STOCK ASSESSMENT AND FISHERY EVALUATION REPORT FOR THE GROUNDFISH FISHERIES OF THE GULF OF ALASKA AND BERING SEA/ALEUTIAN ISLANDS AREA:

ECONOMIC STATUS OF THE GROUNDFISH FISHERIES OFF ALASKA, 2023

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Dear Reader,
This preliminary report of the "Economic Status of the Groundfish Fisheries Off Alaska" is compiled for the express purpose of the September, 2024 meeting of the Groundfish Plan Teams. A final version of this report will be subsequently prepared for the February, 2025 meeting of the North Pacific Fishery Management Council. The data contained within this report are the most recent data available. At the time this report was compiled, data continue to be finalized and validated. In some cases, numbers in the final draft of this report may change from those presented in this preliminary draft. As we finalize and validate the data in this report, the Economic and Social Sciences Research Program welcomes any feedback from readers regarding the data.

This report will be available at:
www.fisheries.noaa.gov/alaska/ecosystems/economic-status-reports-gulf-alaska-and-bering-sea-aleutian-islands

Time series and plots of data presented in this report are available at:
https://reports.psmfc.org/akfin/f?p=501:2001

Regarding a change in the title of this annual report series: effective calendar year 2022, the formal subtitle of this report references the year of the stock assessment cycle for which it is issued: ECONOMIC STATUS OF THE GROUNDFISH FISHERIES OFF ALASKA, 2023. This reverses a discrepancy between the year-designation of annual editions of other document series associated with the annual Stock Assessment of Fishery Evaluation Report, including the Ecosystem Status Report, and that used previously for the Economic Status report. The title change is made solely to clarify document referencing; no changes in the scope or content of this or future editions of the report are implied.

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Chapter 1

Economic Status of Groundfish Fisheries of the BSAI: Summary and Report Card

The Economic SAFE report contains detailed information about economic aspects of the groundfish fisheries, including figures and tables, economic performance indices, 2024 product price and ex-vessel price projections, year-to-date information on volume and value, and an Amendment 80 fishery economic data report (EDR) summary. Data tables are organized into four sections: (1) All Alaska, (2) BSAI, (3) GOA, and (4) Pacific halibut. The figures and tables in the report provide estimates of total groundfish catch, groundfish discards and discard rates, prohibited species catch (PSC) and PSC rates, the ex-vessel value of the groundfish catch, the ex-vessel value of the catch in other Alaska fisheries, the gross product value of the resulting groundfish seafood products, the number and sizes of vessels that participated in the groundfish fisheries off Alaska, vessel activity, and employment on at-sea processors. Generally, the data presented in this report cover 2019-2023, but limited catch and ex-vessel value data are reported for earlier years to illustrate the rapid development of the domestic groundfish fishery since the 1980s and to provide a more complete historical perspective on catch. The data behind the tables from this and past Economic SAFE reports is available online at: https://reports.psmfc.org/akfin/f?p=501:2001.

The commercial FMP groundfish fisheries off Alaska had a total catch of 2.03 million metric tons (mt) in 2023 (including catch in federal and state waters) (Figure 3.1 and Table 4.1), a increase of 9% from 2022. Groundfish accounted for 83 % of Alaska's 2023 total catch (Table 4.6). Total catches of Alaska's FMP groundfish fisheries increased in 2023 for pollock, Atka mackerel, and rockfish species complexes and decreased for sablefish, Pacific cod, and flatfish species complexes (Table 4.1). The contributions of the major groundfish species or species groups to the total catch are depicted in Figure 3.1.

The aggregate ex-vessel value of the FMP groundfish fisheries off Alaska was $858.65 million, which was 55% of the ex-vessel value of all commercial fisheries off Alaska in 2023 (Table 4.3). [1] After adjustment for inflation, the real ex-vessel value of FMP groundfish decreased $136.73 million in 2023 and the aggregate real ex-vessel price decreased 21% to $0.2 per pound (Table 4.6). Nominal

[1]The data required to estimate net benefits to either the participants in fisheries or the Nation, such as cost or quota value (where applicable) data, are not available. Unless otherwise noted 'value' should be interpreted as gross revenue.

pollock ex-vessel prices decreased 16% to $0.15 per pound in the Bering Sea and Aleutian Islands (BSAI) and 25% to $0.13 per pound in the Gulf of Alaska (GOA) (Tables 4.13 and 4.31). Pacific cod nominal ex-vessel prices decreased 4% to $0.44 per pound in the BSAI and 10% to $0.42 per pound in the GOA. Among the other species that are the focus of the shoreside ex-vessel fisheries: GOA flatfish ex-vessel price decreased 19%, GOA rockfish prices decreased 3%, and GOA sablefish prices decreased 29% (in nominal terms). For BSAI and GOA FMP groundfish, the change in price was larger than the change in catch (Figures 5.6, 5.10). For other fisheries in Alaska, halibut and salmon ex-vessel revenues decreased and herring and shellfish ex-vessel revenues increased (Table 4.6).

The gross value of the 2023 groundfish catch after primary processing (first-wholesale) was $2.56 billion (Table 4.7), a decrease of 5% in real terms from 2023. This change was the combined effect of a 13% decrease in the real aggregate 2023 first-wholesale price to $1.42 per pound which was offset by aggregate production volumes increasing 8% to 820.1 thousand mt (Table 4.7). In the BSAI, aggregate first-wholesale value increased 6% and value was increasing for nearly all species including, pollock, sablefish, rockfish, and flatfish (Table 4.17). The average first-wholesale price for all products, however, was decreasing for most species except for arrowtooth, Atka mackerel, and some rockfish and flatfish species (Table4.18). In the GOA, aggregate first-wholesale value decreased (22%) with decreases in value for all species except some flatfish species (Table 4.35). Prices were decreasing for most species with the exception of arrowtooth, Atka mackerel, and some flatfish species (Tables 4.34 and 4.36)

The first-wholesale value of Alaska's FMP groundfish fisheries accounted for 57% of Alaska's total first-wholesale value from commercial fisheries (Table 4.7). First-wholesale value of Alaska's fisheries products other than FMP groundfish fisheries totaled $1.93 billion, most of which ($1.62 billion) came from Pacific salmon. Pacific salmon value decreased 25% as a result of a decline in price which offset a increase in volume. Pacific halibut fisheries, which are concentrated in the Gulf of Alaska, saw a decrease of 36.2% in value in 2023 to $109.4 million due to a decrease in price and volume.

The groundfish fisheries off Alaska are an important segment of the U.S. fishing industry. In 2022, it accounted for 48% of the weight of total U.S. domestic landings and 17% of the ex-vessel value of total U.S. domestic landings (Fisheries of the United States, 2022). Alaska fisheries as a whole (including salmon, halibut, herring, and shellfish) accounted for 57% of the weight of total U.S. domestic landings and 36% of the ex-vessel value of total U.S. domestic landings.

With the exception of the annual economic census Economic Data Report program in BSAI Crab and Amendment 80 catch share programs, NOAA Fisheries collects only limited data on employment in the fisheries off Alaska. The most direct measure available based on data collected across all at-sea processing vessels and catcher vessels in FMP groundfish fisheries is aggregate labor input as represented by the aggregate number of 'crew weeks' accrued. These data indicate that in 2023 crew weeks for both sectors increased in 2023 by 6 %, totaling 111,962, with the majority of them (98,100) occurring in the BSAI groundfish fisheries (Tables 4.25, 4.43, 4.26, and 4.44). In the BSAI, the months with the highest employment correspond with the peak of the pollock seasons in February-March and July-September. In the Gulf of Alaska, crew weeks peak March-May and September-October driven largely by hook-and-line catcher vessels targeting sablefish and Pacific cod fisheries.

1.1 Report Card Metrics for the Alaska Commercial Groundfish Fisheries off Alaska 1993-2023

The purpose of the report card metrics is to give a broad overview of the economic health of Alaska's FMP groundfish fisheries (Figure 1.1). The metrics cover the years 1993-2023 to help elucidate trends and provide historical context to the current state of the fishing industry. In general, these metrics focus on FMP groundfish fisheries, which are also the focus of this economic status report. As a result, halibut and salmon are not well represented by these metrics (except that the share of shoreside value for the top 5 ports does include salmon and halibut). The economic report card includes 9 items[2]:

1) Real first-wholesale revenue[3] index which measures changes in the first-wholesale revenue produced by all FMP groundfish species in Alaska using 2020 as the base year (value=100).

2) Real first-wholesale price index, which measures changes in first wholesale prices produced from all FMP groundfish species in Alaska using 2020 as the base year (value=100).

3) Production volume divided by total catch, where total catch is inclusive of discards and PSC. This metric approximates a recovery rate of product relative to total extractions across all FMP groundfish species.

4) The effective global share of Alaska pollock and cod catch, defined as the average shares of global catch volume weighted by Alaska first-wholesale revenue shares. This metric demonstrates how large the Alaska pollock and cod fisheries are relative to the global supply of these species which provides information as to the potential influence of changes in Alaska catches on global prices for these species.

5) Real effective exchange rate index, which is an average of foreign currencies to U.S. dollar exchange rate weighted by fisheries exports to each country.[4] The Alaska seafood industry exports approximately 80% of it's groundfish products. This metric provides information about how exchange rates are impacting Alaska groundfish producers across all of their export partners.

6) Ratio of ex-vessel over first-wholesale revenues. This revenue share is a function of a number of different factors including the value added from processing, bargaining power, global prices, and processing and harvesting costs.

7) Real first wholesale revenue per fishing week, where fishing weeks are defined as the number of vessels active in each week of the year, and is a productivity-related metric that can be thought of as revenue per unit effort.

8) Alaska resident share of FMP groundfish shoreside ex-vessel value, where residency is determined by the owner address of delivering vessels. This metric measures the share of gross FMP groundfish revenues staying in Alaska versus those going to vessel owners in other states.

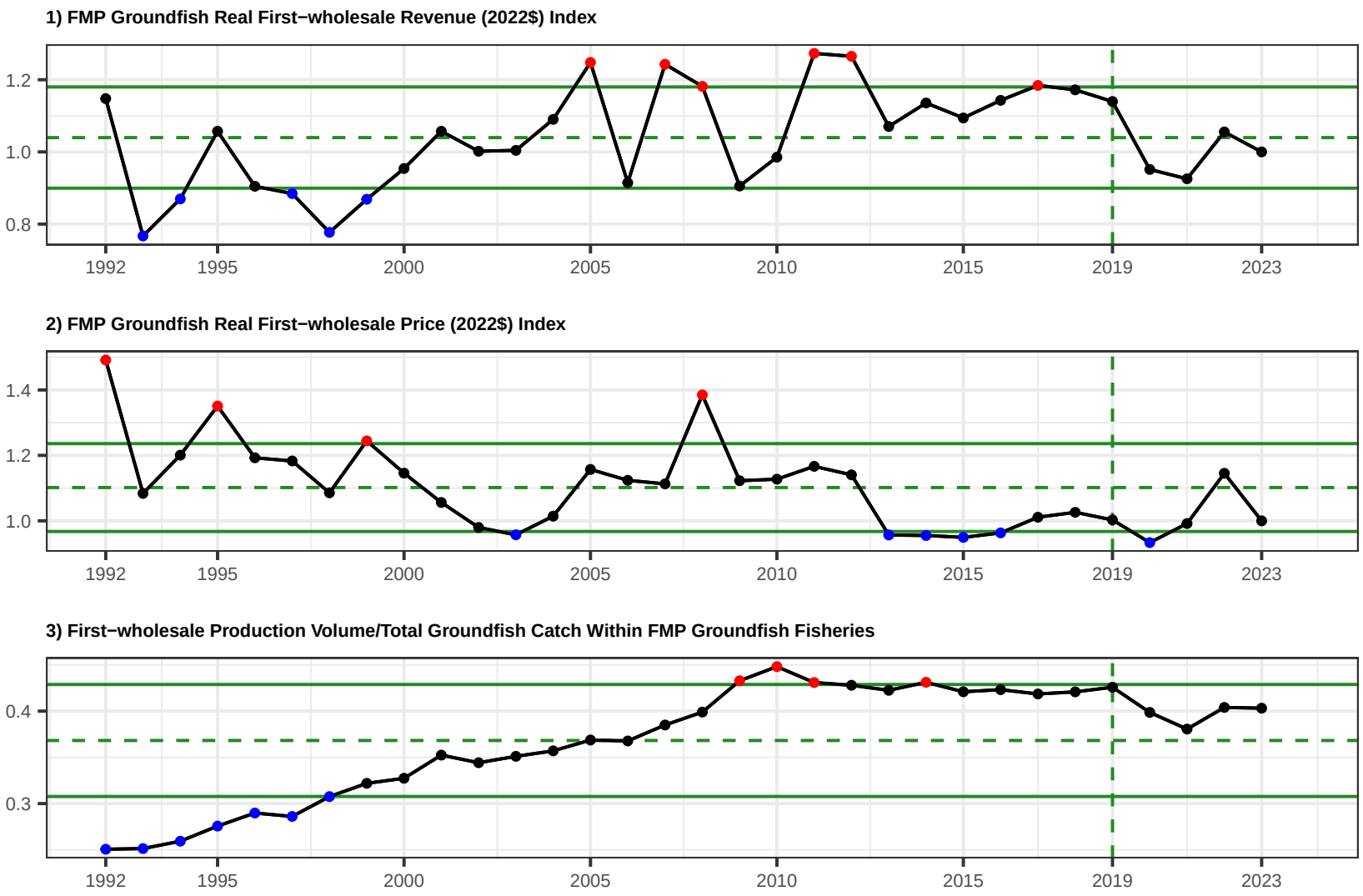
[2]Metrics 1, 2, and 7 are adjusted for inflation using the GDP chain-type price index. For Metric 6 ex-vessel revenues are deflated using the Personal Consumption Expenditures chain-type price index. See the the Overview Section 2.2.6 for references.

[3]The revenue from the sale of fish products after primary processing.

[4]Increases in this index indicate that exports are more expensive for foreign buyers which puts downward pressure on prices received by Alaska producers.

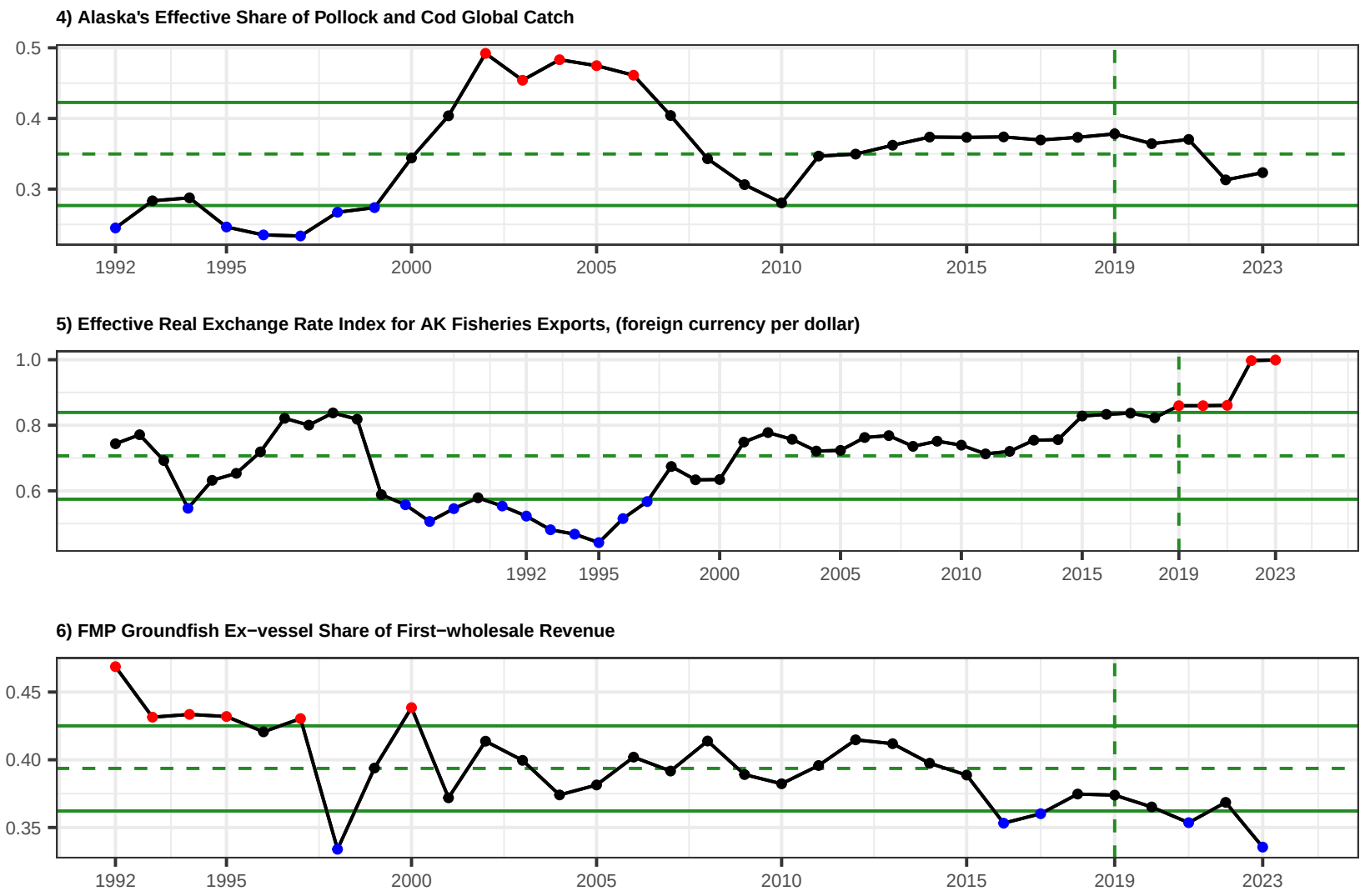
9) Share of shoreside all Alaska fisheries ex-vessel value for the top 5 ports, which is not limited to just FMP groundfish to provide a more comprehensive account of community revenues. This metric measures the degree of concentration of landings across Alaska communities.

The real first wholesale value index (panel 1) and real first wholesale price index (panel 2) both decreased from their respective long-term averages in 2023. Declines in real first wholesale prices substantially drove the decrease in the first wholesale revenue index. The declines in first wholesale price index was potentially driven down by reductions in the export price of many groundfish species. This is primarily due to increases in global supply and volatility in the U.S. exchange rate. Production per-unit-catch remained relatively unchanged from 2022, up from a downward trend observed in 2020 and 2021 but under the 2010 to 2019 average (panel 3). Globally, Alaska has a significant effective share of pollock and cod at approximately 32%, a slight increase from 2022 (panel 4). The effective real exchange rate index increased slightly during 2023, reaching a new historical high and remaining above the upper standard-deviation bound for a fifth consecutive year, signaling ongoing exchange rate pressure on Alaska fish product export prices (panel 5). The ratio of ex-vessel to wholesale revenues dropped significantly in 2023 reaching the lowest ex-vessel share since 1998. This is primarily a result of the 21% decline in aggregate real ex-vessel price in 2023, with the largest decline coming from pollock (panel 6). Revenue per-unit-effort (measured by fishing weeks) declined slightly in 2023 from a historic high in 2022, but remains above one standard deviation of the historical range (panel 7). The share of shoreside revenue to AK residents decreased in 2023 below the one-standard deviation bound (panel 8). Roughly 68% of the shoreside revenues were concentrated in the top 5 key ports in 2023, maintaining a general trend of relatively greater geographic concentration of revenues compared to the long-term history of this indicator (panel 9).



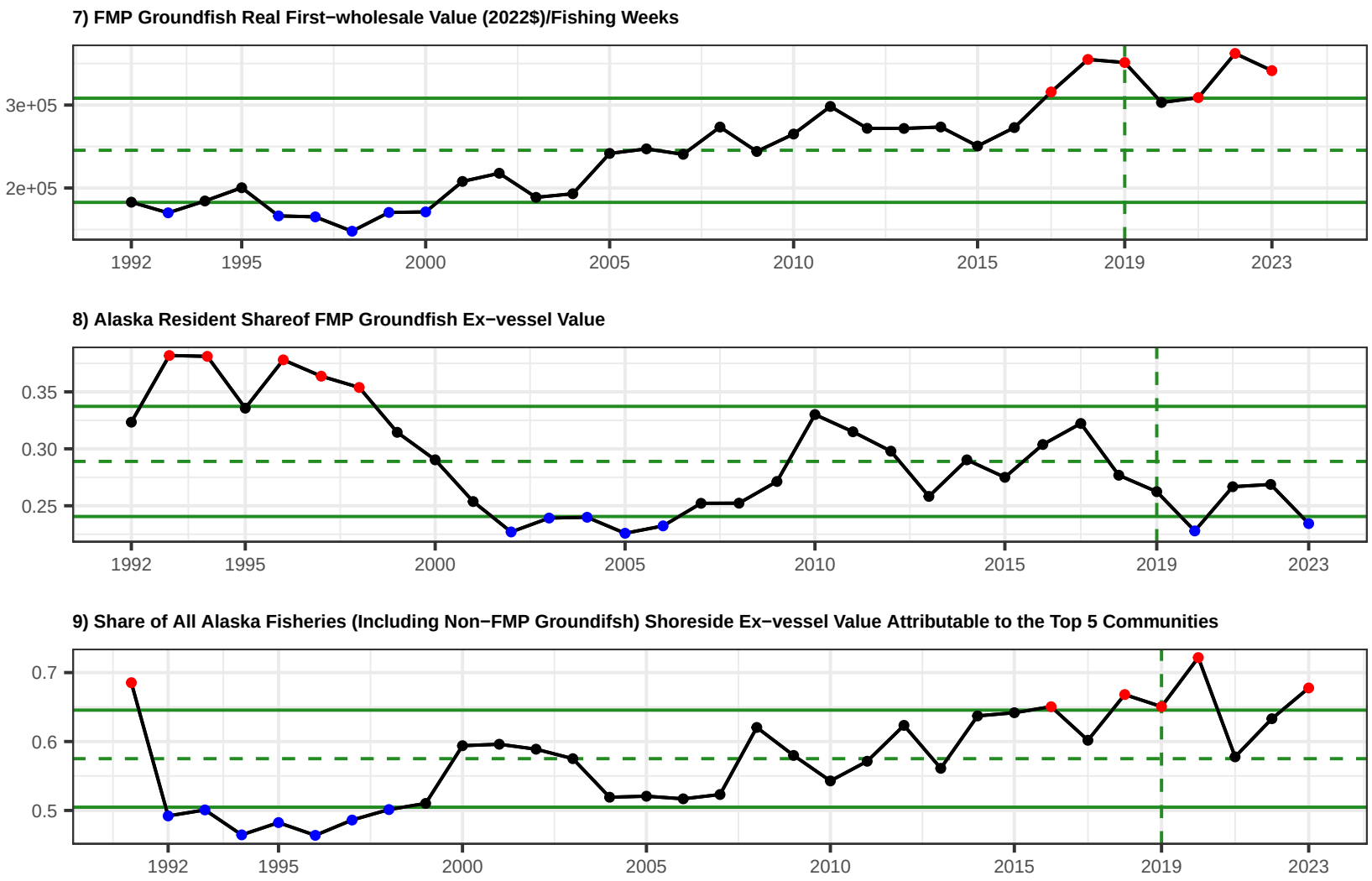
Note: See Figure 1.3 for footnotes.

