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Fisheries Observation Science Program Coverage Rates, 2002–20

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(Somers et al. 2021)[1]

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NOAA FISHERIES

Fisheries Observation Science Program Coverage Rates, 2002–20

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Summary

The Fisheries Observation Science (FOS) Program at the Northwest Fisheries Science Center (NWFSC) places trained scientists, known as observers, on U.S. West Coast fishing vessels to collect data on catch composition and amount, obtain biological samples, collect information on fishing operations, and record interactions with protected species, among other duties. This report summarizes coverage rates in those fisheries observed by FOS.[1] Coverage rates are defined as the proportion of total targeted landings across all trips in the fleet, based on fish ticket data from the Pacific Fishery Information Network (PacFIN), that are associated with observed trips. The species considered to be targeted are defined based on the fishery and described in the header of each table. The total targeted landings by each fleet are reported even in years when FOS did not observe any trips.

FOS consists of two programs, both of which are included in this report: the At-Sea Hake Observer Program (A-SHOP) and the West Coast Groundfish Observer Program (WCGOP). A-SHOP observes the hake fleets that process catch at sea, while WCGOP observes a number of fleets that deliver catch shoreside for processing, including sectors that target and incidentally impact groundfish. WCGOP specifically focuses on at-sea discard estimates. In the WCGOP data especially, the level of observer coverage and sampling can vary greatly between fisheries, years, and spatial strata. This report quantifies the magnitude of expansions required to use observer data to estimate fleetwide levels of discard, and can highlight areas where estimates are less certain (methods are further described in Somers et al. 2021). Further, in some cases, fewer than three active vessels in a stratum result in confidential data, which is masked using asterisks.

Each year, this report is updated to include the most recent year of data, the most current data from FOS and PacFIN for previous years, and the most recent data processing procedures. All updates are described in an annual report on groundfish mortality, available in draft form in the Pacific Fishery Management Council September Briefing Book and then finalized in a NOAA Technical Memorandum (2019 data: Somers et al. 2021).

COVID-19 Impacts on Observer Coverage Rates

Observer requirements were paused for all vessels from 16–30 April 2020 to allow observers to complete a 14-day self-isolation period in order to minimize COVID-19 transmission potential. In all sectors other than those carrying Electronic Monitoring (EM) systems, coverage requirements resumed with additional safety protocols after the waiver period, including a mandatory two-week self-isolation period before an observer deployed to a different vessel. These mitigation protocols reduced the ability to more efficiently deploy observers; consequently, lower observer coverage rates were anticipated.

[1] https://go.usa.gov/xFeSJ

Effort was also lower in some fishery sectors for a variety of pandemic and nonpandemic reasons. NOAA Fisheries plans to release an assessment of COVID-19 impacts on the commercial seafood industries for all of 2020 in the coming months, which will update the snapshot of January to July that was published earlier this year (NMFS 2021). Here, we describe some of these trends to contextualize 2020 observer coverage rates.

While the catch share bottom trawl and midwater rockfish fleets were given releases from observer coverage during the two-week period in April, more than 90% and 97% of landings, respectively, for the year were observed. All trips in the 100% observed catch share fleet using pot gear and midwater gear targeting hake, processed both at-sea and shoreside, were covered in 2020. No effort occurred using hook-and-line gear in the catch share fishery in 2020.

To contextualize the effects of these protocol changes on observer coverage in the non-catch share fleet, we analyzed observer coverage rates at the coastwide level; these patterns may differ for individual states and ports. At the coastwide level, seven of the ten non-catch share sectors were observed at rates below the historical median (Table 1, Figure 1). In the hook-and-line portions of the sablefish primary, daily trip limit, and open access fleets, as well as in the nearshore fixed gear and pot portions of the open access fleet, both the observed and fleetwide landings were below the 2015–19 median. Summarized coastwide, the observer coverage rate in the pink shrimp fishery remained above the historical minimum but below the median. Only the directed Pacific halibut fishery was observed below the historical range, reflecting the challenge of deploying observers for short openings when a two-week isolation period is necessary before changing vessels. Additionally, FOS has only observed this sector since 2017, and landings in 2020 were greater than the median of the past five years.

The coverage rates of the remaining three non-catch share sectors were above the historical median; ridgeback prawn, open access California halibut, and pot gear in the sablefish primary sector all had fleetwide landings similar to or greater than the median of the last five years. Observed landings in both the ridgeback prawn and sablefish primary pot sectors were also greater. Observed landings in the open access California halibut sector were lower than the previous five years.

As in previous years, the uncertainty in resulting point estimates will be quantified in reports and summaries of these datasets, and should be considered in analyses and management decisions.

Table 1: Non-catch share coverage, defined as the percentage of total targeted landings observed in a fishery. *Minimum* and *Median* summarize all years of coverage through 2019. Sectors with 2020 coverage rates below the historical median are shaded. Sector name abbreviations: *DTL* = daily trip limit, *HKL* = hook-and-line, *OA* = open access, *PHLB* = Pacific halibut, *CHLB* = California halibut, *Prim* = primary.

