt	HAL	14.84	84.62	17.53
					POT	14.48	62.62	23.14
					TRW	18.48	91.75	20.14
3	Yes	'Optimized' EM Pool	Yes	Equal Rates	HAL	15.55	82.89	18.76
					POT	15.55	61.04	25.49
					TRW	15.55	91.76	16.95
				15% + Opt	HAL	14.94	82.89	18.03
					POT	14.51	61.04	23.79
					TRW	18.56	91.76	20.22

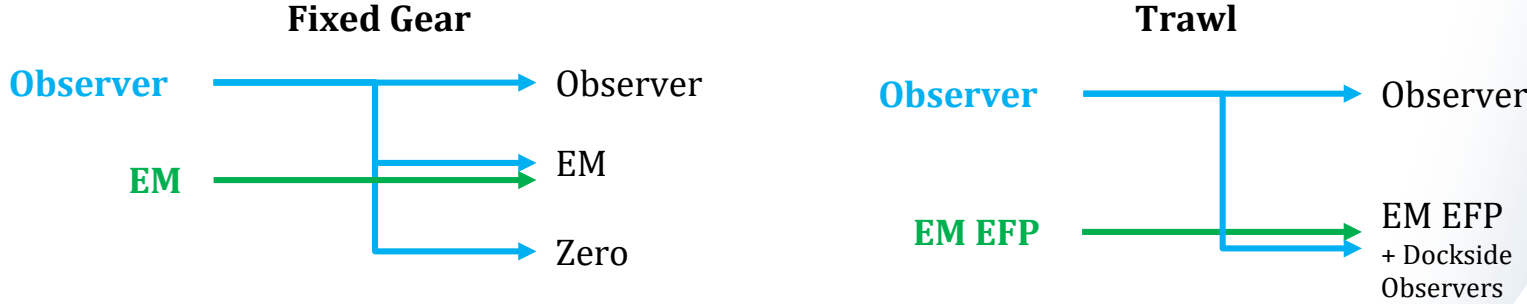
Evaluation

Similarity analysis – Using the estimated programmed rates, assess the **proximity in time and space** of monitored trips to other similar trips in the pools that depend on that data.

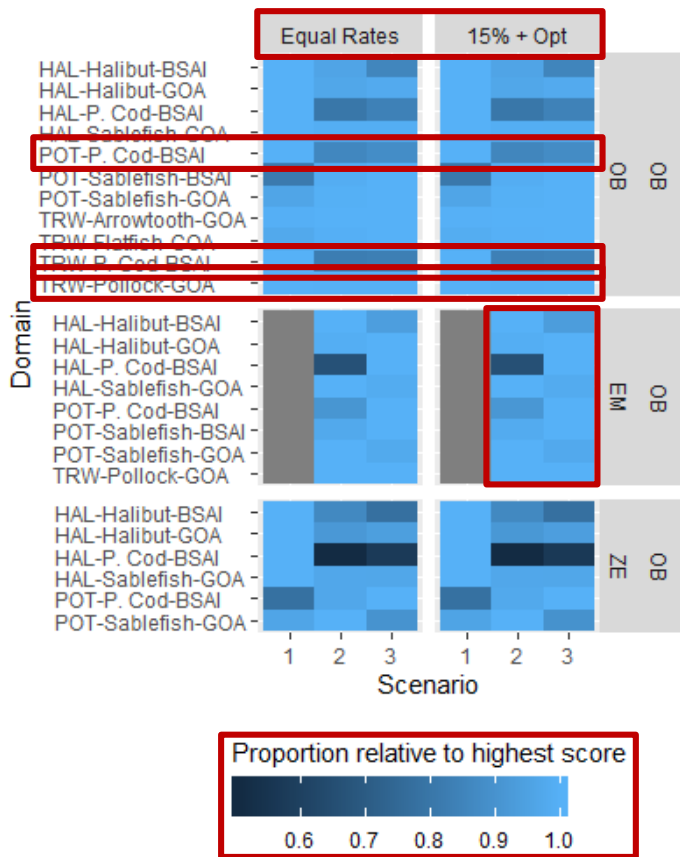
Similar trips defined by **Gear X Trip Target X FMP**

As proximity decreases, the risk that we base our estimates on unrepresentative data increases

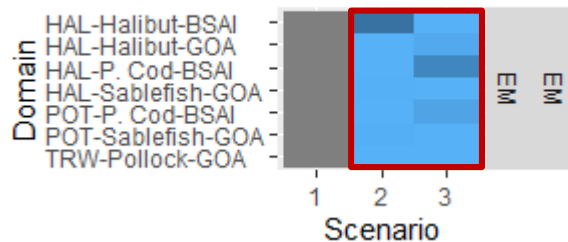
Compare similarity indices between scenarios and allocation schemes.