Figure 1.1: Economic report card metrics



Note: See Figure 1.3 for footnotes.

Figure 1.2: Economic report card metrics continued.



Note: Green horizontal lines show the mean (dashed) and 1 standard deviation (solid) for the 1992−present reference period. Green vertical line indicates the past five years. Color of plotted values indicates values within (black), above (red), and below (blue) one standard deviation of the mean.

Figure 1.3: Economic report card metrics continued.

Chapter 2

Overview of Economic Status Report, 2024

2.1 Introduction

This report presents the economic status of groundfish fisheries off Alaska in terms of economic activity and outputs using estimates of catch, discards, prohibited-species catch (PSC), ex-vessel prices and value (i.e., revenue), effort (as measured by the size and level of activity of the groundfish fleet), and the first wholesale production volume and gross value of (i.e., F.O.B. Alaska revenue from) processed products.[1] The catch, ex-vessel value, fleet size, and activity data reported here reflect the fishing industry activities that are accounted for in the groundfish landings and production reports, North Pacific groundfish and halibut observer data, and the State of Alaska Commercial Operator's Annual Reports. Catch data in this report are sourced from the NMFS Alaska Regional Office (AKRO) catch-accounting system (CAS), which is used for in-season monitoring of groundfish and PSC quotas. The data descriptions, qualifications, and limitations noted in this overview of the fisheries and the footnotes to the tables are critical to understanding the information in this report. This report updates last year's report (Fissel et al. 2020) and is intended to serve as a reference document for those involved in making decisions with respect to conservation, management, and use of Gulf of Alaska (GOA) and Bering Sea and Aleutian Islands (BSAI) groundfish fishery resources.

In addition to catch that is counted against a federal Total Allowable Catch (TAC) quota (i.e., managed under a federal Fishery Management Plan (FMP)), estimates provided in some of the following tables may include catch from other Alaska groundfish fisheries (as indicated by the footnotes). The distinction between catch managed under a federal FMP and catch managed by the State of Alaska is not merely a geographical distinction between catch occurring in the U.S. Exclusive Economic Zone (EEZ) and catch occurring in Alaska state waters (3-mile limit). The State of Alaska maintains authority over some rockfish fisheries in the EEZ of the GOA, for example, and parallel fisheries in state waters are managed under federal FMPs. It is not always possible, depending on data source(s), to definitively identify a unit of catch, or associated units, such as revenue or price, as being part of a federal FMP or otherwise, as noted in the footnotes. Additionally, unless explicitly indicated, phrases such as ''groundfish fisheries off Alaska" or ''Alaska

[1] F.O.B. refers to the value (or price) excluding transportation costs. The acronym, F.O.B. stands for ''Free On Board".

groundfish", as used in this report, should not be construed to include any category of state or federally managed fishery or to refer to any specific geographic area. These and similar phrases may describe groundfish from both Alaska state waters and the federal EEZ off Alaska, groundfish managed only under federal FMPs, or managed under the authority of both NMFS and the state of Alaska.

The BSAI and GOA groundfish fisheries are widely considered to be among the best managed fisheries in the world. These fisheries produce high levels of catch, ex-vessel revenue, processed product revenue, exports, employment, and other measures of economic activity while maintaining ecological sustainability of the fish stocks. However, the data required to estimate the success of these management policies with respect to net benefits to either the participants in these fisheries or the Nation, such as cost or quota value data (where applicable), are not available for many of the fisheries.

The remainder of this report is structured as follows: Section 2.2 gives a verbal description and important information for understanding the economic data tables in Section 4. Section 5 examines the economic performance of the North Pacific groundfish fisheries through market indices.

2.2 Description of the Economic Data Table

2.2.1 Groundfish and Prohibited Species Catch Data Description

Data Sources

Total catch estimates in the groundfish fisheries off Alaska are generated by NMFS from data collected through an extensive fishery observer program and from information provided through required industry reports of harvest and at-sea discards. The North Pacific Observer Program (Observer Program), based at the NMFS Alaska Fisheries Science Center (AFSC), has had a vital role in the management of North Pacific groundfish fisheries since the late 1980s. Observer data are collected by NMFS-trained observers and provide scientific information for managing the groundfish fisheries and minimizing bycatch. Industry-reported data consists of catch and processed product amounts that are electronically recorded and submitted to NMFS through the Interagency Electronic Reporting System, known as eLandings. Observer information and industry reports are integrated into a NMFS application called the Alaska Catch Accounting System (CAS), which is used directly in managing fisheries.

The primary purpose of the CAS is to provide estimates of total catch for FMP species (including prohibited species) in the groundfish and halibut fisheries and allow the in-season monitoring of catch against the TACs and PSC limits. The harvests of groundfish in Federal waters are governed under fishery management plans (FMPs) that are specific to the Bering Sea and Aleutian Islands (BSAI) and Gulf of Alaska (GOA) regions. The groundfish TACs are established and monitored in terms of total catch, which is the sum of retained and discarded catch. In addition, the FMPs describe policy for setting bycatch limits for some species, such as halibut and salmon, whose retention is prohibited in the groundfish fisheries; bycatch of these species is referred to as Prohibited Species Catch (PSC).

In the CAS, at-sea sample and census data collected by observers are used to create discard and PSC rates (a ratio of the estimated discarded catch to the estimated total catch in sampled hauls). For trips that are unobserved, the discard and PSC rates are applied to industry-supplied landings of

retained catch. Expanding on the observer data that are available, the extrapolation from observed vessels to unobserved vessels is based on varying levels of aggregated data. Data are matched based on processing sector (e.g., catcher/processor or catcher vessel), week, target fishery, gear, and federal reporting area. Further detail on the estimation procedure is available in Cahalan et al. (2014). With the exception of Pacific halibut PSC, all estimated at-sea discard is assumed to have 100% mortality. Halibut mortality rates are updated every three years based on the estimated condition of halibut sampled by observers (Williams 2012). These rates are applied to the total estimated halibut discards (for a gear type, FMP area (GOA or BSAI), fishery, and year).

Groundfish Catch Tables

The catch presented throughout these tables is total catch which includes retained and discarded catch. Catch data are sourced from the CAS. Catch for all Alaska including state and federal catches is displayed in Table 4.1. Retained catch for just FMP-managed groundfish is provided in Table 4.6 presents catch and real ex-vessel value by species and area (BSAI, GOA, and All Alaska). Tables 4.10 and 4.27 provide additional information for the BSAI and GOA, respectively, with aggregation of gear types and species specific catch data for flatfish and rockfish. Tables 4.11, 4.12, 4.28, 4.29 and 4.30 provide estimates of total catch by species, gear, and target species for the BSAI and GOA, respectively. In general, the species or species complex accounting for the largest proportion of retained catch on the trip or haul is considered the target species, with two exceptions. A target of pelagic pollock is assigned only if 95% or more of the total catch is pollock. In the BSAI, if flatfish species (flathead, rock, and yellowfin sole, and other flatfish) represent the largest amount of retained catch, then a target of yellowfin sole is assigned if this species represents at least 70% of the combined flatfish retained catch; otherwise, the flatfish species accounting for the greatest amount of retained flatfish catch is assigned as the target. Beginning in 2011, Kamchatka flounder was broken out from arrowtooth flounder in the BSAI. As such, the "other flatfish' ', and/or arrowtooth flounder target categories may not be directly comparable between 2011 and prior years in the historical catch data available online.

Groundfish Discards and Discard Rates

Discarded catch is the unretained catch of species that a vessel is, in general, legally able to target and retain (and thus does not include PSC). Discards are included in a vessel's total catch. Discards can occur for various reasons and in a variety of ways such as discarding of non-targets species, fish falling off of processing conveyor belts, dumping of large portions of nets before bringing them on-board the vessel, dumping fish from the decks, size sorting by crewmen, and quality-control. Discard rates can be high for non-target species. For the most common species (e.g. pollock and cod) retention requirements reduce the amount of discards for these species. The discard rate is the percent of total catch of a species that is discarded. Details on discard estimation can be found in Cahalan et al. (2014). The discards in the groundfish fisheries have received significant management attention by NMFS, the Council, Congress, and the public at large. Table 4.4 presents CAS estimates of discarded groundfish catch and discard rates (calculated as the percent of total catch that is discarded) by gear, area, and species for years 2019-2023.

Prohibited-Species Catch

Prohibited-species catch (PSC) is the catch of species that a vessel is prohibited from targeting and retaining due to their economic value to users outside the FMP groundfish fisheries. These species include Pacific halibut, king and tanner crab (*Chionoecetes*, *Lithodes*, and *Paralithodes spp.*), Pacific salmon (*Oncorhynchus spp.*), and Pacific herring (*Clupea pallasi*). Monitoring and minimizing the amount PSC in the Alaska groundfish fisheries has historically been an issue that

has received significant management attention. The retention of these species was prohibited first in the foreign groundfish fisheries to ensure that groundfish fishermen had no incentive to target these species. Estimates of PSC for 2019-2023 are summarized by area and gear in Table 4.5.

The at-sea observer program was developed for foreign fleets and then extended to the domestic fishery. The observer program, managed by the Fisheries Monitoring and Analysis Division (FMA) of the Alaska Fisheries Science Center, resulted in fundamental changes in the nature of the PSC problem. First, by providing estimates of total groundfish catch and non-groundfish PSC by species, it reduced the concern that total fishing mortality was being vastly underestimated due to fish that were discarded at sea. Second, it made it possible to establish, monitor, and enforce the groundfish quotas in terms of total catch as opposed to only retained catch. Third, it made it possible to implement and enforce PSC quotas for the non-groundfish species that by regulation had to be discarded at sea. Finally, it provided extensive information that managers and the industry could use to assess methods to reduce PSC and PSC mortality. In summary, the observer program provided fishery managers with the information and tools necessary to prevent PSC from adversely affecting the stocks of the PSC species. An example of how this program is being used is the Bering Sea pollock fishery, which became completely observed in 2011. As a result, salmon PSC estimates in the Bering Sea pollock fishery are a census rather than a sample, and since 2011, there has been a fixed "hard cap'' in the fishery.[2] The information from the observer program helps identify the types of information and management measures that are required to reduce PSC to the extent practicable, as is required by the Magnuson-Stevens Fishery Conservation and Management Act (MSA).

2.2.2 Ex-Vessel Prices and Value

The ex-vessel market is the transaction of catch delivered by vessels to processors. In general, ex-vessel prices are derived from Commercial Operator Annual Report (COAR) buying reports. Some catcher-vessels minimally processes (e.g., head-and-gut) the catch prior to delivery to the processor. The value of this on-board processing is discounted from the ex-vessel price so that it represents the round-weight (unprocessed) prices of the retained catch. Ex-vessel value is calculated by multiplying ex-vessel prices by retained catch. For the at-sea sector much of catch is both caught and processed for first-wholesale distribution by a single entity and as such a true "ex-vessel" market does not exist. For national accounting purposes the "ex-vessel' value of the at-sea sector are calculated by applying COAR buying prices for the corresponding species (complex), region, and gear-type of the retained catch. For a subset of fisheries that are prosecuted primarily by the at-sea catcher/processor fleet, and for which COAR buying data are sparse, we impute prices as a percentage (40%) of the estimated wholesale value per round weight. This percentage reflects the long-term average of the ratio of ex-vessel prices to head-and-gut (H&G) processed-product prices for species (primarily Pacific cod) that are well represented in COAR buying and production reports. Ex-vessel prices and value include post-season adjustments.

Tables 4.6 contains data on the real ex-vessel value and catch of groundfish and non-groundfish species in Alaska, adjusted to 2023 dollars by applying the Personal Consumption Expenditure Index (https://research.stlouisfed.org/fred2/series/PCEPI) to account for effects of inflation on fishermen's revenue. Table 4.8 provides estimates of ex-vessel value by residency (Alaska compared

[2]These rules for salmon bycatch management were put in place through Amendment 91 to the BSAI FMP. For details see https://www.federalregister.gov/documents/2010/08/30/2010-20618/fisheries-of-the-exclusive-economic-zone-off-alaska-chinook-salmon-bycatch-management-in-the-bering

to the rest of the U.S., labeled 'Other') of primary vessel owners, area, and species. Residency of primary vessel owners are determined from the CAS combined with State of Alaska groundfish fish ticket data and vessel registration data, the latter of which includes the stated residency of the primary vessel owner. Residents of Alaska and of other states, particularly Washington and Oregon, are active participants in the BSAI and GOA groundfish fisheries. For the BSAI and GOA combined, 76% of the 2023 groundifsh ex-vessel value was accounted for by vessels with primary owners who indicated that they were not residents of Alaska.

Tables 4.13 and 4.31 contain estimated ex-vessel prices that are used with estimates of retained catch to calculate ex-vessel values (gross revenues) for the BSAI and GOA, respectively. Prices in these tables may include data from both federally-managed and state-managed fisheries. Estimates of ex-vessel value by area, gear, type of vessel, and species are presented in Tables 4.14 and 4.32 for the BSAI and GOA, respectively. Table 4.15 presents estimates of ex-vessel value of catch and value per vessel, vessel and permit counts, in the BSAI and the percent value of BSAI FMP groundfish and all BSAI fisheries by processor group. Table 4.15 provides these same data for the GOA.

2.2.3 First Wholesale Production, Prices, and Value

The first wholesale market is the first sale of fisheries products after initial processing by a commercial processor with a Federal Processor Permit (FPP). [3] Groundfish first wholesale production data are sourced from at-sea and shoreside groundfish production reports. Product pricing and value reflect COAR product report price data appended to these production data per the AKFIN product pricing index. While groundfish production reports are a federal reporting requirement, there is typically no distinction made in this reporting between product derived from federally-managed catch and product derived from state-managed catch. Likewise, while COAR production reports include the area of processing, these data are insufficient for identifying the fishery inputs for units of finished production. As such, these tables reflect production volume and pricing from federal and some state-managed fisheries. Wholesale value and prices are given as F.O.B. (Free On Board) Alaska, indicating that transportation costs are not included in values and prices.

Table 4.7 reports estimates of the weight and first wholesale value of processed products from catch in the groundfish and non-groundfish commercial fisheries of Alaska. Estimates of first wholesale production weight of the processed products sourced from catch of groundfish are presented by species, product form, sector, and type of processor in Table 4.16 for the BSAI and Table 4.34 for the GOA. First-wholesale value (gross revenue) is presented in Tables 4.17 and 4.35 for the BSAI and GOA, respectively. Product price-per-pound estimates are presented in Tables 4.18 and 4.36, and estimates of total first wholesale product value per round metric ton of retained catch are reported in Table 4.19 and for the BSAI and GOA, respectively. For these tables we source the round weight of retained catch from CAS data rather than using product recovery rates to derive round weights from production data.

Tables 4.20 and 4.38 present number of processors, gross product value and value per processor, and percent of total wholesale value of processed groundfish accounted for by different processing groups, for the BSAI and GOA, respectively. Data in these tables are summarized from COAR product reporting, and no distinction is made between state-managed and federally-managed groundfish sources of production.

[3] An FPP is required for all processors receiving and/or processing groundfish harvested in Federal waters.

2.2.4 Effort (Fleet Size, Weeks, of Fishing, Crew weeks)

Data on measures of fishing capacity and effort in federally-managed Alaska groundfish fisheries, including fleet size, duration of fishing, and levels of harvesting and processing employment are sourced from CAS data, ADF&G groundfish fish tickets, North Pacific groundfish observer data, and at-sea groundfish production reports.

Vessel participation by area, vessel type, and target are shown in Table 4.9. Number of vessels, average and median length, and average and median capacity (registered net tonnage) of vessels by vessel type and gear are shown in Tables 4.21 and 4.39.

Tables 4.23 and 4.41 provide estimates of vessel weeks for catcher vessels in the BSAI and GOA, respectively, stratified by length class, area, gear, and target fishery. Tables 4.24 and 4.42 provide the same stratification of vessel weeks for catcher/processors in the BSAI and GOA, respectively. Vessel weeks are apportioned by catch volume in cases where a vessel is identified with activity in multiple gears, areas, and/or targets in a given week.

Catcher vessel crew weeks are sourced from ADF&G fish tickets/eLandings, which include data on the number of licensed crew working aboard vessels by month and area shown in Tables 4.25 and 4.43, in the BSAI and GOA, respectively. At-sea production reports provide that information for motherships and catcher/processors shown in Tables 4.26 and 4.44 for the BSAI and GOA, respectively. A single crew week represents one crew member aboard one vessel for a week. Crew weeks are apportioned by catch volume in cases where a vessel is identified with activity in multiple areas in a given week. These data do not include employment levels in the shoreside and inshore processing sectors.

2.2.5 Description of the Category ''Other" in Data Tables

The category 'Other' has different meanings in different tables, as described below.

- Table 4.7: ''Other" includes lingcod, non-crab shellfish (mussel, clam, scallop, shrimp), and various freshwater and anadromous finfish species other than federally managed groundfish, salmon, halibut, and herring (e.g., whitefish, trout, Arctic char).
- Tables 4.11, 4.12, 4.28, 4.29 and 4.30: "Other flatfish'' in the BSAI include Alaska Plaice and species within the BSAI other flatfish management complex, including starry flounder and dover, rex, butter, English, petrale, and sand sole.
- Table 4.5: "Other salmon'' are non-Chinook salmon species (sockeye, coho, pink, chum). "Other King crab'' are blue, golden (brown), and scarlet king crab species. "Other Tanner crab'' are snow, grooved, and triangle Tanner crab species.
- Table 4.14, 4.16: "Other flatfish'' in the BSAI include Alaska Plaice and species within the BSAI other flatfish management complex (starry flounder and dover, rex, butter, english, petrale, and sand sole)
- Tables 4.16, 4.17, 4.18, 4.34, 4.35, 4.36: "Other fillets'' for pollock include fillets with skin and ribs; fillets with skin, no ribs; fillets with ribs, no skin; and skinless/boneless fillets. "Flat Other'' includes BSAI Alaska Plaice and species within the BSAI other flatfish management complex (starry flounder and dover, rex, butter, english, petrale, and sand sole).
- Tables 4.19, 4.37: "Other'' species are primarily skate, squid, octopus, shark, and sculpin.

2.2.6 Additional Notes

- Confidential values are excluded from the computation of aggregates (e.g. sums and averages) within a table. This is particularly important to remember for highly stratified tables, such as Tables 4.13, 4.14, 4.16, 4.18, 4.31, 4.32, 4.34, and 4.36. Care should be taken when comparing totals from tables containing values suppressed for confidentiality. In general, preference should be given to aggregate numbers from less stratified tables.

- Within the data tables, numbers that are smaller than the level of precision used within the table are printed as '0'. For example, if a table uses the one decimal place level of precision, then an actual value of '0.01' is presented in the table as '0'.

- The Personal Consumption Expenditures: chain-type price index (https://research.stlouisfed.org/fred2/series/PCEPI) was used to deflate the ex-vessel estimates reported in Table 4.6. The PCE is used to adjust fishermen's ex-vessel revenues to account for the change in general US consumption expenditures. The GDP: chain-type price index https://research.stlouisfed.org/fred2/series/GDPCTPI) was used to deflate the first wholesale value estimates reported in Table 4.7. The GDP price index is used to adjust to fishermen's wholesale production revenues to account for the change in general US production prices. The use of these indices began in 2014. Before 2014 this annual report used the Producer Price Index (PPI) for unprocessed and packaged fish for real adjustments (http://data.bls.gov/cgi-bin/srgate.) using the series ID 'WPU0223').

- Estimates of U.S. imports and per-capita consumption of various fisheries products, previously published in Tables 54-56 of this report, are available in Fisheries of the United States (FUS), published annually by the NMFS Office of Science \& Technology. The most recent FUS is available at: https://www.fisheries.noaa.gov/national/sustainable-fisheries/fisheries-united-states

- Foreign exchange rates, which we've previously published in Tables 59

- Observer coverage costs: In previous years, Table 51 provided estimates of the numbers of vessels and plants with observers, the numbers of observer-deployment days, and observer costs by year and type of operation. In 2013, the restructured observer program was implemented and more detailed treatment of observer cost estimates can be found in the Observer Annual Report at: http://alaskafisheries.noaa.gov/fisheries/observer-program-reports

2.2.7 Request for Feedback

The data and estimates in this report are intended both to provide information that can be used to describe the Alaska groundfish fisheries and to provide the industry and others an opportunity to comment on the validity of these estimates. We hope that industry representatives and others will identify any data or estimates in this report that can be improved and provide the information and methods necessary to improve them for both past and future years. There are two reasons why it is important that such improvements be made. First, with better estimates, the report will be more useful in monitoring the economic performance of the fisheries and in identifying changes in economic performance that may be attributable to regulatory actions. Second, the estimates in this report often will be used as the basis for estimating the effects of proposed

fishery management actions. Therefore, improved estimates in this report will allow more informed decisions by those involved in managing and conducting the Alaska groundfish fisheries. The industry and other stakeholders in these fisheries can further improve the usefulness of this report by suggesting other measures of economic performance that should be included in the report, or other ways of summarizing the data that are the basis for this report, and participating in voluntary survey efforts NMFS may undertake in the future to improve existing data shortages. Please contact Marysia Szymkowiak at [russel.a.dame@noaa.gov] with any comments or suggestions to improve the Economic SAFE.

2.2.8 Citations

Abbott, J.K., B. Garber-Yonts and J.E. Wilen. 2010. "Employment and Remuneration Effects of IFQs in the Bering Sea/Aleutian Islands Crab Fisheries.'' Marine Resource Economics 25(4): 333-354.

Abbott, J., A. Haynie, and M. Reimer. 2015. "Hidden Flexibility: Institutions, Incentives and the Margins of Selectivity in Fishing.'' Land Economics 91 (1): 169-195.

Cahalan, J., J. Gasper, and J. Mondragon. 2014. Catch sampling and estimation in the federal groundfish fisheries off Alaska, 2015 edition. U.S. Dep. Commer., NOAA Tech. Memo. NMFS-AFSC-286, 46 p. Available at: http://www.afsc.noaa.gov/Publications/AFSC-TM/NOAA-TM-AFSC-286.pdf

Fell, H. and A. Haynie. 2011. "Estimating Time-varying Bargaining Power: A Fishery Application.'' Economic Inquiry 49(3): 685-696.

Fell, H. and A. Haynie. 2012. "Spatial Competition with Changing Market Institutions.'' Journal of Applied Econometrics, DOI: 10.1002/jae.2272.

