A critical overview of the fisheries monitoring design in the Alaska federal groundfish and halibut fisheries

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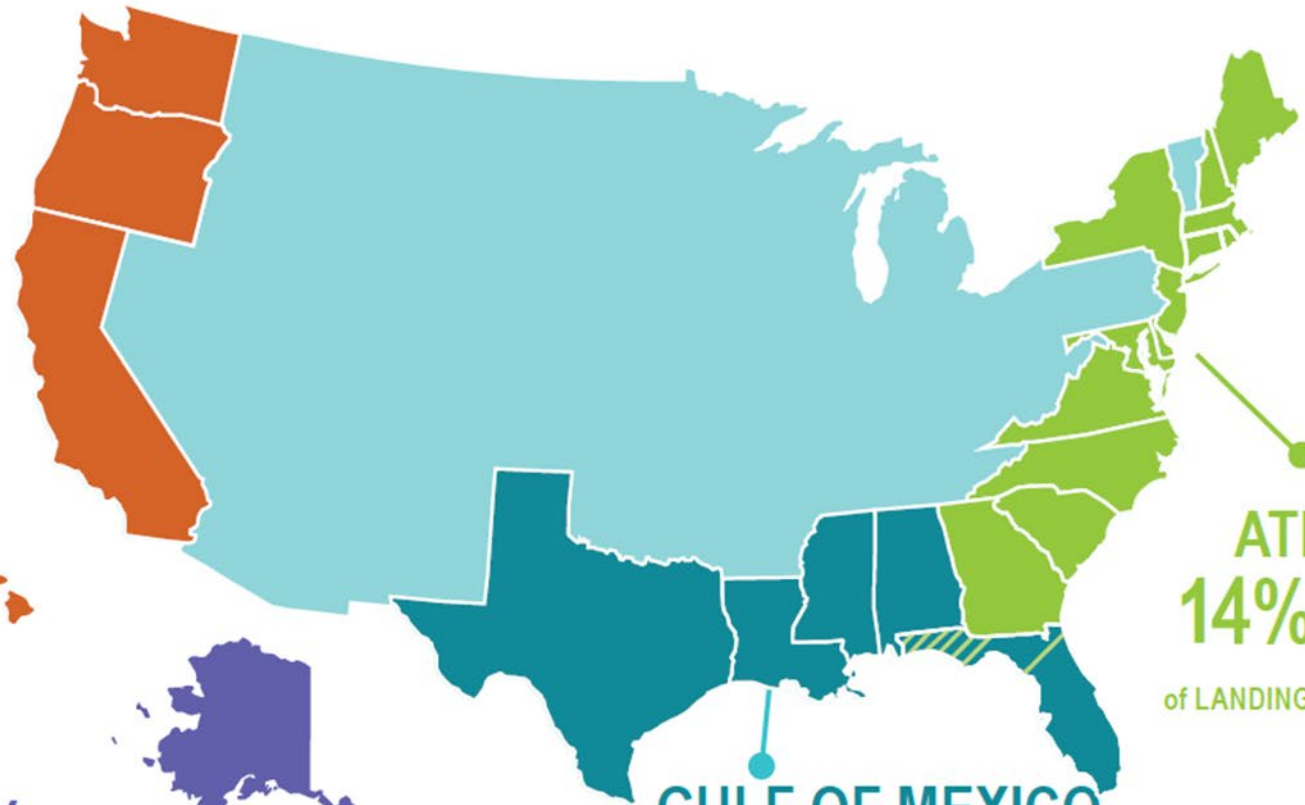
Regional Totals - Commercial