Sector	Minimum	Median	2020
DTL–HKL	1.0%	5.5%	1.9%
OA–HKL	0.9%	3.9%	2.8%
PHLB	7.6%	13.2%	3.0%
Shrimp	3.9%	10.4%	4.5%
Prawn	3.1%	3.9%	5.5%
Nearshore	1.7%	6.6%	5.8%
OA–Pot	1.5%	7.3%	6.5%
OA CHLB	0.8%	11.5%	14.0%
Prim–HKL	6.8%	26.6%	14.3%
Prim–Pot	13.3%	32.6%	46.9%

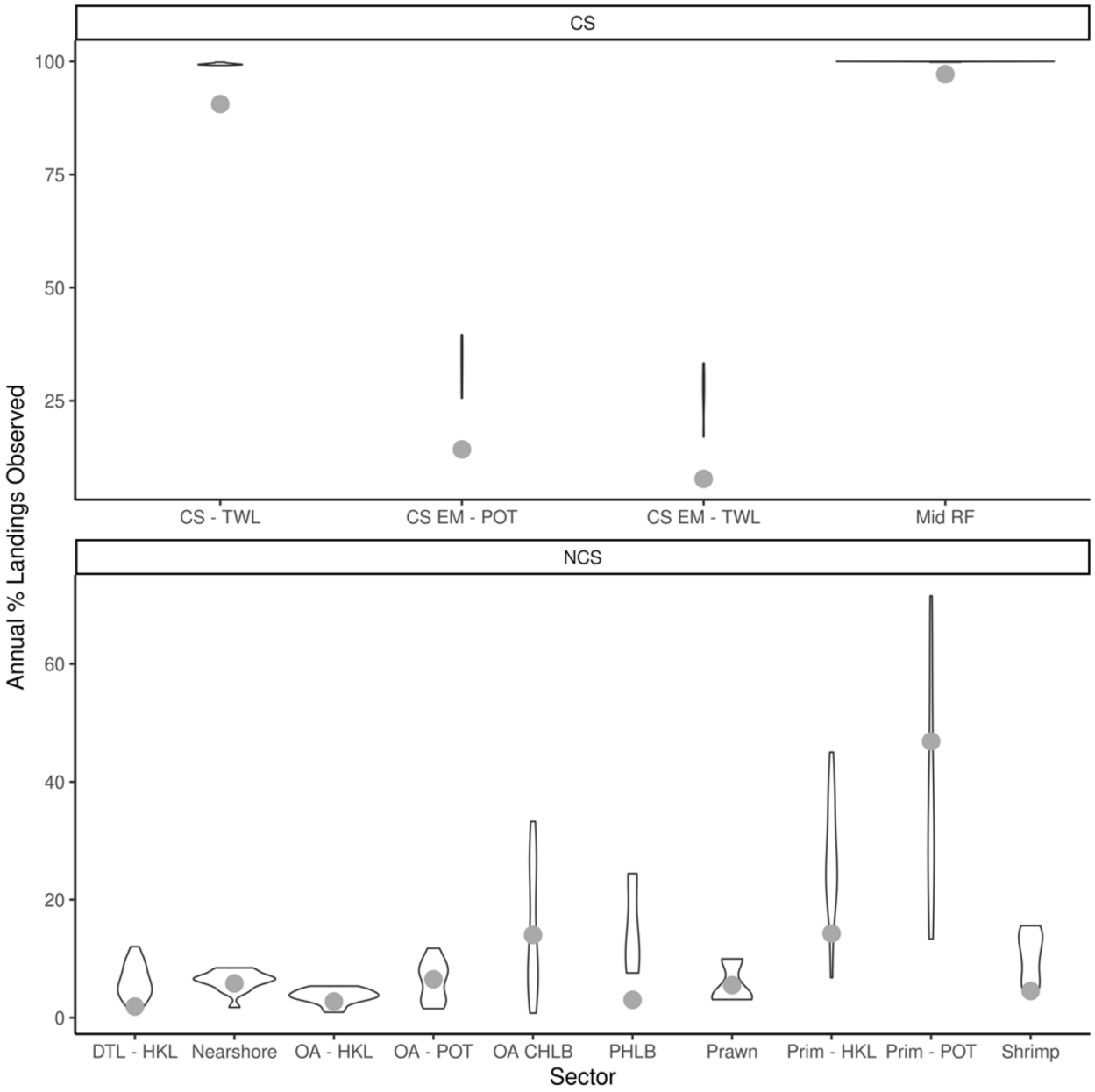

Figure 1. Violin plots of percentage of annual landings observed across all years of observer coverage; gray points represent number of observed trips in 2020. No effort occurred in the catch share hook-and-line fishery in 2020, and observed trips by pot gear in catch share and catch share EM were combined. Sector name abbreviations: *DTL* = daily trip limit, *HKL* = hook-and-line, *OA* = open access, *CHLB* = California halibut, *PHLB* = Pacific halibut, *Prim* = primary.

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