Felthoven, R.G. 2002. "Effects of the American Fisheries Act on capacity, utilization and technical efficiency.'' Marine Resouces Economics 17(3): 181-206.

Fissel, B., M. Dalton, B. Garber-Yonts, A. Haynie, S. Kasperski, J. Lee, D. Lew, C. Seung, K. Sparks, M. Szymkowiak, and S. Wise. 2023. "Stock Assessment and Fishery Evaluation Report for the Groundfish Fisheries of the Gulf of Alaska and Bering Sea/Aleutian Island Area: Economic Status of the Groundfish Fisheries off Alaska, 2022'', NPFMC, November, 2023. https://www.fisheries.noaa.gov/alaska/ecosystems/economic-status-reports-gulf-alaska-and-bering-sea-aleutian-islands

Gordon, H.S. 1954. "The Economic Theory of a Common-Property Resource: The Fishery.'' The Journal of Political Economy 62(2): 124-142.

Holland, D. 2000. "Fencing the Commons: Regulatory Barbed Wire in the Alaskan Groundfish Fisheries.'' Marine Resource Economics 15(2): 141-149.

Homans, F., and J. Wilen. 2005. "Markets and rent dissipation in regulated open access fisheries.'' Journal of Environmental Economics and Management, 49: 381-404. National Marine Fisheries Service, 2022. Fisheries of the United States, 2023. https://www.fisheries.noaa.gov/national/sustainable-fisheries/fisheries-united-states#current-report

Scott, A.. 1955. "The fishery: the objectives of sole ownership.'' Journal of Political Economy 63(2): 116-124.

Torres, M. and R. Felthoven. 2014. "Productivity growth and product choice in catch share fisheries: The case of Alaska pollock.'' Marine Policy, 50: 280-289.

Williams, G.H. 2015. Recommendations for Pacic halibut discard mortality rates in the 2016-2018 groundfish fisheries off Alaska. Int. Pac. Halibut Comm. Report of Assessment and Research Activities 2015: 381-397. Available at: http://www.iphc.int/publications/rara/2015/RARA2015_21DMR.pdf Wilen, J.E., E. Richardson. 2008 "Rent generation in the alaskan pollock conservation cooperative.'' FAO Fisheries Technical Paper, 361.

2.2.9 Acknowledgements

ESSRP wishes to thank the Alaska Fisheries Information Network (AKFIN) for database programming and data management services to support production of the Economic SAFE. Other parties who provided assistance or feedback in the assembly of this report or earlier versions include: Terry Hiatt, Ren Narita, Camille Kohler, Mike Fey (AKFIN); Jennifer Mondragon (NMFS Alaska Region Office, Sustainable Fisheries Division), Mary Furuness (NMFS Alaska Region Office, Sustainable Fisheries Division).

Chapter 3

Figures Reporting Economic Data of the Groundfish Fisheries Off Alaska

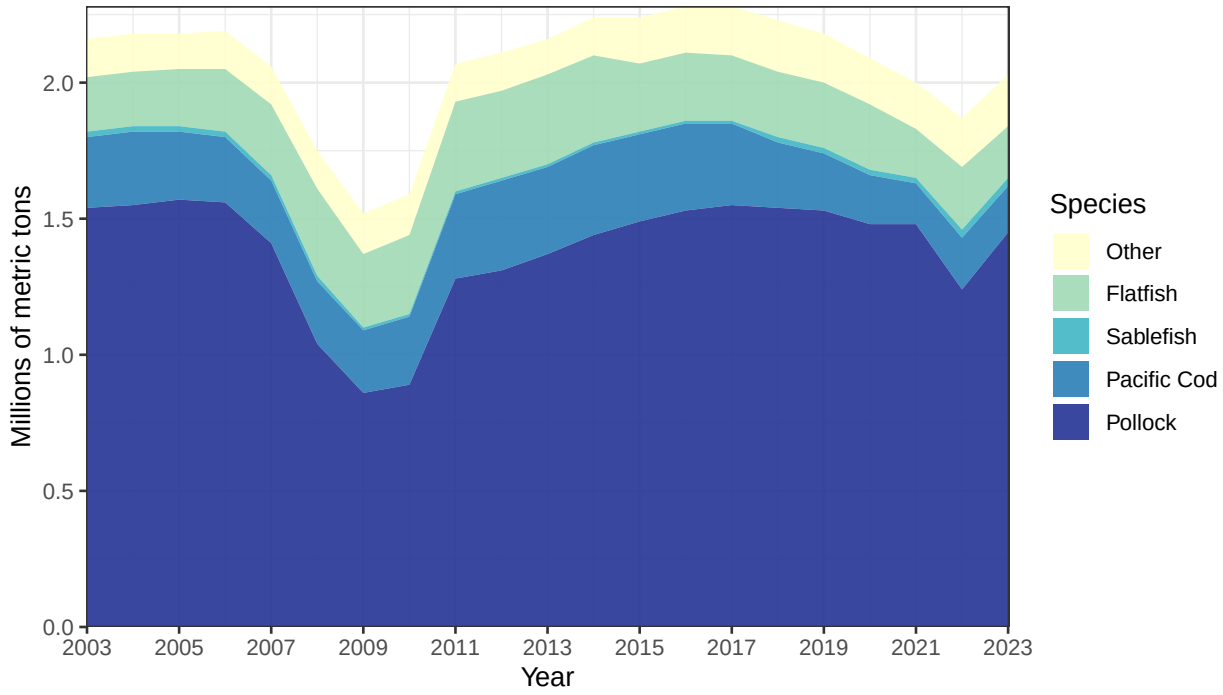


Figure 3.1: Groundfish catch in the commercial fisheries off Alaska by species

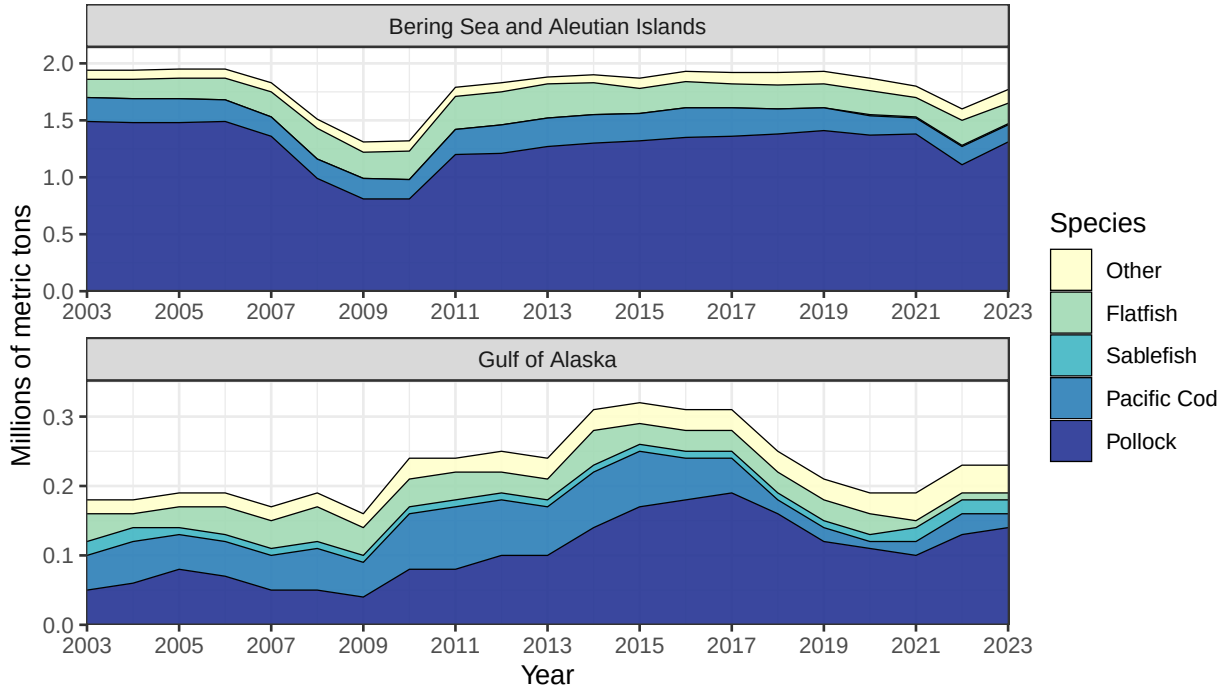


Figure 3.2: Groundfish catch in the commercial fisheries off Alaska by species

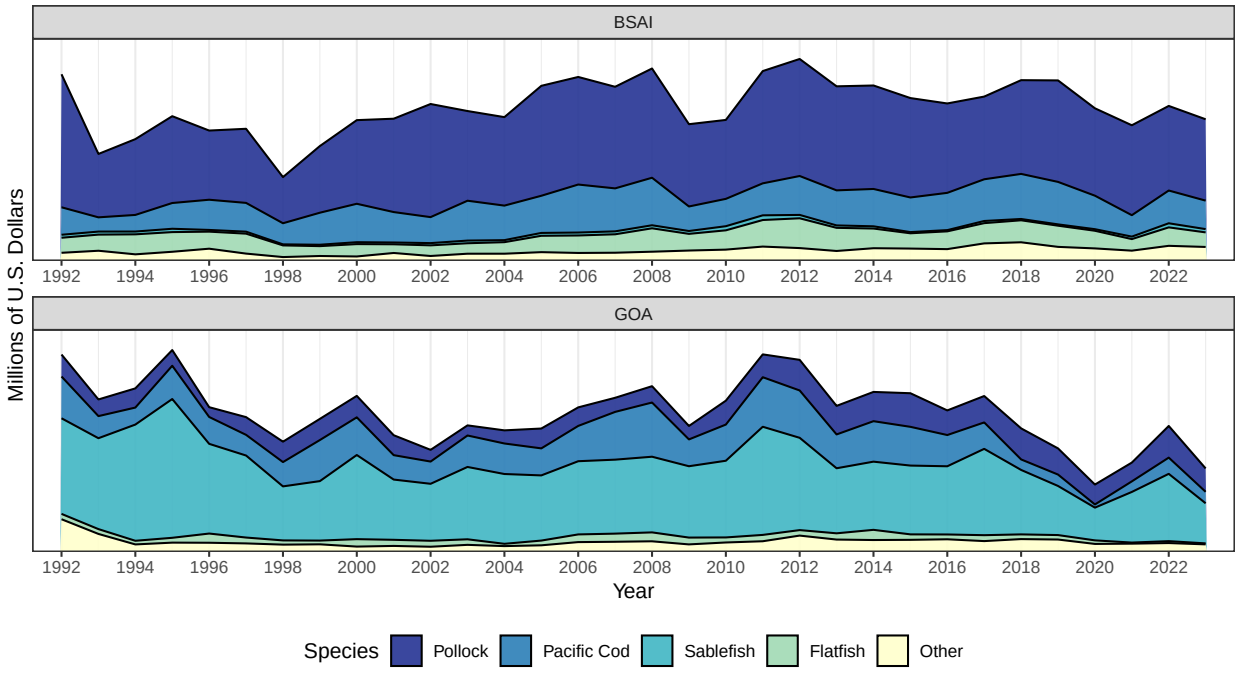


Figure 3.3: Real ex-vessel value of the groundfish catch in the commercial fisheries off Alaska by species, 1992-2023 (base year = 2023).

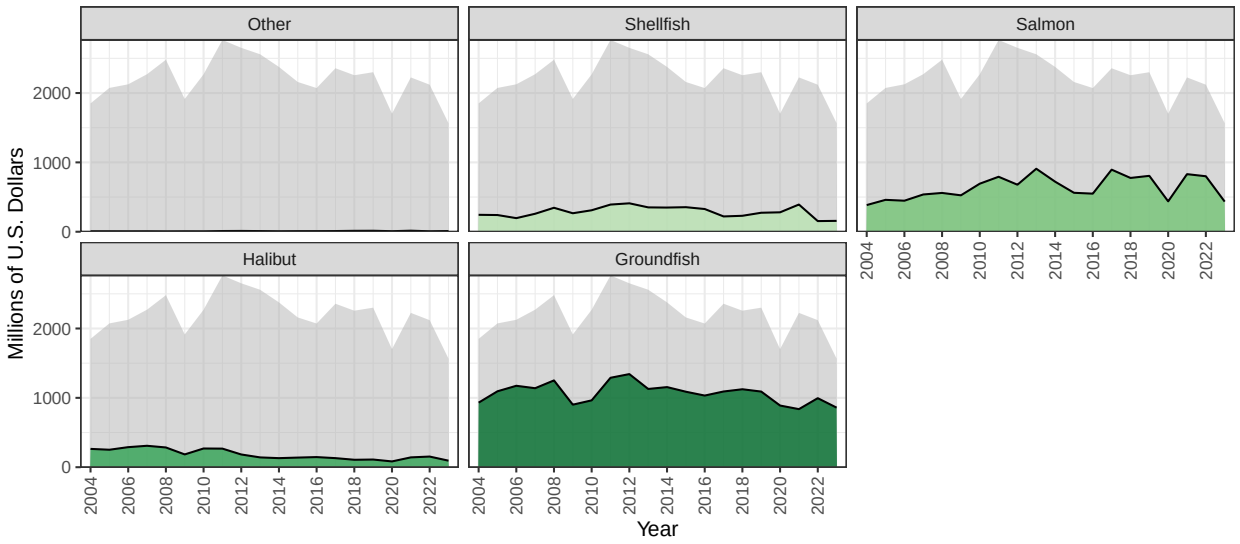


Figure 3.4: Real ex-vessel value of the domestic fish and shellfish catch off Alaska by species group, 2003- 2023 (base year = 2023)

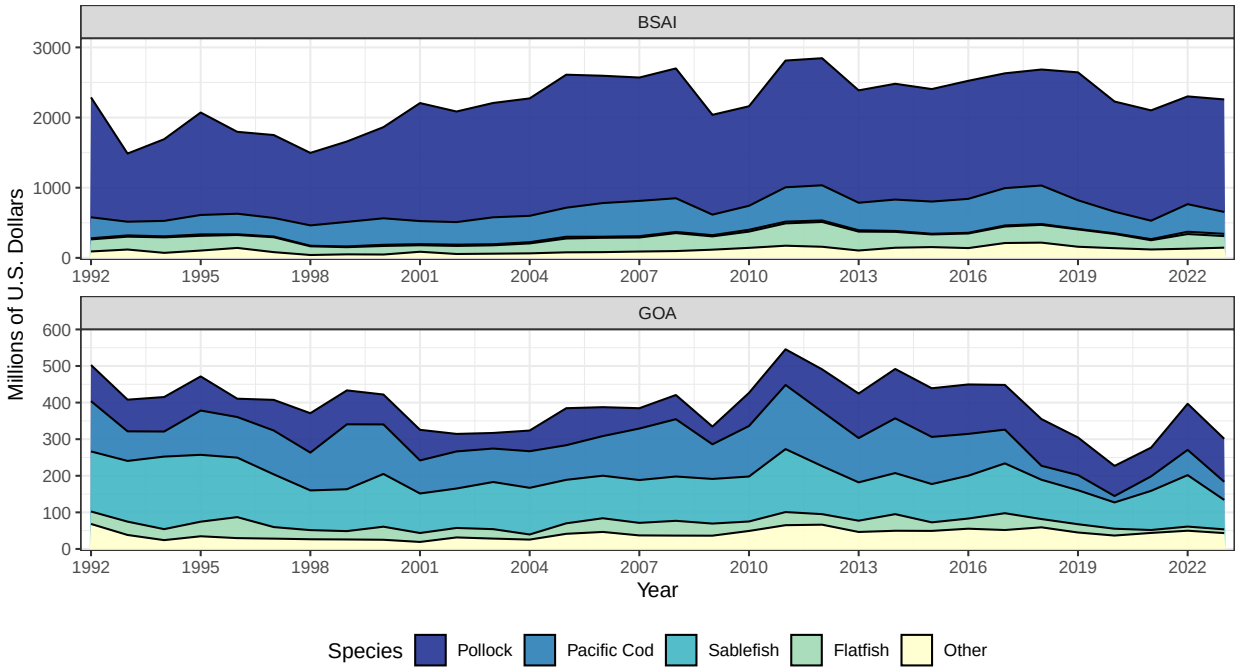


Figure 3.5: Real gross product value of the groundfish catch off Alaska by species, 1992- 2023 (base year = 2023)

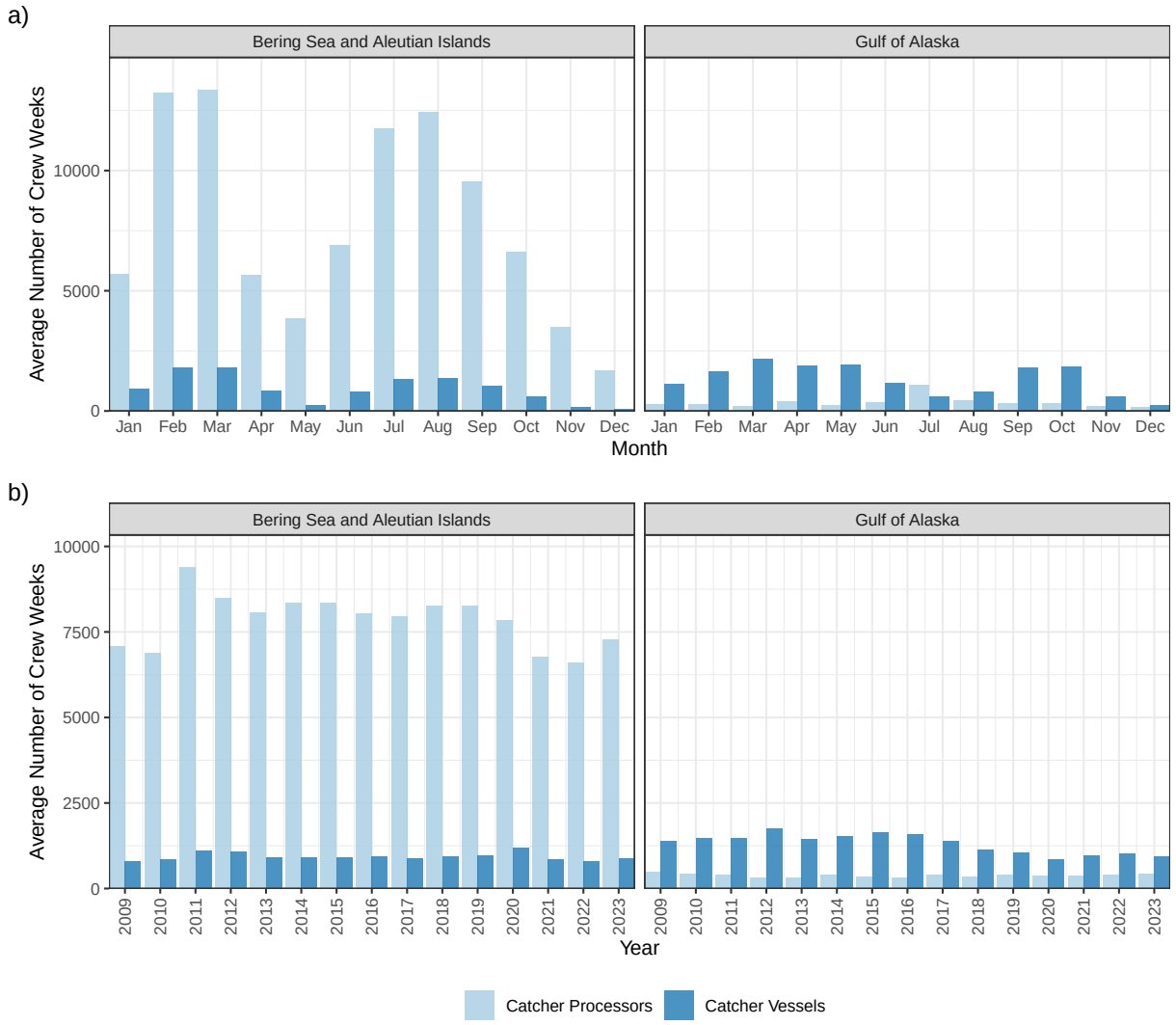


Figure 3.6: a) Average number of crew weeks in both BSAI and GOA by month for Catcher Processors and Catcher Vessels, 2009- 2023 , b) by year, 2009- 2023

Figure 3.7: Decomposition of the change in first-wholesale revenues from 2021-2023 by species.

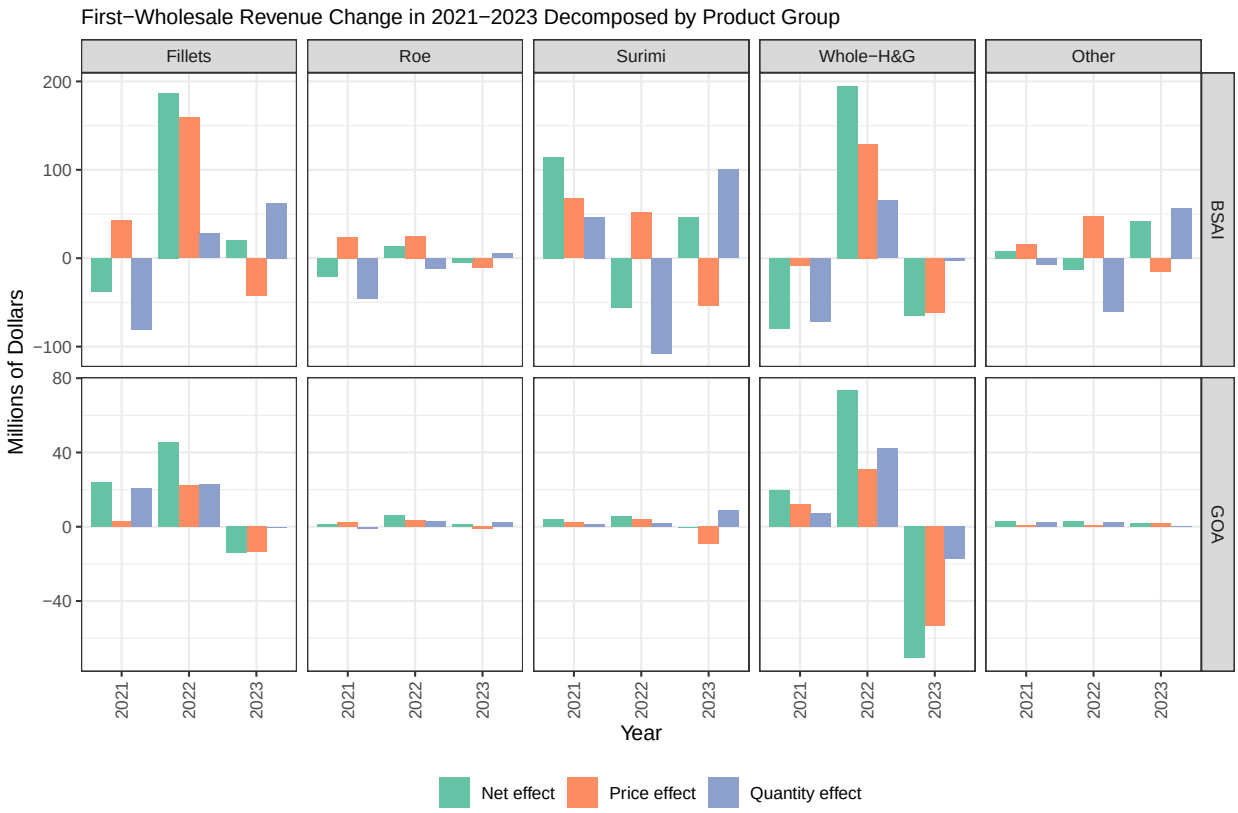


Figure 3.8: Decomposition of the change in first-wholesale revenues from 2021-2023 by product

Chapter 4

Tables Reporting Economic Data of the Groundfish Fisheries Off Alaska

4.1 Alaska Economic Data Tables

Table 4.1: Groundfish catch in the commercial fisheries off Alaska by area and species, 2014-2023 (1,000 metric tons, round weight).