PACIFIC

12% LANDINGS

14% of VALUE

ALASKA

60% of LANDINGS

31% of VALUE

GULF OF MEXICO

14% of LANDINGS

15% of VALUE

ATLANTIC

14% of LANDINGS

40% of VALUE

North Pacific Fisheries Monitoring

Deployment Divided

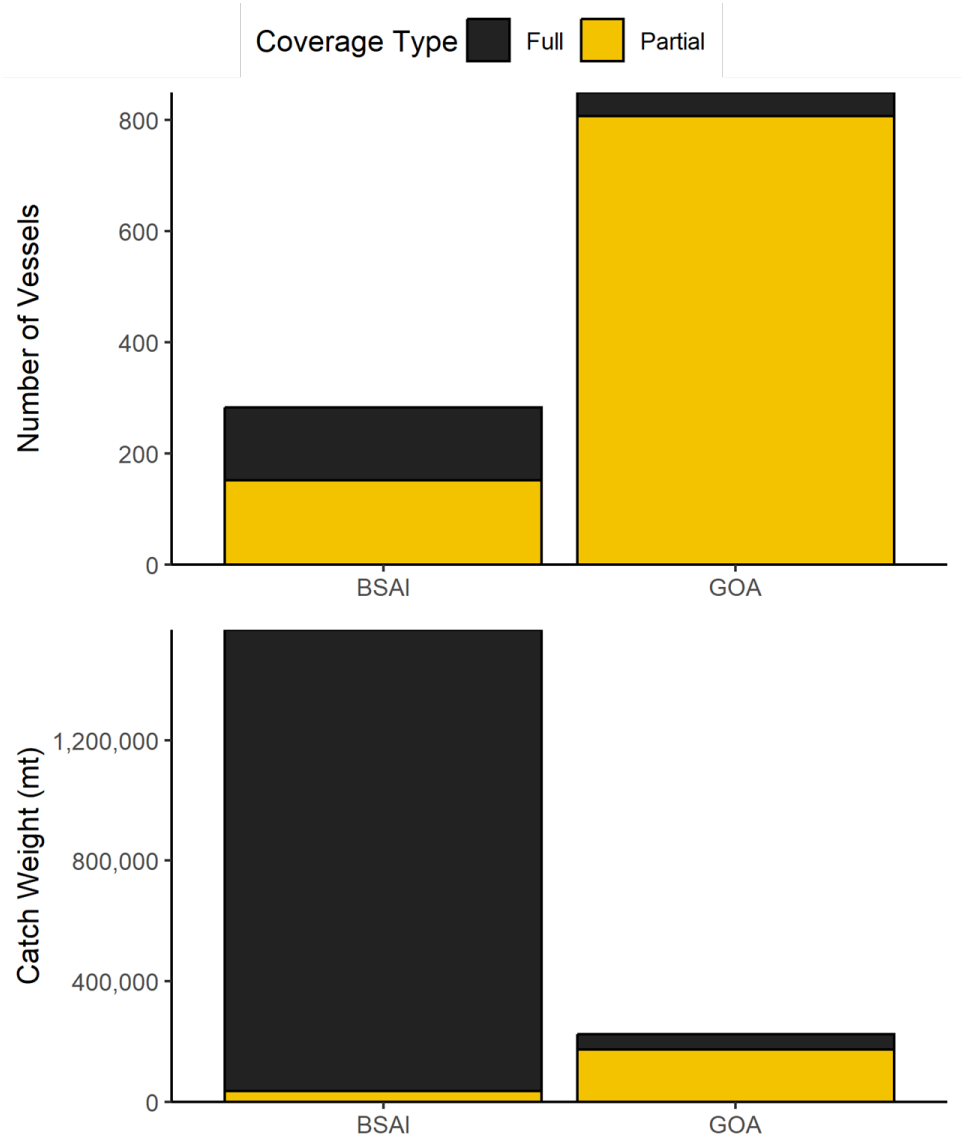
- Full Coverage
  - Catcher Processors, Motherships, Catcher vessels that have transferable PSC as part of their catch share program