Results – Similarity Analyses (*prev. Gaps*)



- Shade: Lighter = Better
- Effect of Scenario > Allocation scheme
- Effect of port-based observer deployment disproportionately affects POT & TRW trips targeting Pacific Cod due to exclusion of Akutan
- Trawl EM EFP has no effect on similarity scores of TRW-Pollock-GOA
- Scenario 3 has tradeoffs with Scenario 2
 - OB-EM (average weight) improves
 - EM-EM (count data) declines



2021 Draft ADP Results Summary

- Funding is sufficient to afford a \$1M fixed-gear EM program and a minimum-sized observer program through 2024... **but not much more!**
- **Port-based trip deployment** will cause gaps in observer coverage and require higher programmed rates in ODDS in order to achieve the planned monitored rates.
- **Scenario 3** demonstrated one way that fixed-gear EM participation may be optimized to improve spatiotemporal proximity of average weight data and reduce hardware costs (approx. \$128,000 per year).
- **Trawl Pollock EM EFP** effectively shrinks the size of the Observer pool, increases monitoring rates afforded, without noticeable impacts to similarity scores.



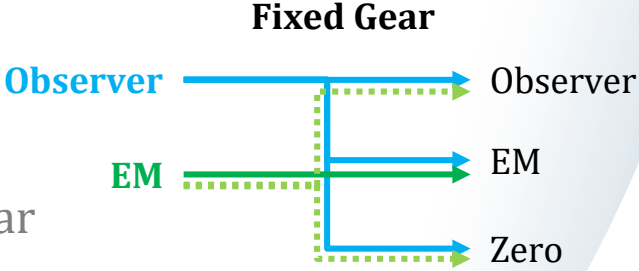
LOOKING FORWARD

Integrated Observer, EM, and Dockside Monitoring Program

- Use the **most effective and/or cost-efficient** tool available
- Balance **data needs** (e.g. stock assessments, catch accounting), understanding different tools collect different kinds of data

To do list:

- Improve cost estimates of monitoring tools (Scenario 3 for fixed-gear EM)
- Re-evaluate Zero-selection Pool
- Evaluate extent to which monitored fixed-gear EM trips may inform estimates for the Observer and Zero-selection pools



NMFS Recommendations - EM

C5 2021 Draft ADP - AP PPT
October 2020

Fixed Gear EM trip-selection pool:

- Requests to opt in (or out) EM selection pool for 2021 must be received by November 1, 2020.
- NMFS will inform operators as to adherence to approved VMP; vessels which do adhere to their VMP may not be eligible to participate in the following year.
- Expect the EM pool size to be maintained from 2020. If funding is insufficient to accommodate all the vessels that request to participate in the EM selection pool, NMFS will prioritize placement in the EM selection pool as follows:
 - vessels that are already equipped with EM systems;
 - vessels that are cost effective for EM and unlikely to introduce large data gaps; and
 - vessels 40-57.5 ft LOA where carrying an observer is problematic due to bunk space or life raft limitations.

Trawl EM Trip-Selection Pool

- NMFS will continue to support the Trawl EM EFP.
- NMFS will increase shore-based observer coverage to help fill in data gaps when possible.



NMFS Recommendations - Observer Coverage

Observer trip-selection pool

NMFS recommends 3 sampling strata for the deployment of observers in 2021:

- Hook-and-line vessels greater than or equal to 40 ft LOA,
- Pot vessels greater than or equal to 40 ft LOA, and
- Trawl vessels

Port Based Deployment

Consistent with revisions to the 2020 deployment plan due to COVID-19, during 2021, observers will be deployed from select ports throughout Alaska.

Waivers

Consistent with existing regulatory authority at 50 CFR 679.51(a)(1), NMFS may release trips from observer coverage on a case-by-case basis for vessels in the Partial Coverage Category. NMFS may modify the list of ports with available observers in the future in response to transportation availability and/or changes in health mandates.



NMFS Recommendations - Observer Coverage

C5 2021 Draft ADP - AP PPT
October 2020

NMFS recommends an observer deployment allocation strategy of 15% plus optimization based on discarded groundfish and halibut PSC, and Chinook PSC.

As a preliminary budget for the draft ADP, NMFS estimated total expenditures in 2021 of \$4.46M resulting in estimated coverage rates:

Hook-and-line – 15%

Pot – 15%

Trawl – 18.5%

Fixed Gear EM – 30%

Trawl EM EFP – 100%

These coverage rates are preliminary estimates and will differ from rates determined in the final ADP.

No-selection pool

As in previous deployment plans, NMFS recommends the no-selection pool continue to be composed of: 1) fixed-gear vessels less than 40 ft LOA and vessels fishing with jig gear, which includes handline, jig, troll, and dinglebar troll gear; 2) vessels voluntarily participating in EM innovation and research.