		Pollock	Sablefish	Pacific Cod	Flatfish	Rockfish	Atka Mackerel	Total
	2014	1,300.20	1.10	249.30	276.60	36.10	31	1,929
	2015	1,323.20	0.60	242	219.70	39.70	53.30	1,914.70
	2016	1,354.90	0.90	260.90	225.50	36.80	54.50	1,969.40
	2017	1,360.90	1.70	253	211.40	38.10	64.40	1,968.90
	2018	1,381.20	2.20	220.30	212.20	41.70	70.40	1,966.20
	2019	1,411	3.80	198	208.60	54.30	57.50	1,959.50
Bering	2020	1,370.40	6.60	169.90	214.10	50.80	58.90	1,896
Sea and	2021	1,378.10	5.70	135.80	169.20	43.70	61.40	1,814.30
Aleutian	2022	1,108.70	7.70	160.70	218.90	44.70	58.10	1,628.40
Islands	2023	1,314.50	8.60	151.50	182.90	48.50	66.60	1,798.80
	2014	142.60	11.10	84.90	48	29	1	326.80
	2015	167.50	11	79.50	27.10	29.10	1.20	324.90
	2016	177.10	10	64.10	28.30	34.10	1.10	324.40
	2017	186.20	11.30	48.70	33.60	31.90	1.10	321.50
	2018	158.10	13	15.20	25.90	34.30	1.40	255.70
	2019	120.20	13.70	15.70	32	34.30	1.30	224.20
	2020	107.50	13.40	6.80	28.90	32.30	0.60	194.40
	2021	101.20	16.50	19.20	13	36.90	0.90	192.80
Gulf of	2022	132.70	20.40	25.90	14.40	36.90	0.90	237.50
Alaska	2023	135.10	17.60	21.80	11.30	37.20	0.50	229.70
	2014	1,442.90	12.20	334.30	324.60	65.10	32	2,255.80
	2015	1,490.80	11.70	321.50	246.80	68.80	54.50	2,239.60
	2016	1,532.10	10.90	324.90	253.90	70.90	55.60	2,293.80
	2017	1,547	13	301.80	245	70	65.50	2,290.50
	2018	1,539.20	15.20	235.40	238.20	76	71.80	2,221.90
	2019	1,531.30	17.50	213.80	240.70	88.70	58.70	2,183.70
	2020	1,477.90	20	176.80	243	83.10	59.50	2,090.40
	2021	1,479.30	22.20	154.90	182.20	80.60	62.30	2,007.10
All	2022	1,241.40	28.10	186.60	233.30	81.60	59	1,866
Alaska	2023	1,449.60	26.20	173.30	194.20	85.60	67.10	2,028.50

Note: The estimates are of total catch (i.e., retained and discarded catch).These estimates include catch from both federal and state of Alaska fisheries. As such, totals may be slightly larger than retained catch estimates provided in later tables.
Source: NMFS Office of Science and Technology, Fisheries Statistics Division, Fisheries of the United States. Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.2: Groundfish retained catch off Alaska by area, sector, and species, 2019-2023 (1,000 metric tons, round weight).

		Bering Sea and Aleutian Islands			Gulf of Alaska			All Alaska		
		Catcher Vessels	Catcher Processors	Total	Catcher Vessels	Catcher Processors	Total	Catcher Vessels	Catcher Processors	Total
	2019	735.60	666.24	1,401.84	118.56	0.33	118.89	854.16	666.57	1,520.73
	2020	725.04	633.32	1,358.36	106.29	0.34	106.63	831.32	633.66	1,464.99
	2021	718.18	645.70	1,363.88	98.47	1.03	99.50	816.65	646.73	1,463.38
	2022	570.03	524.89	1,094.93	130.49	0.96	131.46	700.53	525.86	1,226.38
Pollock	2023	678.24	620.99	1,299.23	132.43	1.26	133.69	810.67	622.25	1,432.92
	2019	1.56	0.61	2.17	9.78	1.06	10.85	11.34	1.67	13.01
	2020	1.66	1.09	2.75	10.41	0.91	11.32	12.07	2.01	14.08
	2021	2.01	1.43	3.44	13.87	1.42	15.29	15.88	2.85	18.73
	2022	3.10	3.03	6.12	17.17	1.78	18.95	20.27	4.81	25.07
Sablefish	2023	3.17	4.74	7.91	14.89	1.60	16.49	18.06	6.34	24.40
	2019	77.53	118.40	195.93	12.90	1.55	14.45	90.42	119.95	210.38
	2020	68.34	99.05	167.39	4.77	0.07	4.84	73.11	99.12	172.23
	2021	52.69	79.40	132.08	15.97	0.17	16.14	68.65	79.57	148.23
Pacific	2022	64.85	93.60	158.45	21.50	2.68	24.18	86.35	96.28	182.63
Cod	2023	61.27	88.31	149.59	17.59	2.13	19.72	78.87	90.44	169.31
	2019	23.58	174.63	198.22	21.32	6.84	28.16	44.90	181.47	226.38
	2020	23.86	179.66	203.52	19.06	5.31	24.36	42.91	184.97	227.88
	2021	10.68	150.31	160.99	1.06	7.47	8.53	11.74	157.78	169.52
	2022	12.75	197.37	210.12	1.15	9.52	10.66	13.89	206.88	220.78
Flatfish	2023	10.95	164.59	175.54	1.74	6.63	8.37	12.69	171.22	183.91
	2019	4.89	44.98	49.87	14.90	15.87	30.78	19.79	60.86	80.65
	2020	5.31	40.70	46.01	15.52	14.76	30.28	20.83	55.46	76.29
	2021	2.31	38.31	40.62	17.80	17.54	35.34	20.11	55.85	75.96
	2022	2.04	40.14	42.17	15.70	19.12	34.82	17.74	59.26	77.00
Rockfish	2023	2.67	43.38	46.05	16.49	18.82	35.31	19.16	62.19	81.36
	2019	3.25	53.59	56.85	0.11	0.79	0.90	3.36	54.39	57.75
	2020	5.63	52.49	58.13	*	0.51	0.51	5.63	53.00	58.64
	2021	3.73	56.85	60.59	-	0.59	0.59	3.74	57.44	61.18
Atka	2022	2.36	55.00	57.36	0.02	0.81	0.82	2.38	55.81	58.19
Mackerel	2023	3.69	61.77	65.45	-	0.44	0.44	3.69	62.21	65.90

Table 4.2: Groundfish retained catch off Alaska by area, sector, and species, 2019-2023 (1,000 metric tons, round weight). *(continued)*

		Bering Sea and Aleutian Islands			Gulf of Alaska			All Alaska		
		Catcher Vessels	Catcher Processors	Total	Catcher Vessels	Catcher Processors	Total	Catcher Vessels	Catcher Processors	Total
	2019	847.09	1,067.59	1,914.68	178.71	26.53	205.24	1,025.79	1,094.12	2,119.91
	2020	830.45	1,014.75	1,845.21	156.87	21.90	178.78	987.33	1,036.66	2,023.98
	2021	790.01	980.50	1,770.50	147.40	28.22	175.62	937.41	1,008.72	1,946.12
All	2022	655.55	926.22	1,581.76	186.28	35.02	221.31	841.83	961.24	1,803.07
Groundfish	2023	760.35	996.11	1,756.46	183.40	31.00	214.41	943.75	1,027.11	1,970.87

Note: The estimates are of retained catch (i.e., excludes discarded catch). All groundfish include additional species categories. These estimates include only catch counted against federal TACs. Includes FMP groundfish catch on halibut targets. "*" indicates a confidential value; "-" indicates no applicable data or value.
Source: NMFS Alaska Region Blend and Catch-accounting System estimates. Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.3: Groundfish ex-vessel value off Alaska by area, sector, and species,2019-2023 ($ millions).

		Bering Sea and Aleutian Islands			Gulf of Alaska			All Alaska		
		Catcher Vessels	Catcher Processors	Total	Catcher Vessels	Catcher Processors	Total	Catcher Vessels	Catcher Processors	Total
	2019	260.48	187.79	448.26	36.01	0.09	36.10	296.49	187.88	484.36
	2020	234.48	155.65	390.14	27.63	0.09	27.72	262.11	155.74	417.85
	2021	243.23	175.07	418.30	26.96	0.28	27.24	270.19	175.35	445.54
	2022	242.45	176.44	418.89	48.63	0.33	48.96	291.08	176.76	467.85
Pollock	2023	244.47	173.39	417.86	37.15	0.35	37.50	281.62	173.74	455.36
	2019	4.44	1.38	5.81	61.84	5.46	67.30	66.27	6.84	73.11
	2020	2.65	2.41	5.07	43.24	2.36	45.60	45.90	4.77	50.67
	2021	7.51	3.91	11.42	68.51	5.09	73.60	76.02	9.00	85.02
	2022	12.49	7.72	20.20	97.28	6.78	104.06	109.77	14.49	124.26
Sablefish	2023	8.29	8.36	16.65	60.18	4.14	64.32	68.47	12.50	80.97
	2019	69.87	117.71	187.58	14.10	1.57	15.67	83.97	119.29	203.25
	2020	58.34	91.16	149.51	4.17	0.06	4.22	62.51	91.22	153.73
	2021	42.46	57.16	99.62	13.74	0.14	13.88	56.19	57.31	113.50
Pacific	2022	66.09	96.03	162.13	22.24	2.81	25.05	88.34	98.84	187.18
Cod	2023	60.44	85.92	146.36	16.28	2.05	18.32	76.72	87.96	164.68
	2019	10.77	82.73	93.50	4.26	1.49	5.75	15.02	84.22	99.25
	2020	8.95	69.48	78.43	3.45	1.01	4.45	12.40	70.49	82.89
	2021	3.37	50.29	53.66	0.14	1.14	1.28	3.51	51.43	54.94
	2022	5.31	85.99	91.30	0.27	2.26	2.54	5.59	88.26	93.84
Flatfish	2023	4.49	70.22	74.71	0.31	1.09	1.40	4.80	71.31	76.11
	2019	1.73	16.04	17.77	7.61	6.88	14.49	9.34	22.92	32.25
	2020	1.69	13.04	14.73	5.28	4.19	9.47	6.97	17.24	24.21
	2021	0.76	12.54	13.29	5.65	4.99	10.63	6.40	17.52	23.93
	2022	0.87	17.06	17.94	6.02	6.26	12.28	6.90	23.33	30.22
Rockfish	2023	1.06	16.77	17.83	5.58	5.25	10.83	6.64	22.02	28.66
	2019	2.03	33.46	35.49	0.07	0.51	0.58	2.10	33.97	36.07
	2020	3.18	29.67	32.86	-0.01	0.30	0.30	3.18	29.98	33.16
	2021	1.82	27.67	29.49	0.00	0.39	0.40	1.82	28.07	29.89
Atka	2022	1.28	29.73	31.01	0.01	0.45	0.46	1.28	30.18	31.46
Mackerel	2023	2.12	35.46	37.58	0.00	0.26	0.26	2.12	35.72	37.83

Table 4.3: Groundfish ex-vessel value off Alaska by area, sector, and species,2019-2023 ($ millions). *(continued)*

		Bering Sea and Aleutian Islands			Gulf of Alaska			All Alaska		
		Catcher Vessels	Catcher Processors	Total	Catcher Vessels	Catcher Processors	Total	Catcher Vessels	Catcher Processors	Total
	2019	349.50	445.66	795.15	125.04	16.06	141.10	474.54	461.72	936.26
	2020	309.46	367.41	676.87	84.57	8.01	92.58	394.03	375.41	769.44
	2021	299.21	329.37	628.58	115.18	12.03	127.21	414.39	341.40	755.79
All	2022	328.68	436.24	764.92	174.64	19.03	193.67	503.32	455.27	958.60
Groundfish	2023	320.98	403.85	724.83	119.66	13.27	132.94	440.64	417.12	857.76

Note: Ex-vessel value is calculated by multiplying ex-vessel prices (Tables 4.13 and 4.31) by the retained round weight catch. The value added by at-sea processing is not included in these estimates of ex-vessel value. All groundfish includes additional species categories.Values are not adjusted for inflation."*" indicates a confidential value; "-" indicates no applicable data or value.
Source: NMFS Alaska Region Blend and Catch-accounting System estimates. Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.4: Discards and discard rates for groundfish catch off Alaska by gear, and species, 2019-2023 (1,000 metric tons, round weight).

		Fixed		Trawl		All Gear	
		Total Discards	Discard Rate	Total Discards	Discard Rate	Total Discards	Discard Rate
	2019	0.70	11	9.70	1	10.40	1
	2020	0.50	11	12.10	1	12.60	1
	2021	0.50	15	14.90	1	15.40	1
	2022	0.70	15	14.20	1	14.90	1
Pollock	2023	0.70	13	15.80	1	16.50	1
	2019	1.70	14	2.70	52	4.40	25
	2020	1.10	9	4.10	56	5.20	26
	2021	1.10	6	2.30	48	3.40	15
	2022	1.20	5	1.70	33	2.90	10
Sablefish	2023	0.90	4	0.80	14	1.70	6
	2019	2.00	1	1.20	2	3.30	2
	2020	1.90	2	2.30	4	4.20	2
	2021	2.00	2	2.80	6	4.80	3
Pacific	2022	2.40	2	1.20	2	3.70	2
Cod	2023	2.70	2	1.00	2	3.80	2
	2019	2.70	76	9.60	4	12.30	5
	2020	2.00	80	9.70	4	11.80	5
	2021	1.90	97	8.10	5	10.00	6
	2022	2.60	98	7.60	3	10.20	4
Flatfish	2023	1.80	96	6.60	3	8.40	4
	2019	1.10	51	6.50	8	7.60	9
	2020	0.70	47	5.70	7	6.50	8
	2021	0.60	46	3.90	5	4.50	6
	2022	0.50	43	3.80	5	4.40	5
Rockfish	2023	0.30	27	3.90	5	4.20	5
	2019	-	68	0.70	1	0.70	1
	2020	-	49	0.80	1	0.80	1
	2021	0.10	98	0.80	1	0.80	1
Atka	2022	0.10	100	0.70	1	0.70	1
Mackerel	2023	-	94	1.00	2	1.00	2
	2019	21.80	10	38.70	2	60.60	3
	2020	19.80	11	41.50	2	61.30	3
	2021	18.30	11	37.00	2	55.30	3
All	2022	26.00	12	33.60	2	59.70	3
Groundfish	2023	22.00	11	33.10	2	55.00	3

Note: All groundfish and all gear may include additional species or gear types.Discards rates are calculated as 100xdiscards/(total catch). See the seventh bullet in Section 2.2.6 for an explanation of 0 discards with positive discard rates. For details on discard estimation see Cahalan, J., J. Gasper, and J. Mondragon. 2014. Catch sampling and estimation in the federal groundfish fisheries off Alaska, 2015 edition. U.S. Dep. Commer., NOAA Tech. Memo. NMFS-AFSC-286, 46 p.
Source NMFS Alaska Region Blend and Catch-accounting System estimates. Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.5: Prohibited species catch (PSC) by species, area and gear, 2019-2023 (metric tons (t) or number in 1,000s).

	Gear	Year	Halibut (t)	Herring (t)	Chinook (1,000s)	Other salmon (1,000s)	Red King Crab (1,000s)	Other King Crab (1,000s)	Bairdi (1,000s)	Other tanner (1,000s)
		2019	88.00	0.00	0.02	0.33	47.26	12.16	128.39	98.06
		2020	94.00	0.00	0.02	0.13	23.26	10.60	90.65	163.65
		2021	109.00	0.00	0.02	0.05	296.84	55.13	42.93	88.49
		2022	186.00	0.00	0.01	0.11	150.80	18.38	118.96	71.43
	Fixed	2023	147.00	0.00	0.01	0.07	94.24	27.12	80.07	58.22
		2019	2,266.00	1,182.00	31.44	358.48	70.14	33.95	344.00	941.30
		2020	1,577.00	3,934.00	34.96	346.25	64.59	13.82	598.12	780.62
		2021	1,427.00	1,880.00	15.88	550.65	40.73	17.09	588.47	247.22
		2022	2,057.00	1,751.00	8.34	245.16	8.60	13.40	436.14	204.38
	Trawl	2023	1,718.00	3,312.00	14.61	116.65	13.30	17.84	572.78	777.09
		2019	2,354.00	1,182.00	31.47	358.81	117.39	46.11	472.39	1,039.35
Bering Sea		2020	1,671.00	3,934.00	34.98	346.38	87.86	24.42	688.77	944.28
and		2021	1,536.00	1,880.00	15.90	550.70	337.57	72.22	631.39	335.71
Aleutian	All	2022	2,243.00	1,751.00	8.34	245.27	159.41	31.78	555.10	275.81
Islands	Gear	2023	1,866.00	3,312.00	14.62	116.71	107.54	44.97	652.85	835.31
		2019	1.00	-	-	0.26	-	0.20	29.95	-
		2020	*	-	-	0.11	-	0.10	0.11	0.01
		2021	12.00	-	-	0.15	0.01	0.11	30.41	-
		2022	29.00	-	-	0.01	-	0.23	25.19	-
	Fixed	2023	17.00	-	-	*	-	1.56	26.20	-
		2019	1,099.00	81.00	23.90	6.41	-	0.36	245.17	-
		2020	775.00	68.00	11.73	3.32	*	0.06	651.65	-
		2021	365.00	19.00	17.09	3.53	*	0.12	15.41	-
		2022	354.00	85.00	14.48	5.24	-	0.14	7.73	-
	Trawl	2023	283.00	69.00	21.14	5.62	-	0.61	14.51	-
		2019	1,101.00	81.00	23.90	6.67	-	0.55	275.12	-
		2020	775.00	68.00	11.73	3.43	*	0.17	651.76	0.01
		2021	377.00	19.00	17.09	3.68	0.01	0.22	45.83	-
Gulf of	All	2022	382.00	85.00	14.48	5.25	-	0.37	32.92	-
Alaska	Gear	2023	300.00	69.00	21.14	5.62	-	2.17	40.71	-

Note: These estimates include only catches counted against federal TACs. Totals may include additional categories. Totals include halibut mortality taken by Amendment 80 vessels under the Exempted Fishing Permit No. 2015-02. The estimates of halibut bycatch mortality are based on the IPHC discard mortality rates that were used for

in-season management. The halibut IFQ program allows retention of halibut in the hook-and-line groundfish fisheries, making true halibut bycatch numbers unavailable for these fisheries. This is particularly a problem in the GOA for all hook-and-line fisheries and in the BSAI for the sablefish hook-and-line fishery. Therefore, estimates of halibut bycatch mortality are not included in this table for those fisheries. There were substantial changes to the observer program in 2013 that could affect the comparability of 2013 and later years, to previous years. Excludes PSC on halibut targets. Excludes PSC in state fisheries (sablefish and P. cod targets in state waters). For details on prohibited species catch estimation see Cahalan, J., J. Gasper, and J. Mondragon. 2014. Catch sampling and estimation in the federal groundfish fisheries off Alaska, 2015 edition. U.S. Dep. Commer., NOAA Tech. Memo. NMFS-AFSC-286, 46 p. "*" indicates a confidential value; "-" indicates no applicable data or value.
Source: NMFS Alaska Region Blend and Catch-accounting System estimates. Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.6: Catch and real ex-vessel value of the commercial fisheries off Alaska by species group and area, 2019-2023; calculations based on COAR (1,000 metric tons and $ millions, base year = 2023).

		Bering Sea and Aleutian Islands		Gulf of Alaska		All Alaska	
		Quantity	Value	Quantity	Value	Quantity	Value
	Groundfish	1,914.84	$ 924.85	207.70	$ 165.57	2,122.54	$ 1,090.42
	Salmon	116.70	$ 436.14	256.69	$ 369.82	373.38	$ 805.96
	Halibut	1.72	$ 17.80	6.97	$ 92.55	8.68	$ 110.36
	Herring	22.31	$ 2.67	0.94	$ 3.32	23.25	$ 5.99
	Shellfish	17.69	$ 225.20	5.84	$ 48.50	23.54	$ 273.70
	Other	-	-	1.48	$ 13.86	1.48	$ 13.86
2019	All Species	2,073.26	$ 1,606.66	479.62	$ 693.62	2,552.88	$ 2,300.28
	Groundfish	1,846.55	$ 781.54	182.21	$ 107.55	2,028.77	$ 889.09
	Salmon	98.93	$ 266.52	122.88	$ 171.35	221.81	$ 437.87
	Halibut	1.53	$ 14.98	6.26	$ 68.13	7.79	$ 83.11
	Herring	3.01	$ 0.56	1.79	$ 3.79	4.80	$ 4.35
	Shellfish	19.50	$ 237.81	6.92	$ 42.25	26.42	$ 280.06
	Other	-	-	1.25	$ 7.84	1.25	$ 7.84
2020	All Species	1,969.52	$ 1,301.42	321.30	$ 400.90	2,290.83	$ 1,702.32
	Groundfish	1,771.03	$ 694.52	179.89	$ 142.80	1,950.92	$ 837.32
	Salmon	99.89	$ 413.94	265.79	$ 416.47	365.69	$ 830.41
	Halibut	1.36	$ 19.53	7.67	$ 122.05	9.02	$ 141.58
	Herring	10.58	$ 1.61	17.70	$ 7.34	28.28	$ 8.96
	Shellfish	23.59	$ 332.78	5.04	$ 59.48	28.62	$ 392.26
	Other	-	-	1.39	$ 14.73	1.39	$ 14.73
2021	All Species	1,906.45	$ 1,462.38	477.48	$ 762.87	2,383.93	$ 2,225.25
	Groundfish	1,581.99	$ 793.79	223.38	$ 201.59	1,805.37	$ 995.38
	Salmon	149.56	$ 466.98	163.20	$ 333.01	312.76	$ 799.99
	Halibut	1.32	$ 21.61	7.86	$ 131.72	9.18	$ 153.33
	Herring	10.66	$ 1.89	25.59	$ 9.39	36.25	$ 11.29
	Shellfish	6.44	$ 104.79	4.63	$ 48.71	11.07	$ 153.50
	Other	-	-	1.18	$ 6.80	1.18	$ 6.80
2022	All Species	1,749.97	$ 1,389.06	425.83	$ 731.22	2,175.80	$ 2,120.28
	Groundfish	1,757.09	$ 725.26	216.28	$ 133.39	1,973.37	$ 858.65
	Salmon	107.58	$ 183.01	275.45	$ 250.93	383.02	$ 433.94
	Halibut	1.03	$ 11.32	6.80	$ 82.58	7.83	$ 93.89
	Herring	1.58	$ 0.69	10.28	$ 11.01	11.86	$ 11.70
	Shellfish	5.77	$ 103.90	7.38	$ 52.87	13.15	$ 156.77
	Other	-	-	1.14	$ 10.00	1.14	$ 10.00
2023	All Species	1,873.05	$ 1,024.17	517.32	$ 540.78	2,390.37	$ 1,564.95

Note: These estimates include the value of catch from both federal and state of Alaska fisheries. The data have been adjusted to 2023 dollars by applying the Personal Consumption Expenditure Index at https://research.stlouisfed.org/fred2/series/PCEPI to account for affects of inflation on fishermen's revenue.
Source NMFS Alaska Region Blend and Catch-accounting System estimates; NMFS Alaska Region At-sea Production Reports; ADF&G Commercial Operators Annual Reports (COAR); and NMFS Office of Science and Technology, Fisheries Statistics Division, Fisheries of the United States. Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.7: Production and real gross value of groundish and non-groundish products in the commercial fisheries of Alaska by species group and area of processing,2019-2023(1,000 metric tons product weight and $ millions, base year = 2023).