Pay-as-you-go

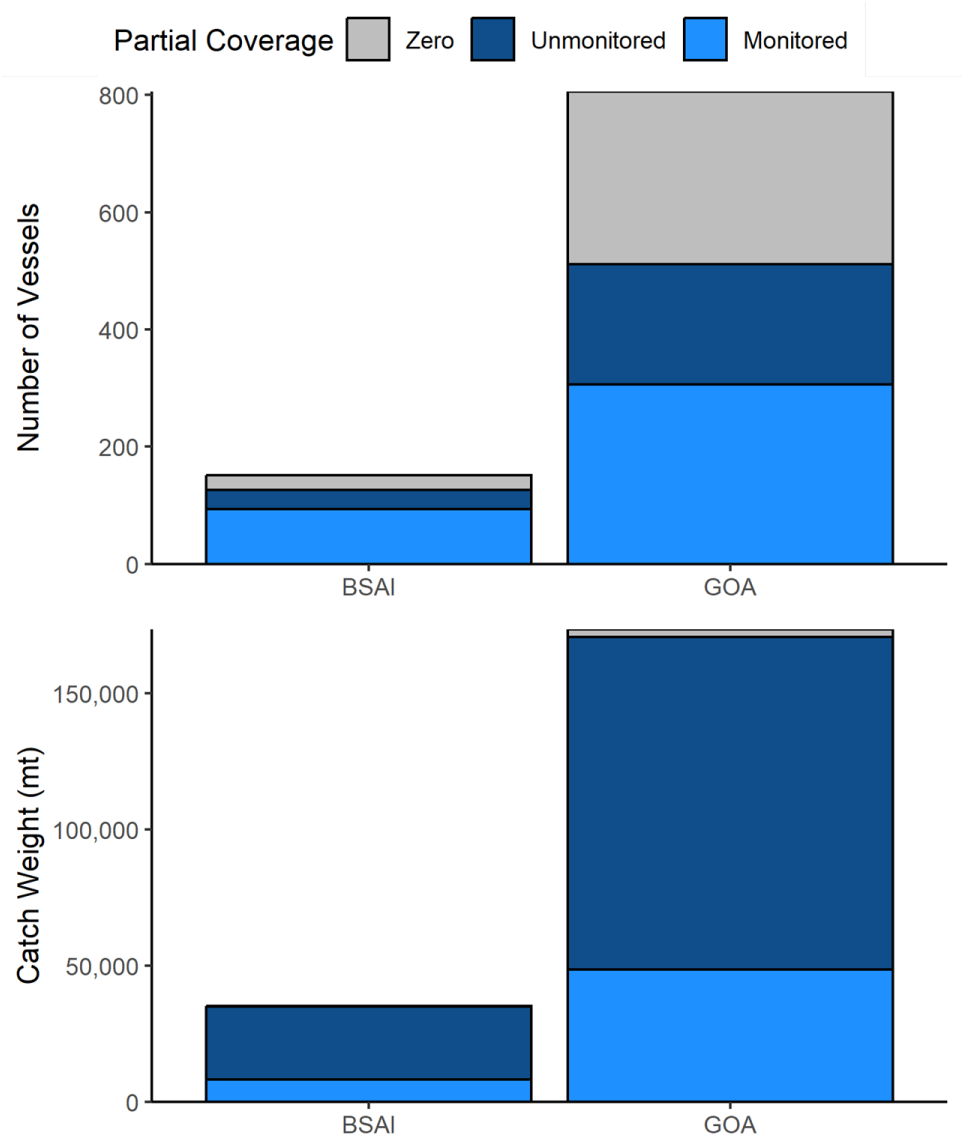
- Partial Coverage
  - Zero Coverage
    - Jig Gear and vessels < 40’ length overall

These pay a 1.65% ex-vessel fee

Catch and Effort 2022



Partial Coverage Catch and Effort 2022



Partial Coverage

Chance of being selected in ODDS

EM Option

Unstable

Purpose

Efficient and effective

Alternative Designs

Strategic use of people

Leverage technology

Analytic Plan

Goal:

Achieve data representative of the entire fishery for a broad range of users

Alternative Designs vs. Status Quo

Representativeness

Evaluations of utility

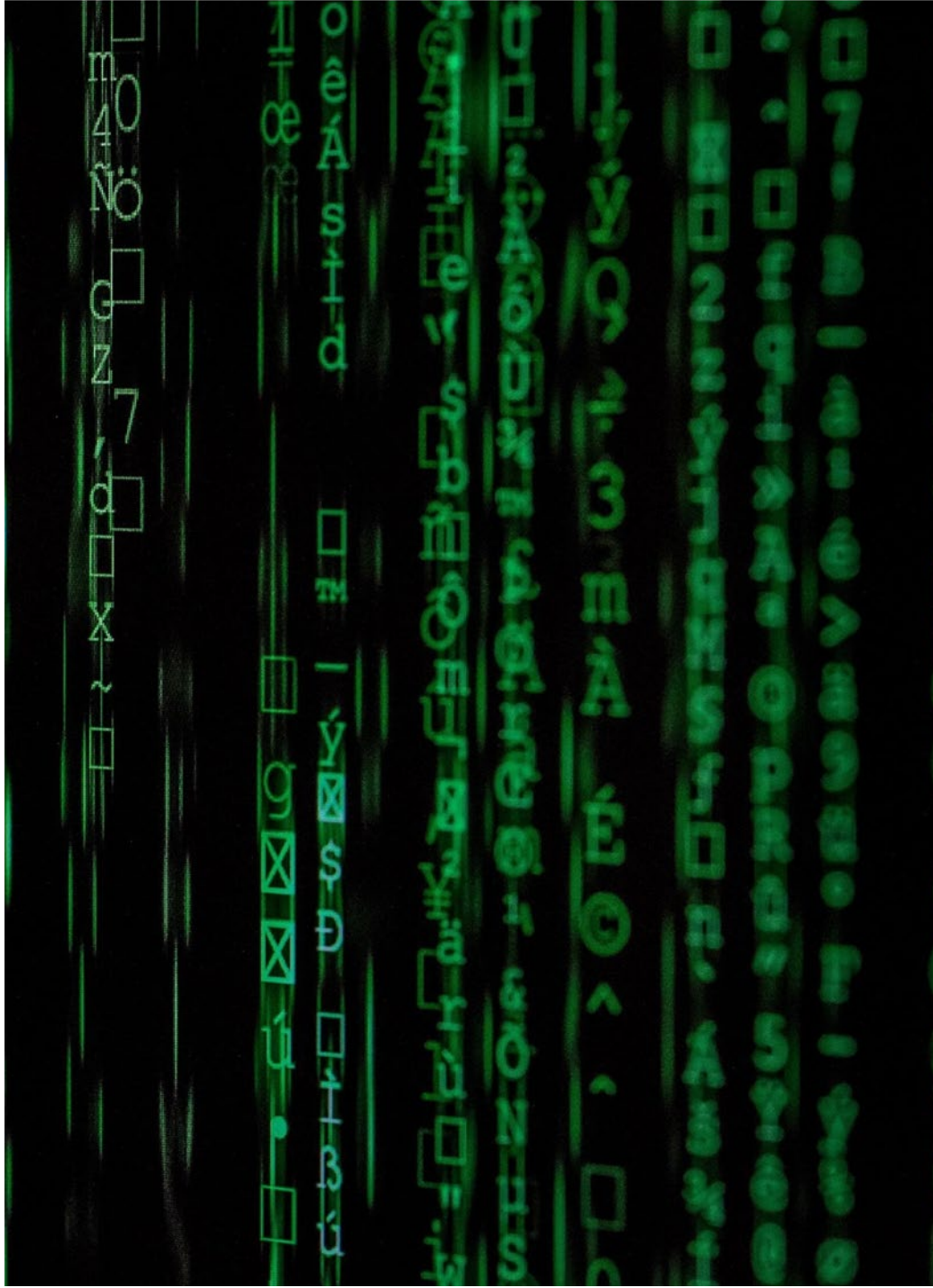
Design Elements

Stratifications

- Gear
- Bering Sea / Aleutian Islands / Gulf of Alaska
- Monitoring method

Allocations

- Equal Rates
- Blended optimization
- Proximity



Monitoring Method

Each monitoring method has its advantages and cost

Method	Benefit
Observers at-sea	Full suite of data (counts, lengths, weights, otoliths, other specimen data, marine mammals and seabird interactions)
EM at-sea	Counts of species from video review, can eliminate observer effects
EM compliance at sea w/ shore based observers	Ensure compliance of maximized retention with full suite of data collected at landing (lose haul specificity)

Alternative Designs

Strata

- Observers at-sea [x Gear x FMP]
- EM Counts at-sea [...]
- EM Counts at-sea +
  - (subset) Observers at-sea [...]
- EM Compliance at-sea +
  - Observers dockside [...]