		Bering Sea and Aleutian Islands		Gulf of Alaska		All Alaska	
		Quantity	Value	Quantity	Value	Quantity	Value
	Groundfish	831.40	$ 2,643.90	100.50	$ 304.60	931.90	$ 2,948.50
	Salmon	83.50	$ 860.60	205.20	$ 1,177.80	288.70	$ 2,038.30
	Halibut	1.10	$ 16.50	6.00	$ 111.30	7.10	$ 127.80
	Herring	19.20	$ 19.10	0.90	$ 5.40	20.20	$ 24.50
	Crab	12.80	$ 274.60	3.20	$ 73.50	16.00	$ 348.20
	Other	-	$ 0.20	1.60	$ 28.30	1.60	$ 28.40
2019	All Species	948.10	$ 3,814.80	317.40	$ 1,700.90	1,265.50	$ 5,515.80
	Groundfish	753.00	$ 2,228.20	82.90	$ 227.00	835.80	$ 2,455.20
	Salmon	60.50	$ 606.30	104.00	$ 791.90	164.50	$ 1,398.20
	Halibut	1.20	$ 14.90	4.40	$ 82.10	5.60	$ 97.00
	Herring	0.50	$ 0.60	4.10	$ 9.00	4.60	$ 9.60
	Crab	14.00	$ 261.50	4.00	$ 79.00	18.00	$ 340.50
	Other	-	-	1.10	$ 15.90	1.10	$ 15.90
2020	All Species	829.10	$ 3,111.50	200.40	$ 1,204.90	1,029.50	$ 4,316.40
	Groundfish	692.00	$ 2,102.30	73.40	$ 277.00	765.30	$ 2,379.30
	Salmon	64.80	$ 727.80	204.80	$ 1,400.40	269.60	$ 2,128.20
	Halibut	1.10	$ 20.30	6.50	$ 149.50	7.50	$ 169.80
	Herring	8.20	$ 11.50	22.60	$ 29.80	30.90	$ 41.30
	Crab	16.30	$ 402.90	3.70	$ 115.40	20.00	$ 518.30
	Other	-	-	1.00	$ 23.50	1.00	$ 23.50
2021	All Species	782.40	$ 3,264.70	311.90	$ 1,995.60	1,094.30	$ 5,260.30
	Groundfish	665.80	$ 2,301.30	89.80	$ 396.80	755.60	$ 2,698.10
	Salmon	83.60	$ 812.70	185.00	$ 1,340.40	268.60	$ 2,153.10
	Halibut	0.90	$ 16.40	6.40	$ 155.00	7.20	$ 171.50
	Herring	10.40	$ 14.10	27.40	$ 173.90	37.80	$ 188.00
	Crab	3.50	$ 117.60	2.70	$ 75.80	6.30	$ 193.40
	Other	-	-	1.40	$ 23.20	1.40	$ 23.20
2022	All Species	764.30	$ 3,262.10	312.70	$ 2,165.20	1,076.90	$ 5,427.40
	Groundfish	727.00	$ 2,258.10	93.10	$ 301.10	820.10	$ 2,559.20
	Salmon	71.70	$ 576.20	226.80	$ 1,038.90	298.50	$ 1,615.20
	Halibut	0.90	$ 11.10	5.30	$ 98.30	6.10	$ 109.40
	Herring	*	$ *	12.80	$ 19.80	12.80	$ 19.80
	Crab	2.90	$ 90.40	4.30	$ 72.50	7.10	$ 162.80
	Other	-	-	0.90	$ 25.40	0.90	$ 25.40
2023	All Species	802.40	$ 2,935.80	343.10	$ 1,556.00	1,145.50	$ 4,491.80

Note: These estimates include the value of catch from both federal and state of Alaska fisheries. The data have been adjusted to 2023 dollars by applying the Personal Consumption Expenditure Index at https://research.stlouisfed.org/fred2/series/PCEPI to account for affects of inflation on fishermen's revenue.
Source NMFS Alaska Region Blend and Catch-accounting System estimates; NMFS Alaska Region At-sea Production Reports; ADF&G Commercial Operators Annual Reports (COAR); and NMFS Office of Science and Technology, Fisheries Statistics Division, Fisheries of the United States. Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.8: Percentage of ex-vessel value of the groundfish catch of Alaska by area, residency, and species, 2019-2023; calculations based on COAR.

		Bering Sea and Aleutian Islands		Gulf of Alaska		All Alaska	
		Alaska	Other	Alaska	Other	Alaska	Other
	2019	8 %	92 %	50 %	50 %	12 %	88 %
	2020	6 %	94 %	53 %	47 %	9 %	91 %
	2021	6 %	94 %	51 %	49 %	9 %	91 %
	2022	10 %	90 %	46 %	54 %	14 %	86 %
Pollock	2023	10 %	90 %	54 %	46 %	14 %	86 %
	2019	36 %	64 %	62 %	38 %	60 %	40 %
	2020	29 %	71 %	66 %	34 %	62 %	38 %
	2021	60 %	40 %	62 %	38 %	62 %	38 %
	2022	54 %	46 %	62 %	38 %	61 %	39 %
Sablefish	2023	50 %	50 %	65 %	35 %	62 %	38 %
	2019	27 %	73 %	72 %	28 %	31 %	69 %
	2020	28 %	72 %	85 %	15 %	29 %	71 %
	2021	26 %	74 %	74 %	26 %	32 %	68 %
Pacific	2022	25 %	75 %	70 %	30 %	31 %	69 %
Cod	2023	27 %	73 %	75 %	25 %	32 %	68 %
	2019	27 %	73 %	63 %	37 %	29 %	71 %
	2020	27 %	73 %	60 %	40 %	29 %	71 %
	2021	27 %	73 %	27 %	73 %	27 %	73 %
	2022	24 %	76 %	22 %	78 %	24 %	76 %
Flatfish	2023	22 %	78 %	21 %	79 %	22 %	78 %
	2019	32 %	68 %	39 %	61 %	35 %	65 %
	2020	31 %	69 %	45 %	55 %	37 %	63 %
	2021	33 %	67 %	45 %	55 %	38 %	62 %
	2022	36 %	64 %	42 %	58 %	39 %	61 %
Rockfish	2023	37 %	63 %	42 %	58 %	39 %	61 %
	2019	42 %	58 %	15 %	85 %	41 %	59 %
	2020	39 %	61 %	14 %	86 %	39 %	61 %
	2021	38 %	62 %	6 %	94 %	38 %	62 %
Atka	2022	44 %	56 %	22 %	78 %	43 %	57 %
Mackerel	2023	42 %	58 %	24 %	76 %	42 %	58 %
	2019	17 %	83 %	58 %	42 %	23 %	77 %
	2020	16 %	84 %	60 %	40 %	21 %	79 %
	2021	14 %	86 %	59 %	41 %	22 %	78 %
All	2022	18 %	82 %	57 %	43 %	26 %	74 %
Groundfish	2023	18 %	82 %	61 %	39 %	24 %	76 %

Note: These estimates include only catches counted against federal TACs. Ex-vessel value is calculate using prices from Tables 4.13 and 4.31. Please refer to Tables 4.13 and 4.31 for a description of the price derivation. Catch delivered to motherships is classified by the residency of the owner of the mothership. All other catch is classified by the residence of the owner of the fishing vessel. All groundfish include additional species categories. For catch for which the residence is unknown, there are either no data or the data have been suppressed to preserve confidentiality. Values are not adjusted for inflation.
Source NMFS Alaska Region Blend and Catch-accounting System estimates; NMFS Alaska Region At-sea Production Reports; ADF&G Commercial Operators Annual Reports (COAR); and NMFS Office of Science and Technology, Fisheries Statistics Division, Fisheries of the United States. Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.9: Number of vessels that caught groundfish of Alaska by area, vessel category, gear, and target,2019-2023.

		Bering Sea and Aleutian Islands			Gulf of Alaska			All Alaska		
		Catcher Vessels	Catcher Processors	Total	Catcher Vessels	Catcher Processors	Total	Catcher Vessels	Catcher Processors	Total
	2019	84	30	114	62	-	62	125	30	155
	2020	88	29	117	60	1	61	131	29	160
	2021	84	32	116	56	2	58	124	33	157
	2022	84	30	114	54	1	55	122	30	152
Pollock	2023	77	28	105	52	-	52	115	28	143
	2019	13	5	18	252	6	258	258	10	268
	2020	13	7	20	249	5	254	254	10	264
	2021	20	4	24	245	5	250	258	8	266
	2022	25	11	36	249	7	256	263	13	276
Sablefish	2023	30	13	43	237	5	242	251	15	266
	2019	150	46	196	179	4	183	308	47	355
	2020	151	38	189	103	-	103	249	38	287
	2021	115	31	146	184	2	186	277	31	308
Pacific	2022	120	30	150	200	6	206	285	30	315
Cod	2023	109	31	140	214	5	219	301	31	332
	2019	9	26	35	30	4	34	39	27	66
	2020	8	25	33	22	5	27	30	26	56
	2021	7	21	28	4	4	8	11	22	33
	2022	6	20	26	4	6	10	10	21	31
Flatfish	2023	6	19	25	10	3	13	15	19	34
	2019	5	22	27	105	9	114	110	24	134
	2020	6	18	24	90	8	98	96	22	118
	2021	4	21	25	74	7	81	78	23	101
	2022	3	15	18	60	7	67	63	18	81
Rockfish	2023	5	15	20	77	8	85	81	16	97
	2019	4	14	18	-	-	-	4	14	18
	2020	3	13	16	-	-	-	3	13	16
	2021	4	14	18	-	-	-	4	14	18
Atka	2022	3	14	17	-	-	-	3	14	17
Mackerel	2023	5	13	18	-	-	-	5	13	18

Table 4.9: Number of vessels that caught groundfish of Alaska by area, vessel category, gear, and target,2019-2023. *(continued)*

		Bering Sea and Aleutian Islands			Gulf of Alaska			All Alaska		
		Catcher Vessels	Catcher Processors	Total	Catcher Vessels	Catcher Processors	Total	Catcher Vessels	Catcher Processors	Total
	2019	196	65	260	476	19	495	603	67	669
	2020	206	59	265	417	14	431	559	61	620
	2021	171	55	226	431	14	445	543	57	600
All	2022	182	55	237	437	21	458	551	57	608
Targets	2023	164	52	216	475	18	493	576	53	629

Note: The target is determined based on vessel, week, catching mode, NMFS area, and gear. These estimates include only vessels that fished part of federal TACs. "*" indicates a confidential value; "-" indicates no applicable data or value.
Source: NMFS Alaska Region Blend and Catch-accounting System estimates; NMFS Alaska Region At-sea Production Reports; ADF&G Commercial Operators Annual Reports (COAR); and NMFS Office of Science and Technology, Fisheries Statistics Division, Fisheries of the United States. Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

4.2 Bering Sea & Aleutian Island Economic Data Tables

Table 4.10: Bering Sea and Aleutian Islands groundfish retained catch by vessel type, gear and species, 2022-2023 (1,000 metric tons, round weight).

		Catcher Vessels				Catcher Processors				Total			
	Year	Hook and Line	Pot	Trawl	All Gear	Hook and Line	Pot	Trawl	All Gear	Hook and Line	Pot	Trawl	All Gear
	2019	-	-	735.60	735.60	-	-	660.60	666.20	-	-	1,396.20	1,401.80
	2020	-	-	725.00	725.00	-	-	629.00	633.30	-	-	1,354.00	1,358.40
	2021	-	-	718.20	718.20	-	-	642.60	645.70	-	-	1,360.80	1,363.90
	2022	-	-	570.00	570.00	-	-	520.80	524.90	-	-	1,090.80	1,094.90
Pollock	2023	-	-	678.20	678.20	-	-	616.00	621.00	-	-	1,294.20	1,299.20
	2019	1.20	43.10	33.30	77.50	88.60	4.20	25.60	118.30	89.80	47.30	58.80	195.80
	2020	1.00	35.80	31.60	68.30	73.60	3.40	22.10	99.00	74.50	39.20	53.60	167.40
	2021	0.20	30.50	22.00	52.70	58.90	2.30	18.10	79.40	59.10	32.80	40.10	132.10
	2022	0.20	39.70	25.00	64.80	70.40	2.70	20.50	93.60	70.50	42.40	45.40	158.40
Pacific Cod	2023	-	36.60	24.60	61.20	65.50	2.40	20.40	88.20	65.50	39.00	45.00	149.50
	2019	0.20	0.50	0.80	1.60	-	*	0.40	0.40	0.20	0.50	1.20	2.00
	2020	0.10	-	1.60	1.70	-	*	0.70	0.70	0.10	-	2.20	2.30
	2021	0.10	1.40	0.40	1.90	-	*	0.80	0.90	0.20	1.40	1.30	2.80
	2022	0.20	2.70	0.20	3.10	*	1.10	2.00	3.00	0.20	3.80	2.10	6.10
Sablefish	2023	-	2.60	0.30	3.00	-	1.50	3.20	4.70	-	4.10	3.60	7.80
	2019	-	-	3.30	3.30	-	-	53.60	53.60	-	-	56.80	56.80
	2020	-	-	5.60	5.60	-	-	52.50	52.50	-	-	58.10	58.10
	2021	-	-	3.70	3.70	-	-	56.90	56.90	-	-	60.60	60.60
Atka	2022	-	-	2.40	2.40	-	-	55.00	55.00	-	-	57.40	57.40
Mackerel	2023	-	-	3.70	3.70	-	-	61.80	61.80	-	-	65.50	65.50
	2019	-	-	17.30	17.30	-	-	108.80	108.80	-	-	126.10	126.10
	2020	-	-	16.10	16.10	*	-	115.60	115.60	*	-	131.60	131.60
	2021	-	-	8.00	8.00	*	-	98.70	98.70	*	-	106.70	106.70
	2022	-	-	10.30	10.30	*	-	141.20	141.20	*	-	151.50	151.50
Yellowfin	2023	-	-	7.40	7.40	-	-	103.70	103.70	-	-	111.10	111.10

Table 4.10: Bering Sea and Aleutian Islands groundfish retained catch by vessel type, gear and species, 2022-2023 (1,000 metric tons, round weight). *(continued)*

		Catcher Vessels				Catcher Processors				Total			
	Year	Hook and Line	Pot	Trawl	All Gear	Hook and Line	Pot	Trawl	All Gear	Hook and Line	Pot	Trawl	All Gear
	2019	*	-	2.40	2.40	-	-	22.00	22.00	-	-	24.40	24.40
	2020	-	-	2.60	2.60	*	-	22.00	22.00	*	-	24.70	24.70
	2021	-	-	0.60	0.60	*	-	12.80	12.80	*	-	13.40	13.40
	2022	-	-	0.70	0.70	*	-	16.70	16.70	*	-	17.40	17.40
Rock Sole	2023	-	-	1.50	1.50	*	-	24.60	24.60	*	-	26.20	26.20
	2019	*	-	0.80	0.80	-	-	14.10	14.10	-	-	14.90	14.90
	2020	-	-	1.00	1.10	-	-	7.20	7.20	-	-	8.30	8.30
	2021	-	-	0.70	0.70	-	-	8.70	8.80	-	-	9.50	9.50
Flathead	2022	-	-	0.70	0.70	*	-	12.90	12.90	*	-	13.60	13.70
Sole	2023	-	-	0.50	0.50	*	-	7.60	7.60	*	-	8.20	8.20
	2019	-	-	0.60	0.60	0.20	-	8.30	8.50	0.20	-	8.90	9.10
	2020	*	-	0.30	0.30	0.10	-	9.40	9.50	0.10	-	9.70	9.80
	2021	*	-	0.20	0.20	-	-	7.70	7.80	-	-	8.00	8.00
	2022	-	-	0.10	0.10	*	-	6.60	6.60	-	-	6.70	6.70
Arrowtooth	2023	*	-	0.20	0.20	0.10	-	6.00	6.00	0.10	-	6.20	6.30
	2019	-	-	0.10	0.10	-	-	4.10	4.10	-	-	4.20	4.20
	2020	*	-	0.20	0.20	-	-	6.90	7.00	-	-	7.20	7.20
	2021	-	-	-	-	-	-	6.40	6.40	-	-	6.40	6.40
Kamchatka	2022	-	-	-	-	*	-	8.00	8.00	*	-	8.00	8.00
Flounder	2023	*	-	0.10	0.10	-	-	6.70	6.70	-	-	6.80	6.80
	2019	*	-	-	-	0.50	-	2.20	2.80	0.50	-	2.30	2.80
	2020	*	-	-	-	0.30	-	1.90	2.10	0.30	-	1.90	2.10
	2021	*	-	-	-	-	-	1.50	1.50	-	-	1.50	1.50
	2022	*	-	-	-	-	-	1.40	1.40	-	-	1.40	1.40
Turbot	2023	*	-	-	-	-	-	1.10	1.10	-	-	1.10	1.20

Table 4.10: Bering Sea and Aleutian Islands groundfish retained catch by vessel type, gear and species, 2022-2023 (1,000 metric tons, round weight). *(continued)*

		Catcher Vessels				Catcher Processors				Total			
	Year	Hook and Line	Pot	Trawl	All Gear	Hook and Line	Pot	Trawl	All Gear	Hook and Line	Pot	Trawl	All Gear
	2019	-	-	2.40	2.40	-	-	14.30	14.30	-	-	16.70	16.70
	2020	*	-	3.50	3.50	-	-	16.20	16.20	-	-	19.70	19.70
	2021	-	-	1.10	1.10	*	-	14.40	14.40	*	-	15.40	15.40
Other	2022	-	-	0.80	0.80	-	-	10.60	10.60	-	-	11.40	11.40
Flatfish	2023	-	-	1.20	1.20	-	-	14.80	14.80	-	-	16.00	16.00
	2019	*	-	4.40	4.40	-	-	35.40	35.40	-	-	39.80	39.80
	2020	*	-	4.40	4.40	*	-	33.10	33.10	*	-	37.50	37.50
Pacific	2021	-	-	2.10	2.10	*	-	31.60	31.60	*	-	33.70	33.70
Ocean	2022	*	-	1.80	1.80	-	-	31.80	31.80	*	-	33.60	33.60
Perch	2023	*	-	2.40	2.40	*	-	32.50	32.50	*	-	34.90	34.90
	2019	-	-	0.40	0.40	*	-	8.20	8.20	*	-	8.60	8.60
	2020	-	-	0.80	0.80	-	-	6.50	6.50	-	-	7.30	7.30
	2021	*	-	0.20	0.20	*	-	5.50	5.50	*	-	5.60	5.60
Northern	2022	-	-	0.10	0.10	-	-	7.10	7.10	-	-	7.30	7.30
Rockfish	2023	*	-	0.20	0.20	-	-	9.70	9.70	-	-	9.90	9.90
	2019	-	-	0.10	0.10	-	-	1.30	1.30	-	-	1.30	1.40
	2020	-	-	0.10	0.10	-	-	1.10	1.10	-	-	1.10	1.20
	2021	-	-	-	-	-	-	1.20	1.20	-	-	1.20	1.30
Other	2022	-	-	-	-	*	-	1.20	1.20	-	-	1.30	1.30
Rockfish	2023	-	-	-	0.10	-	-	1.20	1.20	-	-	1.20	1.20
	2019	-	-	0.50	0.70	6.30	-	2.70	9.10	6.40	-	3.20	9.70
	2020	-	-	0.50	0.60	6.60	-	1.90	8.40	6.60	-	2.30	9.10
	2021	-	-	0.40	0.40	6.20	-	2.20	8.50	6.20	-	2.60	8.90
Other	2022	-	-	0.30	0.40	10.90	-	1.30	12.20	10.90	-	1.70	12.60
Groundfish	2023	-	-	0.30	0.40	11.20	-	1.10	12.20	11.20	-	1.40	12.60

	2019	1.40	-	801.90	847.10	101.40	-	961.50	1,067.10	102.80	-	1,763.50	1,914.20
	2020	1.10	-	793.40	830.40	85.00	-	925.90	1,014.30	86.10	-	1,719.30	1,844.70
	2021	0.30	-	757.70	789.90	68.30	-	909.20	979.90	68.70	-	1,666.90	1,769.80
All	2022	0.40	-	612.60	655.50	85.40	-	837.00	926.20	85.80	-	1,449.60	1,581.70
Groundfish	2023	0.10	-	720.80	760.20	81.70	-	910.30	995.90	81.80	-	1,631.10	1,756.10

Note: The estimates are of retained catch (i.e., excludes discarded catch). All groundfish include additional species categories. These estimates include only catch counted against federal TACs. Includes FMP groundfish catch on halibut targets. "*" indicates a confidential value; "-" indicates no applicable data or value.
Source: NMFS Alaska Region Blend and Catch-accounting System estimates; NMFS Alaska Region At-sea Production Reports; ADF&G Commercial Operators Annual Reports (COAR); and NMFS Office of Science and Technology, Fisheries Statistics Division, Fisheries of the United States. Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.11: Bering Sea & Aleutian Islands groundfish retained catch by target, vessel type, gear and species, Catcher Vessels 2022-2023 (1,000 metric tons, round weight).