✖

Allocations

- Equal Rates
- Blended optimization
- Proximity

Evaluations

Simulated Sampling

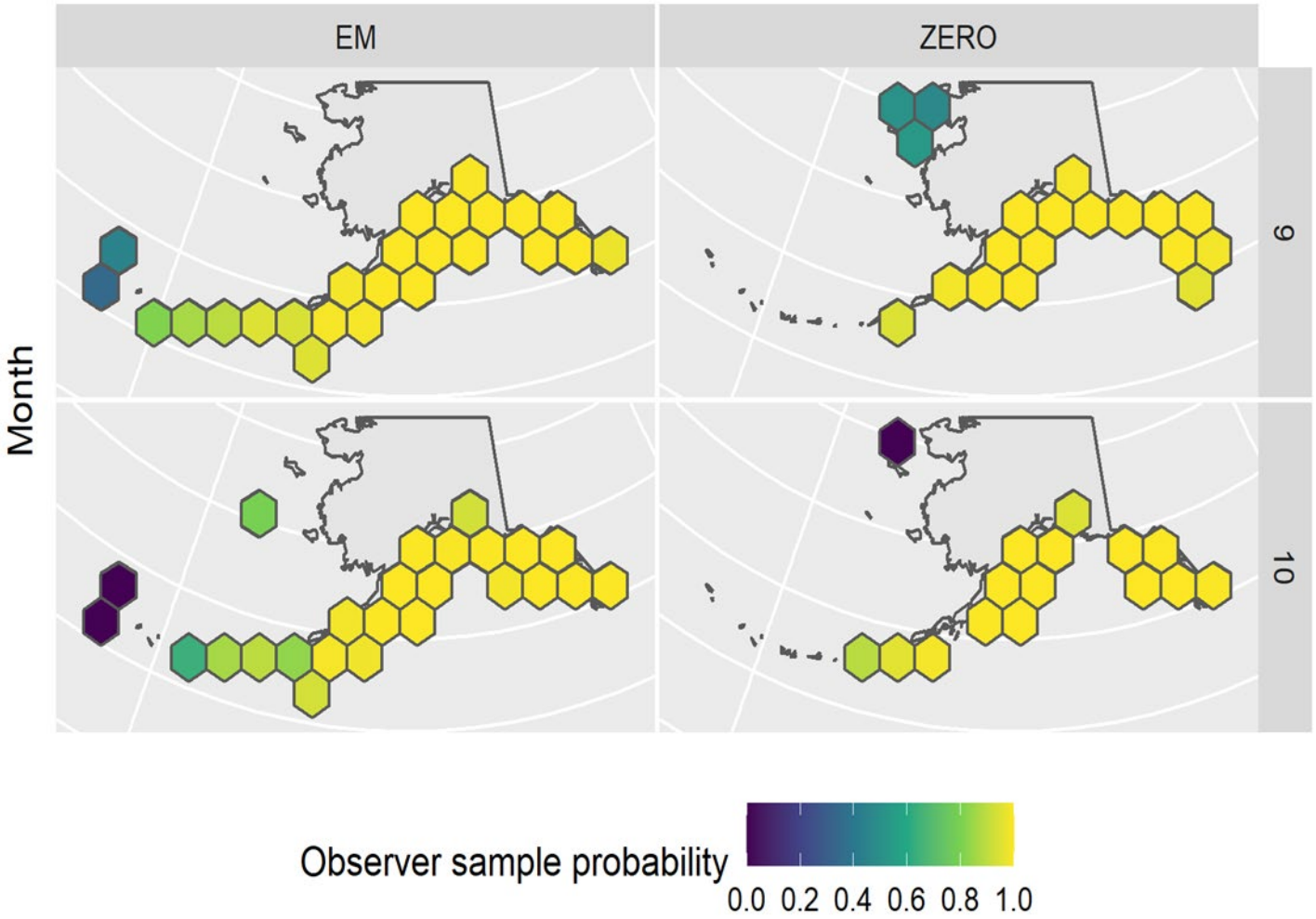
- Cost
- Variance in Expenses
- Observer Isolation
- Power to detect
  - Rare Events
  - Observer Effects
- Equitability
- Timeliness
- Variance in Catch
- *Interspersion*

Interspersion

How well observed trips are distributed in space and time relative to those without an observer

The expected proportion of trips neighboring an <u>observed</u> trip

EM at-sea and zero coverage rely on data from observers



Summary

We are changing our monitoring methods

to collect fisheries-dependent data more efficiently

under increasing financial constraint, fisheries management structures, shifting patterns of fishing activities and environmental uncertainty.

Thank you

You can track this project by emailing any of us or by following along through the North Pacific Fishery Management Council.

More details on our analysis plan will be made available next month and a draft of our results will be available in October of 2023.

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