Gear	Year	Target	Pollock	Sablefish	Pacific Cod	Arrowtooth	Kamchatka Flounder	Flathead Sole	Rock Sole	Turbot	Yellowfin	Flat Other	Rockfish	Atka Mackerel	Other	All Species
		Sablefish	-	0.10	*	-	-	-	-	-	-	-	*	-	-	0.10
		Pacific Cod	-	-	0.10	-	-	-	-	-	-	-	-	-	-	0.10
	2022	All Targets	*	0.20	0.20	-	-	-	-	*	-	-	-	-	-	0.40
		Sablefish	-	*	*	*	-	-	-	-	-	-	*	-	-	*
Hook and		Pacific Cod	-	*	*	*	*	-	-	*	-	-	*	-	-	*
Line	2023	All Targets	-	-	-	*	*	-	-	*	-	-	-	-	-	0.10
		Sablefish	*	2.70	*	*	-	-	-	*	-	-	-	-	*	2.70
		Pacific Cod	-	-	39.70	*	-	-	-	-	*	-	-	-	0.10	39.80
	2022	All Targets	-	2.70	39.70	*	-	-	-	*	*	-	-	-	0.10	42.50
		Sablefish	-	2.60	*	*	-	-	-	-	-	-	-	-	-	2.60
		Pacific Cod	-	*	36.60	*	-	-	*	-	*	*	-	-	0.10	36.70
Pot	2023	All Targets	-	2.60	36.60	*	-	-	*	-	*	*	-	-	0.10	39.30
		Pollock, Bottom	3.80	*	0.10	-	-	-	-	*	0.10	-	0.10	*	-	4.00
		Pollock, Pelagic	564.60	0.20	1.40	0.10	*	0.20	-	-	-	-	0.20	-	0.10	566.80
		Pacific Cod	0.50	*	22.40	-	-	-	-	-	-	-	-	*	-	23.00
		Flathead Sole	0.20	-	0.10	-	*	0.20	0.10	-	0.40	-	-	-	-	1.10
		Rock Sole	-	-	-	*	-	*	-	-	-	-	-	-	*	-
		Yellowfin	0.80	-	0.70	0.10	-	0.30	0.50	-	9.80	0.70	-	-	0.20	13.10
		Rockfish	0.10	-	-	-	-	-	-	-	-	-	1.40	0.10	-	1.70
		Atka Mackerel	0.10	*	0.30	*	*	*	-	-	-	-	0.30	2.30	-	3.00
	2022	All Targets	570.00	0.20	25.00	0.10	-	0.70	0.70	-	10.30	0.80	2.00	2.40	0.30	612.60

Table 4.11: Bering Sea & Aleutian Islands groundfish retained catch by target, vessel type, gear and species, Catcher Vessels 2022-2023 (1,000 metric tons, round weight). *(continued)*

Gear	Year	Target	Pollock	Sablefish	Pacific Cod	Arrowtooth	Kamchatka Flounder	Flathead Sole	Rock Sole	Turbot	Yellowfin	Flat Other	Rockfish	Atka Mackerel	Other	All Species
		Pollock, Bottom	2.60	*	-	-	-	-	*	*	*	-	0.20	-	-	2.80
		Pollock, Pelagic	673.90	0.30	1.80	0.10	*	0.30	0.10	-	-	0.20	0.60	-	0.10	677.30
		Pacific Cod	0.60	*	21.90	0.10	*	0.10	0.30	*	-	-	-	*	0.10	23.00
		Flathead Sole	*	-	*	*	-	*	*	-	*	*	-	-	*	*
		Rock Sole	0.10	-	0.10	-	-	-	0.30	-	0.40	0.10	-	-	-	1.10
		Yellowfin	0.90	-	0.50	-	-	0.20	0.80	*	7.00	0.90	-	-	0.10	10.20
		Rockfish	0.20	0.10	-	-	0.10	*	-	*	-	-	1.70	0.40	-	2.50
		Atka Mackerel	-	-	0.30	-	-	*	-	*	-	*	0.20	3.30	-	3.90
Trawl	2023	All Targets	678.20	0.30	24.60	0.20	0.10	0.50	1.50	-	7.40	1.20	2.70	3.70	0.30	720.80
All Gear	2022	All Targets	570.00	3.10	64.80	0.10	-	0.70	0.70	-	10.30	0.80	2.00	2.40	0.40	655.50
	2023	All Targets	678.20	3.00	61.20	0.20	0.10	0.50	1.50	-	7.40	1.20	2.70	3.70	0.40	760.20

Note: Estimates are of retained catch (i.e., excluding discarded catch) by species/species category, gear, and fishery target, where fishery target is as assigned by the Groundfish Catch Accounting System according to the predominant species within a trip or haul. For details on target assignment in retained catch estimation procedures, see Cahalan, J., J. Gasper, and J. Mondragon. 2014. Catch sampling and estimation in the federal groundfish fisheries off Alaska, 2015 edition. U.S. Dep. Commer., NOAA Tech. Memo. NMFS-AFSC-286,46 p.' Values may not sum to the totals shown in the "All Species" column due to suppression of values for selected species-gear combinations. These estimates include only catch counted against federal TACs. Estimates also include retained catch of FMP groundfish in the halibut fishery. "*" indicates a confidential value; "-" indicates no applicable data or value.

Source: NMFS Alaska Region Blend and Catch-accounting System estimates. Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.12: Bering Sea & Aleutian Islands groundfish retained catch by target, vessel type, gear and species, Catcher Processors 2022-2023 (1,000 metric tons, round weight).

Gear	Year	Target	Pollock	Sablefish	Pacific Cod	Arrowtooth	Kamchatka Flounder	Flathead Sole	Rock Sole	Turbot	Yellowfin	Flat Other	Rockfish	Atka Mackerel	Other	All Species
		Sablefish	-	*	-	-	-	-	-	-	-	-	*	-	-	*
		Pacific Cod	4.10	*	70.40	*	*	*	*	-	*	-	*	-	10.90	85.40
		Halibut	-	-	*	-	-	-	-	-	-	-	-	-	-	*
	2022	All Targets	4.10	*	70.40	*	*	*	*	-	*	-	*	-	10.90	85.40
Hook and Line		Pacific Cod	5.00	-	65.50	0.10	-	*	*	-	-	-	-	-	11.20	81.70
	2023	All Targets	5.00	-	65.50	0.10	-	*	*	-	-	-	-	-	11.20	81.70
		Sablefish	-	1.10	-	-	-	-	-	-	-	-	*	-	-	1.10
		Pacific Cod	*	-	2.70	-	-	*	*	-	*	-	-	-	*	2.70
	2022	All Targets	*	1.10	2.70	-	-	*	*	-	*	-	*	-	*	3.80
		Sablefish	*	1.50	*	-	-	-	-	*	-	-	*	-	-	1.50
		Pacific Cod	*	-	2.40	*	-	-	-	-	-	-	-	-	*	2.40
Pot	2023	All Targets	*	1.50	2.40	*	-	-	-	*	-	-	*	-	*	3.90

Table 4.12: Bering Sea & Aleutian Islands groundfish retained catch by target, vessel type, gear and species, Catcher Processors 2022-2023 (1,000 metric tons, round weight). *(continued)*

Gear	Year	Target	Pollock	Sablefish	Pacific Cod	Arrowtooth	Kamchatka Flounder	Flathead Sole	Rock Sole	Turbot	Yellowfin	Flat Other	Rockfish	Atka Mackerel	Other	All Species
		Pollock, Bottom	4.50	-	0.40	0.20	0.20	0.10	0.10	-	0.50	0.20	0.30	0.10	-	6.50
		Pollock, Pelagic	487.90	-	1.80	-	-	0.50	0.30	-	0.20	-	0.60	-	0.20	491.50
		Sablefish	-	0.30	*	-	0.10	-	*	0.10	*	-	0.10	*	-	0.60
		Pacific Cod	0.20	-	2.50	-	*	-	0.40	*	-	-	*	*	-	3.20
		Arrowtooth	0.20	0.10	0.10	1.10	0.20	0.30	-	0.10	*	0.10	0.20	*	*	2.30
		Kamchatka Flounder	1.20	0.50	-	1.70	6.50	*	*	0.50	-	-	0.80	0.10	-	11.40
		Rock Sole	1.90	-	2.10	0.10	*	0.60	6.60	-	4.10	0.90	-	-	-	16.30
		Turbot	0.10	0.10	*	0.10	0.20	0.10	*	0.30	-	0.10	0.10	-	*	0.90
		Yellowfin	19.30	*	9.10	1.10	0.10	5.50	8.00	-	132.90	8.30	-	*	0.80	185.10
		Other Flatfish	-	-	-	0.10	0.10	-	*	-	*	0.10	-	-	*	0.40
		Rockfish	1.80	0.50	0.70	0.60	0.30	0.10	-	0.10	-	0.20	25.20	6.00	-	35.50
		Atka Mackerel	1.10	0.20	2.20	0.20	0.20	-	0.10	-	*	-	12.40	48.70	0.10	65.10
	2022	All Targets	520.80	2.00	20.50	6.60	8.00	12.90	16.70	1.40	141.20	10.60	40.10	55.00	1.30	837.00
		Pollock, Bottom	3.40	-	0.40	0.10	-	0.20	0.30	*	0.70	0.10	0.20	-	-	5.50
		Pollock, Pelagic	581.60	-	1.60	0.10	-	0.30	0.10	-	-	-	0.30	-	0.10	584.00
		Sablefish	0.10	0.60	-	0.20	0.20	0.10	*	0.10	*	0.10	0.20	*	-	1.70
		Pacific Cod	0.50	-	2.90	-	-	-	0.70	-	-	0.10	*	*	*	4.10
		Arrowtooth	0.30	0.30	0.10	1.30	0.30	0.20	-	0.10	*	0.10	0.10	*	0.10	3.00
		Kamchatka Flounder	1.20	1.00	-	1.80	5.10	-	*	0.50	-	-	0.90	0.50	-	11.10
		Rock Sole	6.80	*	4.70	0.10	-	0.60	13.70	*	12.30	2.50	*	-	0.10	40.60
		Turbot	*	*	*	-	-	-	-	-	-	-	-	-	*	0.10
		Yellowfin	15.90	-	6.90	0.80	0.10	2.40	9.00	-	88.20	10.20	*	-	0.50	133.90
		Other Flatfish	0.30	0.40	0.20	0.30	0.20	0.20	0.20	0.10	0.10	1.10	0.20	*	-	3.20
		Rockfish	2.50	0.60	0.80	0.60	0.50	0.20	-	0.10	*	0.20	28.90	8.30	0.10	42.90
		Atka Mackerel	1.50	0.20	2.00	0.20	0.10	-	-	-	*	-	12.30	53.00	0.10	69.40
Trawl	2023	All Targets	616.00	3.20	20.40	6.00	6.70	7.60	24.60	1.10	103.70	14.80	43.40	61.80	1.10	910.30

Table 4.12: Bering Sea & Aleutian Islands groundfish retained catch by target, vessel type, gear and species, Catcher Processors 2022-2023 (1,000 metric tons, round weight). *(continued)*

Gear	Year	Target	Pollock	Sablefish	Pacific Cod	Arrowtooth	Kamchatka Flounder	Flathead Sole	Rock Sole	Turbot	Yellowfin	Flat Other	Rockfish	Atka Mackerel	Other	All Species
All Gear	2022	All Targets	524.90	3.00	93.60	6.60	8.00	12.90	16.70	1.40	141.20	10.60	40.10	55.00	12.20	926.20
	2023	All Targets	621.00	4.70	88.20	6.00	6.70	7.60	24.60	1.10	103.70	14.80	43.40	61.80	12.20	995.90

Note: Estimates are of retained catch (i.e., excluding discarded catch) by species/species category, gear, and fishery target, where fishery target is as assigned by the Groundfish Catch Accounting System according to the predominant species within a trip or haul. For details on target assignment in retained catch estimation procedures, see Cahalan, J., J. Gasper, and J. Mondragon. 2014. Catch sampling and estimation in the federal groundfish fisheries off Alaska, 2015 edition. U.S. Dep. Commer., NOAA Tech. Memo. NMFS-AFSC-286,46 p.' Values may not sum to the totals shown in the "All Species" column due to suppression of values for selected species-gear combinations. These estimates include only catch counted against federal TACs. Estimates also include retained catch of FMP groundfish in the halibut fishery. "*" indicates a confidential value; "-" indicates no applicable data or value.
Source: NMFS Alaska Region Blend and Catch-accounting System estimates. Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.13: Bering Sea & Aleutian Islands ex-vessel prices in the groundfish fisheries by gear, and species, 2019-2023; calculations based on COAR ($/lb, round weight).

		Shoreside			At Sea			All Sectors		
		Fixed	Trawl	All Gear	Fixed	Trawl	All Gear	Fixed	Trawl	All Gear
	2019	0.16	0.17	0.17	0.16	0.13	0.13	0.16	0.14	0.14
	2020	0.01	0.15	0.15	0.01	0.11	0.11	0.01	0.13	0.13
	2021	0.06	0.16	0.16	0.06	0.12	0.12	0.06	0.14	0.14
	2022	0.12	0.20	0.20	0.12	0.15	0.15	0.12	0.17	0.17
Pollock	2023	0.06	0.17	0.17	0.06	0.13	0.13	0.06	0.15	0.15
	2019	0.44	0.37	0.42	0.48	0.35	0.44	0.47	0.36	0.43
	2020	0.42	0.35	0.39	0.43	0.36	0.41	0.43	0.36	0.40
	2021	0.39	0.34	0.37	0.34	0.29	0.32	0.35	0.32	0.34
Pacific	2022	0.47	0.45	0.46	0.47	0.43	0.46	0.47	0.44	0.46
Cod	2023	0.44	0.46	0.45	0.44	0.45	0.44	0.44	0.46	0.44
	2019	1.92	0.75	1.30	1.92	0.75	1.01	1.92	0.75	1.21
	2020	1.50	0.67	0.94	1.50	0.67	0.98	1.50	0.67	0.95
	2021	1.96	0.77	1.72	1.96	0.77	1.21	1.96	0.77	1.49
	2022	1.89	0.76	1.83	1.89	0.76	1.15	1.89	0.76	1.49
Sablefish	2023	1.26	0.58	1.21	1.26	0.58	0.79	1.26	0.58	0.95
	2019	0.01	0.28	0.28	*	0.28	0.28	0.01	0.28	0.28
	2020	0.01	0.26	0.26	0.01	0.26	0.26	0.01	0.26	0.26
	2021	0.02	0.22	0.22	*	0.22	0.22	0.02	0.22	0.22
Atka	2022	0.01	0.24	0.24	-	0.24	0.24	0.01	0.24	0.24
Mackerel	2023	0.02	0.26	0.26	-	0.26	0.26	0.02	0.26	0.26
	2019	0.01	0.21	0.09	0.01	0.21	0.21	0.01	0.21	0.21
	2020	0.01	0.16	0.11	*	0.16	0.16	0.01	0.16	0.16
	2021	0.01	0.14	0.13	*	0.14	0.14	0.01	0.14	0.14
	2022	*	0.19	0.19	*	0.19	0.19	*	0.19	0.19
Yellowfin	2023	*	0.18	0.18	-	0.18	0.18	*	0.18	0.18
	2019	0.01	0.22	0.22	0.01	0.22	0.22	0.01	0.22	0.22
	2020	*	0.20	0.20	*	0.20	0.20	*	0.20	0.20
	2021	*	0.14	0.14	*	0.14	0.14	*	0.14	0.14
	2022	0.01	0.20	0.20	*	0.20	0.20	0.01	0.20	0.20
Rock Sole	2023	*	0.20	0.20	*	0.20	0.20	*	0.20	0.20

Table 4.13: Bering Sea & Aleutian Islands ex-vessel prices in the groundfish fisheries by gear, and species, 2019-2023; calculations based on COAR ($/lb, round weight). *(continued)*

		Shoreside			At Sea			All Sectors		
		Fixed	Trawl	All Gear	Fixed	Trawl	All Gear	Fixed	Trawl	All Gear
	2019	0.01	0.22	0.22	0.01	0.22	0.22	0.01	0.22	0.22
	2020	0.01	0.16	0.16	0.01	0.16	0.16	0.01	0.16	0.16
	2021	0.01	0.15	0.14	0.01	0.15	0.15	0.01	0.15	0.15
Flathead	2022	0.02	0.19	0.17	0.01	0.19	0.19	0.02	0.19	0.19
Sole	2023	0.02	0.19	0.18	*	0.19	0.19	0.02	0.19	0.19
	2019	*	0.70	0.70	0.01	0.70	0.57	0.01	0.70	0.57
	2020	*	0.65	0.65	0.01	0.65	0.57	0.01	0.65	0.57
	2021	*	0.64	0.64	0.01	0.64	0.63	0.01	0.64	0.63
	2022	*	0.76	0.76	0.01	0.76	0.76	0.01	0.76	0.76
Turbot	2023	*	0.77	0.77	0.02	0.77	0.77	0.02	0.77	0.77
	2019	*	0.22	0.22	0.01	0.22	0.21	0.01	0.22	0.21
	2020	0.02	0.18	0.18	0.01	0.18	0.17	0.01	0.18	0.17
	2021	0.01	0.18	0.18	0.01	0.18	0.18	0.01	0.18	0.18
	2022	0.01	0.22	0.22	*	0.22	0.22	0.01	0.22	0.22
Arrowtooth	2023	*	0.24	0.24	0.02	0.24	0.24	0.02	0.24	0.24
	2019	-	*	*	0.01	0.25	0.24	0.01	0.25	0.24
	2020	*	*	*	0.01	0.22	0.22	0.01	0.22	0.22
	2022	-	*	*	*	0.26	0.26	*	0.26	0.26
Kamchatka	2023	*	-	*	0.02	0.27	0.27	0.02	0.27	0.27
Flounder	2021	-	-	-	0.01	0.23	0.23	0.01	0.23	0.23
	2019	0.01	0.58	0.55	0.01	0.19	0.19	0.01	0.19	0.19
	2020	0.01	0.40	0.40	0.01	0.17	0.17	0.01	0.17	0.17
	2021	*	0.27	0.27	*	0.12	0.12	*	0.12	0.12
Other	2022	-	0.28	0.28	0.01	0.18	0.18	0.01	0.18	0.18
Flatfish	2023	*	0.32	0.32	0.02	0.21	0.21	0.02	0.21	0.21
	2019	0.02	0.16	0.16	0.74	0.16	0.16	0.22	0.16	0.16
	2020	*	0.15	0.15	*	0.15	0.15	*	0.15	0.15
Pacific	2021	*	0.15	0.15	*	0.15	0.15	*	0.15	0.15
Ocean	2022	0.44	0.20	0.20	-	0.20	0.20	0.44	0.20	0.20
Perch	2023	*	0.18	0.18	*	0.18	0.18	*	0.18	0.18

Table 4.13: Bering Sea & Aleutian Islands ex-vessel prices in the groundfish fisheries by gear, and species, 2019-2023; calculations based on COAR ($/lb, round weight). *(continued)*

		Shoreside			At Sea			All Sectors		
		Fixed	Trawl	All Gear	Fixed	Trawl	All Gear	Fixed	Trawl	All Gear
	2019	*	0.14	0.14	*	0.14	0.14	*	0.14	0.14
	2020	-	0.10	0.10	0.36	0.10	0.10	0.36	0.10	0.10
	2021	*	0.08	0.08	*	0.08	0.08	*	0.08	0.08
Northern	2022	-	0.14	0.14	-	0.14	0.14	-	0.14	0.14
Rockfish	2023	*	0.13	0.13	0.42	0.13	0.13	0.42	0.13	0.13
	2019	0.76	0.27	0.48	0.74	0.35	0.36	0.75	0.35	0.36
	2020	0.45	0.21	0.30	0.36	0.29	0.29	0.41	0.29	0.29
	2021	0.45	0.14	0.36	0.38	0.32	0.32	0.40	0.32	0.32
Other	2022	0.42	0.17	0.36	0.44	0.41	0.41	0.42	0.41	0.41
Rockfish	2023	0.39	0.19	0.33	0.42	0.33	0.33	0.39	0.33	0.33
	2019	0.45	0.09	0.25	0.45	0.03	0.31	0.45	0.03	0.31
	2020	0.41	0.02	0.16	0.41	0.02	0.31	0.41	0.02	0.31
	2021	0.19	0.12	0.12	0.19	0.02	0.14	0.19	0.02	0.14
Other	2022	0.97	0.11	0.45	0.97	0.01	0.85	0.97	0.02	0.84
Groundfish	2023	0.55	0.10	0.24	0.55	0.01	0.50	0.55	0.02	0.49

Note: Prices are for catch from both federal and state of Alaska fisheries. The ex-vessel price is calculated as value of landings divided by estimated or actual round weight. Prices for catch processed by an at-sea processor without a COAR buying record (e.g., from catcher processors) are set using the prices for the matching species (group), region and gear-types for which buying records exist shoreside. Trawl-caught sablefish, rockfish and flatfish in the BSAI and trawl-caught Atka mackerel in both the BSAI and the GOA are not well represented in the COAR buying records. A price was calculated for these categories from product-report prices; the price in this case is the value of the first wholesale products divided by the calculated round weight and multiplied by a constant 0.4, a coarse estimate of the value added by processing based. The "All Alaska/All gear" column is the average weighted by retained catch. Values are not adjusted for inflation. "*" indicates a confidential value; "-" indicates no applicable data or value.
Source: NMFS Alaska Region Blend and Catch-accounting System estimates; NMFS Alaska Region At-sea Production Reports; and ADF&G Commercial Operators Annual Reports (COAR). Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.14: Bering Sea & Aleutian Islands ex-vessel value of the groundfish catch by vessel category, gear, and species, 2019-2023; calculations based on COAR ($ millions).

		Catcher Vessels				Catcher Processor				All Sectors			
		Hook and Line	Pot	Trawl	All Gear	Hook and Line	Pot	Trawl	All Gear	Hook and Line	Pot	Trawl	All Gear
	2019	-	-	259.81	259.81	-	-	186.50	188.45	-	-	446.31	448.27
	2020	-	-	233.70	233.70	-	-	156.30	156.44	-	-	390.00	390.14
	2021	-	-	242.79	242.79	-	-	175.11	175.53	-	-	417.90	418.32
	2022	-	-	241.98	241.98	-	-	175.80	176.91	-	-	417.78	418.89
Pollock	2023	-	-	244.03	244.03	-	-	173.13	173.85	-	-	417.16	417.88
	2019	1.16	42.04	19.06	62.26	93.51	4.43	27.39	125.34	94.67	46.47	46.45	187.59
	2020	0.89	33.12	19.60	53.61	70.20	3.26	22.47	95.93	71.08	36.39	42.07	149.54
	2021	0.17	26.17	13.02	39.35	43.68	1.71	14.92	60.31	43.85	27.88	27.94	99.66
Pacific	2022	0.16	41.48	19.24	60.88	73.57	2.86	24.86	101.28	73.73	44.34	44.10	162.17
Cod	2023	0.06	35.39	18.84	54.29	63.35	2.30	26.44	92.09	63.41	37.69	45.28	146.38
	2019	0.87	2.19	1.36	4.41	0.29	*	0.83	1.12	1.16	2.19	2.18	5.53
	2020	0.41	1.89	2.19	4.49	0.21	*	1.13	1.35	0.62	1.89	3.33	5.84
	2021	0.80	5.95	0.71	7.47	0.28	*	1.63	1.91	1.09	5.95	2.34	9.38
	2022	0.82	11.38	0.38	12.58	*	4.39	3.34	7.73	0.82	15.77	3.72	20.31
Sablefish	2023	0.52	7.32	0.44	8.28	-	4.24	4.23	8.47	0.52	11.56	4.68	16.76
	2019	-	-	0.14	0.14	-	-	35.36	35.36	-	-	35.50	35.50
	2020	-	-	0.24	0.24	-	-	32.65	32.65	-	-	32.89	32.89
	2021	-	-	0.23	0.23	-	-	29.29	29.29	-	-	29.52	29.52
Atka	2022	-	-	0.05	0.05	-	-	30.99	30.99	-	-	31.04	31.04
Mackerel	2023	-	-	0.02	0.02	-	-	37.64	37.64	-	-	37.65	37.65
	2019	-	-	0.01	0.01	-	-	57.24	57.24	-	-	57.25	57.25
	2020	-	-	0.01	0.01	*	-	47.16	47.16	*	-	47.17	47.17
	2021	-	-	-	-	*	-	33.75	33.75	*	-	33.75	33.75
	2022	-	-	0.03	0.03	*	-	62.91	62.91	*	-	62.94	62.94
Yellowfin	2023	-	-	-	-	-	-	43.07	43.07	-	-	43.07	43.07

Table 4.14: Bering Sea & Aleutian Islands ex-vessel value of the groundfish catch by vessel category, gear, and species, 2019-2023; calculations based on COAR ($ millions). *(continued)*

		Catcher Vessels				Catcher Processor				All Sectors			
		Hook and Line	Pot	Trawl	All Gear	Hook and Line	Pot	Trawl	All Gear	Hook and Line	Pot	Trawl	All Gear
	2019	*	-	0.09	0.09	-	-	11.78	11.78	-	-	11.87	11.87
	2020	-	-	0.08	0.08	*	-	10.86	10.86	*	-	10.94	10.94
	2021	-	-	0.02	0.02	*	-	4.01	4.01	*	-	4.03	4.03
Rock	2022	-	-	0.02	0.02	*	-	7.76	7.76	*	-	7.78	7.78
Sole	2023	-	-	0.04	0.04	*	-	11.55	11.55	*	-	11.59	11.59
	2019	*	-	0.15	0.15	-	-	7.15	7.15	-	-	7.31	7.31
	2020	-	-	0.24	0.24	-	-	2.78	2.78	-	-	3.02	3.02
	2021	-	-	0.13	0.13	-	-	2.95	2.95	-	-	3.08	3.08
Flathead	2022	-	-	0.08	0.08	*	-	5.77	5.77	*	-	5.84	5.84
Sole	2023	-	-	0.13	0.13	*	-	3.29	3.29	*	-	3.42	3.42
	2019	-	-	0.06	0.06	0.01	-	4.18	4.19	0.01	-	4.24	4.25
	2020	*	-	0.07	0.07	0.01	-	3.77	3.78	0.01	-	3.84	3.85
	2021	*	-	0.03	0.03	-	-	3.18	3.18	-	-	3.22	3.22
	2022	-	-	0.03	0.03	*	-	3.26	3.26	-	-	3.29	3.29
Arrowtooth	2023	*	-	0.04	0.04	-	-	3.24	3.24	-	-	3.28	3.28
	2019	-	-	-	-	-	-	2.28	2.28	-	-	2.28	2.28
	2020	*	-	-	-	-	-	3.47	3.47	-	-	3.47	3.47
	2021	-	-	*	*	-	-	3.26	3.26	-	-	3.26	3.26
Kamchatka	2022	-	-	*	*	*	-	4.57	4.57	*	-	4.57	4.57
Flounder	2023	*	-	*	*	-	-	4.07	4.07	-	-	4.07	4.07
	2019	*	-	-	-	0.02	-	3.51	3.52	0.02	-	3.51	3.53
	2020	*	-	0.01	0.01	0.01	-	2.81	2.82	0.01	-	2.81	2.82
	2021	*	-	-	-	-	-	2.16	2.16	-	-	2.17	2.17
	2022	*	-	-	-	-	-	2.34	2.34	-	-	2.34	2.34
Turbot	2023	*	-	0.01	0.01	-	-	2.05	2.05	-	-	2.06	2.06

Table 4.14: Bering Sea & Aleutian Islands ex-vessel value of the groundfish catch by vessel category, gear, and species, 2019-2023; calculations based on COAR ($ millions). *(continued)*

		Catcher Vessels				Catcher Processor				All Sectors			
		Hook and Line	Pot	Trawl	All Gear	Hook and Line	Pot	Trawl	All Gear	Hook and Line	Pot	Trawl	All Gear
	2019	-	-	0.20	0.20	-	-	6.87	6.87	-	-	7.07	7.07
	2020	*	-	0.30	0.30	-	-	7.16	7.16	-	-	7.46	7.46
	2021	-	-	0.07	0.07	*	-	4.18	4.18	*	-	4.25	4.25
Other	2022	-	-	0.04	0.04	-	-	4.51	4.51	-	-	4.56	4.56
Flatfish	2023	-	-	0.12	0.12	-	-	7.31	7.31	-	-	7.43	7.43
	2019	*	-	0.68	0.68	-	-	13.35	13.35	-	-	14.03	14.03
	2020	*	-	0.62	0.62	*	-	11.86	11.86	*	-	12.47	12.47
Pacific	2021	-	-	0.20	0.20	*	-	11.12	11.12	*	-	11.31	11.31
Ocean	2022	*	-	0.11	0.11	-	-	14.48	14.48	*	-	14.59	14.59
Perch	2023	*	-	0.30	0.30	*	-	13.80	13.80	*	-	14.09	14.09
	2019	-	-	0.01	0.01	*	-	2.60	2.60	*	-	2.61	2.61
	2020	-	-	0.01	0.01	0.01	-	1.51	1.52	0.01	-	1.53	1.54
	2021	*	-	-	-	*	-	1.06	1.06	*	-	1.06	1.06
Northern	2022	-	-	-	-	-	-	2.20	2.20	-	-	2.20	2.20
Rockfish	2023	*	-	-	-	-	-	2.83	2.84	-	-	2.84	2.84
	2019	0.02	-	0.01	0.04	0.04	-	1.04	1.09	0.07	-	1.06	1.13
	2020	0.02	-	0.01	0.03	0.02	-	0.73	0.74	0.03	-	0.74	0.78
	2021	0.01	-	-	0.01	0.02	-	0.89	0.91	0.03	-	0.89	0.92
Other	2022	0.01	-	-	0.01	*	-	1.14	1.14	0.01	-	1.14	1.15
Rockfish	2023	0.01	-	-	0.01	-	-	0.88	0.88	0.01	-	0.89	0.90
	2019	0.02	-	0.03	0.17	6.38	-	0.19	6.57	6.40	-	0.22	6.74
	2020	-	-	0.02	0.15	5.90	-	0.10	5.99	5.90	-	0.11	6.14
	2021	-	-	0.05	0.06	2.64	-	0.09	2.73	2.64	-	0.14	2.78
Other	2022	-	-	0.03	0.18	23.28	-	0.05	23.34	23.29	-	0.08	23.52
Groundfish	2023	-	-	0.03	0.11	13.70	-	0.03	13.73	13.70	-	0.06	13.84

	2019	2.06	-	281.61	328.02	102.22	-	360.26	466.91	104.28	-	641.87	794.93
	2020	1.32	-	257.09	293.55	76.49	-	304.75	384.51	77.81	-	561.85	678.07
	2021	0.98	-	257.25	290.35	47.04	-	287.60	336.36	48.02	-	544.85	626.71
All	2022	0.99	-	261.99	315.99	97.96	-	343.97	449.18	98.94	-	605.96	765.17
Species	2023	0.59	-	264.01	307.39	77.78	-	333.55	417.87	78.37	-	597.56	725.25

Note: Ex-vessel value is calculated by multiplying ex-vessel prices by the retained round weight catch. Refer to Table 4.13 for a description of the price derivation. The value added by at-sea processing is not included in these estimates of ex-vessel value. All groundfish includes additional species categories. Values are not adjusted for inflation. "*" indicates a confidential value; "-" indicates no applicable data or value.
Source: NMFS Alaska Region Blend and Catch-accounting System estimates; NMFS Alaska Region At-sea Production Reports; and ADF&G Commercial Operators Annual Reports (COAR). Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.15: Bering Sea & Aleutian Islands vessel and processor permit counts, ex-vessel value, value per vessel, and percent value of BSAI FMP groundfish and all BSAI fisheries by fleet, 2019-2023; calculations based on COAR ($ millions).

	Year	Vessels	Processors	Ex-vessel Value per Vessel $1,000	Ex-vessel Value $million	Percent Value, BSAI FMP Groundfish	Percent Value, All BSAI Fisheries
	2019	82	22	3,444.55	282.45	35.54	20.49
	2020	86	20	2,979.53	256.24	37.74	22.66
	2021	82	17	3,133.22	256.92	40.89	19.47
AFA	2022	80	13	3,242.12	259.37	33.91	19.43
CV	2023	75	11	3,501.81	262.64	36.22	25.70
	2019	16	16	11,924.54	190.79	24.01	13.84
	2020	13	13	11,639.55	151.31	22.29	13.38
	2021	15	15	11,824.05	177.36	28.23	13.44
	2022	14	14	11,989.39	167.85	21.95	12.58
AFA CP	2023	13	13	12,724.10	165.41	22.81	16.18
	2019	20	20	7,397.80	147.96	18.62	10.73
	2020	19	19	6,627.88	125.93	18.55	11.14
	2021	19	19	5,326.49	101.20	16.11	7.67
	2022	18	18	8,405.58	151.30	19.78	11.34
A80	2023	17	17	8,254.19	140.32	19.35	13.73
	2019	18	18	1,148.40	20.67	2.60	1.50
	2020	15	16	1,891.05	28.37	4.18	2.51
	2021	14	13	668.73	9.36	1.49	0.71
BSAI	2022	21	13	1,306.58	27.44	3.59	2.06
Trawl	2023	18	13	1,621.72	29.19	4.03	2.86
	2019	8	7	*	*	*	*
CV	2020	12	5	*	*	*	*
Hook	2021	2	4	*	*	*	*
and	2022	5	3	*	*	*	*
Line	2023	2	2	*	*	*	*
	2019	23	23	4,439.33	102.10	12.85	7.41
CP	2020	20	20	3,819.16	76.38	11.25	6.76
Hook	2021	17	17	2,761.82	46.95	7.47	3.56
and	2022	19	19	5,156.34	97.97	12.81	7.34
Line	2023	18	18	4,321.02	77.78	10.73	7.61
	2019	14	8	218.05	3.05	0.38	0.22
	2020	16	5	207.92	3.33	0.49	0.29
	2021	22	7	383.51	8.44	1.34	0.64
Sablefish	2022	28	11	578.88	16.21	2.12	1.21
IFQ	2023	29	10	390.03	11.31	1.56	1.11
	2019	83	18	561.37	46.59	5.86	3.38
	2020	94	17	388.57	36.53	5.38	3.23
	2021	65	17	429.05	27.89	4.44	2.11
	2022	66	11	675.04	44.55	5.83	3.34
Pot	2023	57	9	673.11	38.37	5.29	3.75

Table 4.15: Bering Sea & Aleutian Islands vessel and processor permit counts, ex-vessel value, value per vessel, and percent value of BSAI FMP groundfish and all BSAI fisheries by fleet, 2019-2023; calculations based on COAR ($ millions). *(continued)*

	Year	Vessels	Processors	Ex-vessel Value per Vessel $1,000	Ex-vessel Value $million	Percent Value, BSAI FMP Groundfish	Percent Value, All BSAI Fisheries
	2019	3	3	*	*	*	*
	2020	3	2	*	*	*	*
	2021	1	1	*	*	*	*
	2022	1	1	*	*	*	*
Jig	2023	1	1	*	*	*	*

Note: These tables include the value of groundfish purchases reported by processing plants, as well as by other entities, such as markets and restaurants, that normally would not report sales of groundfish products.Keep this in mind when comparing ex-vessel values in this table to gross processed-product values. The data are for catch from both federal and state of Alaska fisheries. The category "BSAI Trawl" does not include trawl vessel in the other categories (e.g. "AFA CV", "AFA CP", "A80"), for example TLAS. The column 'permits' is a count of federal groundfish processor permits. Values are not adjusted for inflation. **Source**: ADF&G Commercial Operators Annual Reports (COAR); and ADF&G Intent to Operate (ITO) file. Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.16: Bering Sea & Aleutian Islands production of groundfish products by species, 2019-2023, (1,000 metric tons product weight).

		2019			2020			2021			2022			2023		
	Product	At Sea	Shoreside	All	At Sea	Shoreside	All	At Sea	Shoreside	All	At Sea	Shoreside	All	At Sea	Shoreside	All
	Whole Fish	0.15	0.22	0.37	0.01	0.36	0.37	*	0.17	0.17	0.04	0.24	0.29	0.05	0.38	0.42
	Head And Gut	17.68	*	17.68	16.22	*	16.22	11.81	*	11.81	14.71	*	14.71	15.78	*	15.78
	Roe	16.18	11.77	27.95	15.73	8.96	24.68	11.51	4.44	15.95	9.28	4.55	13.83	9.10	5.56	14.66
	Deep-Skin Fillets	39.34	18.81	58.15	34.16	15.98	50.14	34.64	*	34.64	32.93	*	32.93	40.62	18.27	58.89
	Other Fillets	66.04	62.60	128.63	48.87	50.37	99.24	40.49	42.99	83.48	35.19	42.88	78.08	43.10	40.93	84.03
	Surimi	104.67	87.57	192.24	91.22	80.54	171.77	98.58	89.17	187.75	78.71	76.13	154.84	94.40	91.12	185.52
	Minced Fish	12.25	7.35	19.59	15.73	11.38	27.11	14.07	13.18	27.25	9.16	6.43	15.58	13.43	7.45	20.88
	Fishmeal	30.51	39.33	69.84	29.37	40.03	69.40	29.49	37.72	67.20	22.26	23.70	45.96	28.07	33.59	61.66
	Other Products	16.34	27.13	43.47	10.41	23.40	33.81	13.06	22.80	35.86	10.91	20.37	31.28	12.22	26.81	39.02
Pollock	All Products	303.17	254.76	557.93	261.72	231.02	492.74	253.65	210.47	464.12	213.19	174.30	387.49	256.76	224.10	480.86
	Whole Fish	0.01	0.28	0.29	0.01	0.11	0.11	*	0.06	0.06	0.18	0.05	0.23	0.23	0.13	0.36
	Head And Gut	58.78	11.47	70.25	47.30	7.74	55.04	37.47	8.49	45.96	45.13	2.22	47.35	44.91	2.10	47.01
	Roe	1.31	1.69	3.01	0.85	2.02	2.87	0.88	1.41	2.29	0.88	1.96	2.85	1.02	1.74	2.76
	Fillets	0.23	7.80	8.02	0.18	7.33	7.51	0.25	5.36	5.61	0.13	10.00	10.13	0.13	8.88	9.01
	Other Products	7.39	6.01	13.40	6.21	5.87	12.08	5.21	3.73	8.94	6.07	9.60	15.67	6.35	4.93	11.28
Pacific Cod	All Products	67.72	27.25	94.97	54.55	23.07	77.62	43.81	19.06	62.86	52.38	23.84	76.22	52.65	17.78	70.43
	Head And Gut	0.34	0.58	0.92	0.56	0.55	1.12	0.77	0.92	1.69	1.51	1.64	3.15	2.69	2.01	4.70
	Other Products	0.04	0.02	0.05	0.01	0.02	0.03	0.01	0.06	0.06	0.04	0.43	0.48	0.22	0.02	0.24
Sablefish	All Products	0.38	0.59	0.97	0.57	0.57	1.15	0.78	0.98	1.76	1.56	2.07	3.63	2.92	2.03	4.95

Table 4.16: Bering Sea & Aleutian Islands production of groundfish products by species, 2019-2023, (1,000 metric tons product weight). *(continued)*

		2019			2020			2021			2022			2023		
	Product	At Sea	Shoreside	All	At Sea	Shoreside	All	At Sea	Shoreside	All	At Sea	Shoreside	All	At Sea	Shoreside	All
Atka Mackerel	Whole Fish	0.47	*	0.47	0.49	0.06	0.54	*	0.02	0.02	*	-	*	1.00	-	1.00
	Head And Gut	32.82	*	32.82	33.35	*	33.35	34.93	-	34.93	33.43	-	33.43	37.47	-	37.47
	Other Products	0.00	0.01	0.02	0.00	0.04	0.04	0.00	0.21	0.21	0.00	0.06	0.06	0.00	0.00	0.00
	All Products	33.29	0.01	33.30	33.84	0.10	33.94	34.93	0.23	35.16	33.43	0.06	33.48	38.48	0.00	38.48
Yellowfin	Whole Fish	4.88	-	4.88	8.00	-	8.00	0.69	-	0.69	*	-	*	6.20	-	6.20
	Head And Gut	70.31	-	70.31	73.20	-	73.20	61.68	-	61.68	84.29	-	84.29	60.86	-	60.86
	Other Products	0.04	0.00	0.04	0.08	0.01	0.09	0.14	0.00	0.14	1.14	0.05	1.19	1.03	0.03	1.06
	All Products	75.22	0.00	75.23	81.27	0.01	81.28	62.51	0.00	62.51	85.43	0.05	85.49	68.09	0.03	68.12
Rock Sole	Whole Fish	0.49	*	0.49	0.92	*	0.92	0.30	-	0.30	0.17	-	0.17	0.28	-	0.28
	Head And Gut	12.57	-	12.57	12.17	-	12.17	6.17	-	6.17	8.36	-	8.36	13.61	-	13.61
	Fillets	-	*	*	*	-	*	-	-	-	-	-	-	-	-	-
	Other Products	0.15	0.05	0.20	0.07	0.06	0.13	0.20	0.03	0.23	0.22	0.03	0.25	0.21	0.04	0.25
	All Products	13.22	0.05	13.27	13.16	0.06	13.22	6.67	0.03	6.70	8.76	0.03	8.79	14.10	0.04	14.14
Flathead Sole	Whole Fish	0.05	-	0.05	0.31	*	0.31	0.24	-	0.24	*	-	*	0.16	-	0.16
	Head And Gut	7.88	-	7.88	3.54	-	3.54	4.22	*	4.22	7.05	-	7.05	3.95	-	3.95
	Fillets	-	-	-	*	-	*	-	-	-	-	-	-	-	-	-
	Other Products	0.12	0.10	0.21	0.13	0.23	0.36	0.10	0.10	0.20	0.26	0.07	0.32	0.14	0.10	0.24
	All Products	8.04	0.10	8.14	3.99	0.23	4.21	4.56	0.10	4.66	7.30	0.07	7.37	4.25	0.10	4.35

Table 4.16: Bering Sea & Aleutian Islands production of groundfish products by species, 2019-2023, (1,000 metric tons product weight). *(continued)*

		2019			2020			2021			2022			2023		
	Product	At Sea	Shoreside	All	At Sea	Shoreside	All	At Sea	Shoreside	All	At Sea	Shoreside	All	At Sea	Shoreside	All
	Whole Fish	*	-	*	-	-	-	-	-	-	-	-	-	-	-	-
	Head And Gut	1.92	-	1.92	1.45	-	1.45	1.05	-	1.05	0.98	-	0.98	0.79	-	0.79
	Other Products	0.74	0.00	0.74	0.57	0.00	0.57	0.34	*	0.34	0.37	*	0.37	0.31	*	0.31
Turbot	All Products	2.66	0.00	2.67	2.02	0.00	2.02	1.39	*	1.39	1.35	*	1.35	1.10	*	1.10
	Whole Fish	-	-	-	*	-	*	-	-	-	-	-	-	-	-	-
	Head And Gut	2.13	-	2.13	3.97	-	3.97	3.62	-	3.62	4.69	-	4.69	3.74	-	3.74
	Fishmeal	0.00	*	0.00	0.01	-	0.01	0.00	-	0.00	0.00	-	0.00	0.01	-	0.01
	Other Products	-	-	-	*	-	*	-	-	-	-	-	-	*	-	*
Kamchatka Flounder	All Products	2.13	*	2.13	3.97	-	3.97	3.62	-	3.62	4.69	-	4.69	3.75	-	3.75
	Whole Fish	-	-	-	*	-	*	*	-	*	-	-	-	-	-	-
	Head And Gut	4.86	-	4.86	5.43	-	5.43	4.26	-	4.26	3.42	-	3.42	3.41	-	3.41
	Fillets	*	-	*	-	-	-	-	-	-	-	-	-	-	-	-
	Other Products	0.02	0.05	0.07	0.02	0.10	0.12	0.01	0.03	0.04	0.03	0.02	0.05	0.05	0.03	0.08
Arrowtooth	All Products	4.88	0.05	4.93	5.45	0.10	5.55	4.27	0.03	4.30	3.45	0.02	3.47	3.46	0.03	3.49
	Whole Fish	0.61	0.06	0.67	0.58	0.10	0.68	0.56	*	0.56	0.63	-	0.63	1.24	-	1.24
	Head And Gut	8.75	*	8.75	10.29	-	10.29	7.89	*	7.89	5.52	-	5.52	7.82	-	7.82
	Fillets	-	-	-	-	*	*	-	-	-	-	-	-	-	-	-
	Other Products	0.38	0.02	0.40	0.02	0.08	0.10	0.01	0.05	0.06	0.12	0.02	0.14	0.17	0.06	0.23
Other Flatfish	All Products	9.74	0.07	9.82	10.89	0.17	11.06	8.46	0.05	8.51	6.27	0.02	6.29	9.23	0.06	9.29

Table 4.16: Bering Sea & Aleutian Islands production of groundfish products by species, 2019-2023, (1,000 metric tons product weight). *(continued)*

		2019			2020			2021			2022			2023		
	Product	At Sea	Shoreside	All	At Sea	Shoreside	All	At Sea	Shoreside	All	At Sea	Shoreside	All	At Sea	Shoreside	All
Pacific Ocean Perch	Whole Fish	0.67	0.39	1.06	0.49	0.28	0.77	0.03	*	0.03	*	0.02	0.02	1.68	*	1.68
	Head And Gut	17.31	*	17.31	16.59	-	16.59	15.97	-	15.97	16.24	0.02	16.26	15.95	*	15.95
	Other Products	0.66	0.20	0.86	0.28	0.40	0.67	0.16	0.21	0.37	0.19	0.13	0.32	0.27	0.27	0.55
	All Products	18.63	0.59	19.22	17.36	0.67	18.03	16.17	0.21	16.37	16.44	0.16	16.60	17.90	0.27	18.18
Northern Rockfish	Whole Fish	-	*	*	-	*	*	-	-	-	-	-	-	*	-	*
	Head And Gut	3.89	*	3.89	3.05	-	3.05	2.38	-	2.38	3.05	*	3.05	4.31	-	4.31
	Other Products	0.01	0.00	0.01	0.01	0.03	0.03	0.00	0.00	0.01	0.00	0.00	0.00	0.02	0.01	0.02
	All Products	3.90	0.00	3.90	3.05	0.03	3.08	2.38	0.00	2.39	3.05	0.00	3.05	4.33	0.01	4.34
Other Rockfish	Whole Fish	0.42	*	0.42	0.21	*	0.21	0.29	*	0.29	0.38	*	0.38	0.32	-	0.32
	Head And Gut	0.27	0.01	0.28	0.30	0.01	0.31	0.33	*	0.33	0.29	0.00	0.29	0.30	0.00	0.30
	Other Products	0.16	0.00	0.17	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	All Products	0.86	0.01	0.87	0.52	0.01	0.53	0.62	0.00	0.62	0.67	0.00	0.67	0.62	0.00	0.62
Other Groundfish	Whole Fish	0.00	0.34	0.35	*	0.04	0.04	0.00	0.50	0.50	0.00	0.50	0.50	-	0.29	0.29
	Head And Gut	0.02	0.06	0.08	0.01	0.09	0.09	0.02	*	0.02	0.01	*	0.01	*	*	*
	Fishmeal	0.17	0.60	0.77	0.10	1.59	1.69	0.33	0.48	0.81	0.08	0.98	1.06	0.20	1.07	1.28
	Other Products	2.65	*	2.65	2.17	*	2.17	2.17	0.00	2.17	2.73	0.02	2.74	3.26	*	3.26
	All Products	2.84	1.00	3.84	2.28	1.72	3.99	2.52	0.98	3.50	2.82	1.50	4.32	3.46	1.37	4.83

Table 4.16: Bering Sea & Aleutian Islands production of groundfish products by species, 2019-2023, (1,000 metric tons product weight). *(continued)*

		2019			2020			2021			2022			2023		
	Product	At Sea	Shoreside	All	At Sea	Shoreside	All	At Sea	Shoreside	All	At Sea	Shoreside	All	At Sea	Shoreside	All
	Whole Fish	7.76	1.29	9.05	11.01	0.94	11.95	2.11	0.75	2.86	1.40	0.81	2.22	11.16	0.80	11.96
	Head And Gut	239.53	12.12	251.64	227.43	8.39	235.82	192.56	9.42	201.98	228.67	3.88	232.55	215.58	4.11	219.70
	Roe	17.50	13.46	30.96	16.58	10.97	27.55	12.38	5.86	18.24	10.17	6.51	16.68	10.13	7.30	17.42
	Fillets	0.23	7.80	8.02	0.18	7.33	7.51	0.25	5.36	5.61	0.13	10.00	10.13	0.13	8.88	9.01
	Deep-Skin Fillets	39.34	18.81	58.15	34.16	15.98	50.14	34.64	*	34.64	32.93	*	32.93	40.62	18.27	58.89
	Other Fillets	66.04	62.60	128.63	48.87	50.37	99.24	40.49	42.99	83.48	35.19	42.88	78.08	43.10	40.93	84.03
	Surimi	104.67	87.57	192.24	91.22	80.54	171.77	98.58	89.17	187.75	78.71	76.13	154.84	94.40	91.12	185.52
	Minced Fish	12.25	7.35	19.59	15.73	11.38	27.11	14.07	13.18	27.25	9.16	6.43	15.58	13.43	7.45	20.88
	Fishmeal	30.68	39.93	70.62	29.48	41.62	71.09	29.82	38.20	68.02	22.34	24.69	47.02	28.28	34.66	62.94
	Other Products	28.70	33.60	62.30	19.98	30.24	50.22	21.43	27.21	48.64	22.08	30.80	52.88	24.27	32.29	56.57
All Species	All Products	546.69	284.51	831.20	494.64	257.76	752.40	446.33	232.14	678.47	440.77	202.13	642.90	481.09	245.82	726.91

Note: Total includes additional species not listed in the production details as well as confidential data from Tables 4.31 and 4.32. These estimates are for catch from both federal and state of Alaska fisheries. "*" indicates a confidential value; "-" indicates no applicable data or value.
Source: NMFS Alaska Region At-sea and Shoreside Production Reports; and ADF&G Commercial Operators Annual Reports (COAR). Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.17: Bering Sea & Aleutian Islands gross value of groundfish products by species, 2019-2023, ($ million).

		2019			2020			2021			2022			2023		
	Product	At Sea	Shoreside	All	At Sea	Shoreside	All	At Sea	Shoreside	All	At Sea	Shoreside	All	At Sea	Shoreside	All
	Whole Fish	0.2	0.5	0.6	0.0	0.4	0.4	*	0.2	0.2	0.1	0.3	0.5	0.1	0.9	1.0
	Head And Gut	24.5	*	24.5	20.2	*	20.2	13.5	*	13.5	20.3	*	20.3	19.2	*	19.2
	Roe	89.9	42.3	132.2	81.8	29.1	110.9	75.5	14.2	89.7	75.6	24.1	99.7	72.4	24.0	96.4
	Deep-Skin Fillets	137.9	67.2	205.1	133.5	54.8	188.4	145.4	*	145.4	201.8	*	201.8	213.2	99.5	312.6
	Other Fillets	218.7	203.2	421.9	161.7	155.4	317.1	141.8	140.5	282.3	151.0	179.7	330.7	162.5	169.6	332.2
	Surimi	341.5	240.6	582.2	267.9	208.1	476.0	321.8	263.9	585.8	290.1	240.1	530.2	294.4	282.2	576.5
	Minced Fish	21.8	12.0	33.8	31.7	19.5	51.2	37.6	24.7	62.3	26.0	25.8	51.8	35.8	23.7	59.5
	Fishmeal	67.3	42.9	110.2	106.5	47.9	154.3	92.5	59.9	152.4	75.2	38.9	114.1	55.8	62.0	117.8
	Other Products	18.5	21.4	39.9	13.7	20.7	34.4	18.1	20.6	38.7	22.7	29.2	51.9	38.2	50.1	88.3
Pollock	All Products	920.3	630.2	1,550.5	817.1	535.8	1,352.9	846.1	524.0	1,370.1	862.9	538.0	1,400.9	891.5	712.0	1,603.5
	Whole Fish	0.0	0.3	0.3	0.0	0.1	0.2	*	0.1	0.1	0.8	0.1	0.8	0.4	0.3	0.7
	Head And Gut	216.8	31.1	247.9	157.0	18.4	175.4	143.3	18.9	162.2	231.4	7.1	238.5	184.1	8.6	192.7
	Roe	2.3	3.4	5.7	1.5	4.6	6.1	1.7	3.6	5.3	2.7	5.8	8.5	2.9	3.8	6.7
	Fillets	1.6	67.6	69.2	1.3	60.5	61.8	2.3	50.8	53.1	1.3	101.1	102.4	1.5	88.7	90.1
	Other Products	11.3	12.1	23.4	9.9	12.5	22.4	7.7	8.3	16.0	10.6	18.2	28.8	11.5	10.3	21.8
Pacific Cod	All Products	232.0	114.5	346.5	169.7	96.2	265.9	155.0	81.7	236.7	246.7	132.3	379.0	200.3	111.7	312.0
	Head And Gut	2.3	4.7	7.0	3.3	4.1	7.4	5.3	8.3	13.7	10.4	15.2	25.6	14.7	16.7	31.4
	Other Products	0.1	0.1	0.1	0.0	0.2	0.2	0.0	0.5	0.5	0.3	5.9	6.2	0.5	0.1	0.6
Sablefish	All Products	2.4	4.8	7.1	3.3	4.3	7.6	5.4	8.9	14.2	10.8	21.1	31.9	15.2	16.7	31.9
	Whole Fish	1.0	*	1.0	0.8	0.1	0.8	*	0.0	0.0	*	-	*	1.6	-	1.6
	Head And Gut	84.0	*	84.0	77.6	*	77.6	70.0	-	70.0	74.2	-	74.2	88.1	-	88.1
	Other Products	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.3	0.3	0.0	0.1	0.1	0.0	0.0	0.0
Atka Mackerel	All Products	85.0	0.0	85.0	78.4	0.1	78.5	70.0	0.3	70.2	74.2	0.1	74.3	89.7	0.0	89.7

Table 4.17: Bering Sea & Aleutian Islands gross value of groundfish products by species, 2019-2023, ($ million). *(continued)*

		2019			2020			2021			2022			2023		
	Product	At Sea	Shoreside	All	At Sea	Shoreside	All	At Sea	Shoreside	All	At Sea	Shoreside	All	At Sea	Shoreside	All
	Whole Fish	6.9	-	6.9	7.2	-	7.2	0.7	-	0.7	*	-	*	6.5	-	6.5
	Head And Gut	121.9	-	121.9	100.4	-	100.4	74.5	-	74.5	130.4	-	130.4	88.1	-	88.1
	Other Products	0.1	0.0	0.1	0.1	0.0	0.1	0.3	0.0	0.3	1.2	0.1	1.2	2.2	0.1	2.3
Yellowfin	All Products	128.8	0.0	128.8	107.8	0.0	107.8	75.5	0.0	75.5	131.5	0.1	131.6	96.8	0.1	96.8
	Whole Fish	1.0	*	1.0	1.0	*	1.0	0.4	-	0.4	0.2	-	0.2	0.4	-	0.4
	Head And Gut	23.2	-	23.2	19.8	-	19.8	7.3	-	7.3	14.2	-	14.2	22.7	-	22.7
	Fillets	-	*	*	*	-	*	-	-	-	-	-	-	-	-	-
	Other Products	0.2	0.1	0.3	0.1	0.1	0.2	0.4	0.0	0.4	0.3	0.0	0.3	0.4	0.1	0.5
Rock Sole	All Products	24.3	0.1	24.4	20.9	0.1	21.0	8.1	0.0	8.1	14.7	0.0	14.7	23.5	0.1	23.6
	Whole Fish	*	-	*	-	-	-	-	-	-	-	-	-	-	-	-
	Head And Gut	10.7	-	10.7	7.2	-	7.2	5.0	-	5.0	5.4	-	5.4	4.3	-	4.3
	Other Products	1.7	0.0	1.7	1.5	0.0	1.5	0.9	*	0.9	1.2	*	1.2	1.1	*	1.1
Turbot	All Products	12.3	0.0	12.3	8.7	0.0	8.7	5.9	*	5.9	6.6	*	6.6	5.4	*	5.4
	Whole Fish	0.1	-	0.1	0.4	*	0.4	0.2	-	0.2	*	-	*	0.2	-	0.2
	Head And Gut	14.9	-	14.9	5.0	-	5.0	5.4	*	5.4	12.2	-	12.2	6.4	-	6.4
	Fillets	-	-	-	*	-	*	-	-	-	-	-	-	-	-	-
	Other Products	0.1	0.1	0.3	0.2	0.3	0.5	0.2	0.1	0.3	0.4	0.1	0.5	0.3	0.2	0.5
Flathead Sole	All Products	15.2	0.1	15.3	5.6	0.3	5.9	5.9	0.1	6.0	12.6	0.1	12.7	6.8	0.2	7.1

Table 4.17: Bering Sea & Aleutian Islands gross value of groundfish products by species, 2019-2023, ($ million). *(continued)*

		2019			2020			2021			2022			2023		
	Product	At Sea	Shoreside	All	At Sea	Shoreside	All	At Sea	Shoreside	All	At Sea	Shoreside	All	At Sea	Shoreside	All
	Whole Fish	-	-	-	*	-	*	-	-	-	-	-	-	-	-	-
	Head And Gut	4.7	-	4.7	7.7	-	7.7	7.4	-	7.4	10.7	-	10.7	9.1	-	9.1
	Fishmeal	0.0	*	0.0	0.0	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0	-	0.0
	Other Products	-	-	-	*	-	*	-	-	-	-	-	-	*	-	*
Kamchatka Flounder	All Products	4.7	*	4.7	7.7	-	7.7	7.4	-	7.4	10.7	-	10.7	9.1	-	9.1
	Whole Fish	-	-	-	*	-	*	*	-	*	-	-	-	-	-	-
	Head And Gut	9.4	-	9.4	8.6	-	8.6	6.8	-	6.8	6.8	-	6.8	7.3	-	7.3
	Fillets	*	-	*	-	-	-	-	-	-	-	-	-	-	-	-
	Other Products	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.2
Arrowtooth	All Products	9.4	0.1	9.5	8.6	0.1	8.8	6.9	0.0	6.9	6.8	0.0	6.8	7.4	0.1	7.5
	Whole Fish	1.7	0.2	1.9	1.3	0.1	1.4	0.9	*	0.9	1.3	-	1.3	2.4	-	2.4
	Head And Gut	12.5	*	12.5	13.6	-	13.6	7.7	*	7.7	7.8	-	7.8	12.8	-	12.8
	Fillets	-	-	-	-	*	*	-	-	-	-	-	-	-	-	-
	Other Products	0.5	0.0	0.5	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.2	0.4	0.1	0.5
Other Flatfish	All Products	14.6	0.2	14.8	14.9	0.2	15.1	8.6	0.1	8.7	9.2	0.0	9.3	15.6	0.1	15.7
	Whole Fish	1.1	0.4	1.4	0.8	0.3	1.1	0.0	*	0.0	*	0.0	0.0	2.0	*	2.0
	Head And Gut	31.2	*	31.2	27.5	-	27.5	27.1	-	27.1	35.6	0.0	35.7	32.2	*	32.2
	Other Products	0.8	0.6	1.4	0.5	0.5	1.0	0.3	0.3	0.6	0.3	0.2	0.5	0.6	0.6	1.2
Pacific Ocean Perch	All Products	33.0	1.0	34.0	28.8	0.7	29.5	27.5	0.3	27.7	35.9	0.3	36.2	34.8	0.6	35.4

Table 4.17: Bering Sea & Aleutian Islands gross value of groundfish products by species, 2019-2023, ($ million). *(continued)*

		2019			2020			2021			2022			2023		
	Product	At Sea	Shoreside	All	At Sea	Shoreside	All	At Sea	Shoreside	All	At Sea	Shoreside	All	At Sea	Shoreside	All
	Whole Fish	-	*	*	-	*	*	-	-	-	-	-	-	*	-	*
	Head And Gut	5.9	*	5.9	3.2	-	3.2	2.2	-	2.2	4.6	*	4.6	6.2	-	6.2
	Other Products	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Northern Rockfish	All Products	5.9	0.0	5.9	3.2	0.0	3.2	2.2	0.0	2.2	4.6	0.0	4.6	6.2	0.0	6.2
	Whole Fish	1.6	*	1.6	0.7	*	0.7	1.1	*	1.1	1.7	*	1.7	1.2	-	1.2
	Head And Gut	0.8	0.0	0.8	0.6	0.0	0.7	0.7	*	0.7	0.6	0.0	0.6	0.6	0.0	0.6
	Other Products	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Rockfish	All Products	2.6	0.1	2.6	1.4	0.0	1.4	1.8	0.0	1.8	2.3	0.0	2.3	1.8	0.0	1.8
	Whole Fish	0.0	0.5	0.5	*	0.1	0.1	0.0	0.5	0.5	0.0	1.2	1.2	-	0.6	0.6
	Head And Gut	0.1	0.1	0.2	0.0	0.2	0.2	0.1	*	0.1	0.0	*	0.0	*	*	*
	Fishmeal	0.2	0.8	1.0	0.2	1.8	2.0	0.6	0.6	1.2	0.1	1.3	1.4	0.4	2.2	2.7
	Other Products	5.2	*	5.2	4.0	*	4.0	3.5	0.0	3.5	5.8	0.0	5.8	8.8	*	8.8
Other Groundfish	All Products	5.5	1.4	6.9	4.2	2.1	6.3	4.3	1.1	5.4	5.9	2.6	8.5	9.2	2.9	12.1

Table 4.17: Bering Sea & Aleutian Islands gross value of groundfish products by species, 2019-2023, ($ million). *(continued)*

		2019			2020			2021			2022			2023		
	Product	At Sea	Shoreside	All	At Sea	Shoreside	All	At Sea	Shoreside	All	At Sea	Shoreside	All	At Sea	Shoreside	All
	Whole Fish	13.5	1.8	15.3	12.2	1.0	13.2	3.4	0.8	4.2	4.1	1.7	5.7	14.8	1.8	16.6
	Head And Gut	562.7	36.0	598.6	451.6	22.8	474.4	376.3	27.2	403.5	564.6	22.4	587.0	495.8	25.3	521.1
	Roe	92.2	45.7	137.9	83.3	33.7	117.0	77.2	17.9	95.0	78.3	29.9	108.2	75.3	27.8	103.2
	Fillets	1.6	67.6	69.2	1.3	60.5	61.8	2.3	50.8	53.1	1.3	101.1	102.4	1.5	88.7	90.1
	Deep-Skin Fillets	137.9	67.2	205.1	133.5	54.8	188.4	145.4	*	145.4	201.8	*	201.8	213.2	99.5	312.6
	Other Fillets	218.7	203.2	421.9	161.7	155.4	317.1	141.8	140.5	282.3	151.0	179.7	330.7	162.5	169.6	332.2
	Surimi	341.5	240.6	582.2	267.9	208.1	476.0	321.8	263.9	585.8	290.1	240.1	530.2	294.4	282.2	576.5
	Minced Fish	21.8	12.0	33.8	31.7	19.5	51.2	37.6	24.7	62.3	26.0	25.8	51.8	35.8	23.7	59.5
	Fishmeal	67.5	43.6	111.1	106.6	49.7	156.4	93.1	60.5	153.6	75.3	40.1	115.5	56.2	64.3	120.5
	Other Products	38.7	34.4	73.1	30.2	34.4	64.6	31.4	30.2	61.6	42.9	53.9	96.8	64.1	61.6	125.7
All Species	All Products	1,496.1	752.3	2,248.4	1,280.2	639.9	1,920.1	1,230.3	616.4	1,846.8	1,435.6	694.6	2,130.2	1,413.4	844.5	2,257.9

Note: Total includes additional species not listed in the production details as well as confidential data from Tables 4.31 and 4.32. These estimates are for catch from both federal and state of Alaska fisheries. Values are not adjusted for inflation. "*" indicates a confidential value; "-" indicates no applicable data or value.
Source: NMFS Alaska Region At-sea and Shoreside Production Reports; and ADF&G Commercial Operators Annual Reports (COAR). Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.18: Bering Sea & Aleutian Islands price per pound of groundfish products by species and processing mode, 2019-2023, ($/lb).

		2019		2020		2021		2022		2023	
	Product	At-sea	Shoreside	At-sea	Shoreside	At-sea	Shoreside	At-sea	Shoreside	At-sea	Shoreside
	Whole Fish	0.47	0.95	0.71	0.45	*	0.47	1.29	0.62	0.89	1.09
	Head And Gut	0.63	*	0.56	*	0.52	*	0.63	*	0.55	*
	Roe	2.52	1.63	2.36	1.47	2.98	1.45	3.70	2.40	3.61	1.96
	Deep-Skin Fillets	1.59	1.62	1.77	1.56	1.90	*	2.78	*	2.38	2.47
	Other Fillets	1.50	1.47	1.50	1.40	1.59	1.48	1.95	1.90	1.71	1.88
	Surimi	1.48	1.25	1.33	1.17	1.48	1.34	1.67	1.43	1.41	1.40
	Minced Fish	0.81	0.74	0.91	0.78	1.21	0.85	1.29	1.82	1.21	1.44
	Fishmeal	1.00	0.49	1.64	0.54	1.42	0.72	1.53	0.74	0.90	0.84
	Other Products	0.51	0.36	0.60	0.40	0.63	0.41	0.94	0.65	1.42	0.85
Pollock	All Products	1.38	1.12	1.42	1.05	1.51	1.13	1.84	1.40	1.57	1.44
	Whole Fish	0.28	0.54	0.97	0.58	*	0.56	2.00	0.65	0.86	0.87
	Head And Gut	1.67	1.23	1.51	1.08	1.73	1.01	2.33	1.46	1.86	1.87
	Roe	0.81	0.90	0.81	1.03	0.88	1.17	1.37	1.35	1.28	1.00
	Fillets	3.18	3.93	3.22	3.74	4.20	4.30	4.56	4.59	5.10	4.53
	Other Products	0.69	0.91	0.72	0.97	0.67	1.01	0.79	0.86	0.82	0.94
Pacific Cod	All Products	1.55	1.91	1.41	1.89	1.60	1.94	2.14	2.52	1.73	2.85
	Head And Gut	3.07	3.70	2.64	3.40	3.15	4.09	3.13	4.21	2.48	3.76
	Other Products	0.90	1.67	1.12	3.22	0.89	4.38	3.55	6.17	0.97	2.10
Sablefish	All Products	2.85	3.64	2.62	3.39	3.12	4.10	3.14	4.62	2.36	3.74
	Whole Fish	0.94	*	0.73	0.51	*	0.50	*	-	0.71	-
	Head And Gut	1.16	*	1.06	*	0.91	-	1.01	-	1.07	-
	Other Products	0.58	0.56	0.79	0.52	0.88	0.55	0.94	0.60	0.95	0.95
Atka Mackerel	All Products	1.16	0.56	1.05	0.52	0.91	0.55	1.01	0.60	1.06	0.95

Table 4.18: Bering Sea & Aleutian Islands price per pound of groundfish products by species and processing mode, 2019-2023, ($/lb). *(continued)*

		2019		2020		2021		2022		2023	
	Product	At-sea	Shoreside	At-sea	Shoreside	At-sea	Shoreside	At-sea	Shoreside	At-sea	Shoreside
	Whole Fish	0.64	-	0.41	-	0.46	-	*	-	0.47	-
	Head And Gut	0.79	-	0.62	-	0.55	-	0.70	-	0.66	-
	Other Products	0.63	0.56	0.80	0.52	0.85	0.55	0.46	0.60	0.97	0.97
Yellowfin	All Products	0.78	0.56	0.60	0.52	0.55	0.55	0.70	0.60	0.64	0.97
	Whole Fish	0.90	*	0.47	*	0.57	-	0.50	-	0.67	-
	Head And Gut	0.79	-	0.64	-	0.52	-	0.76	-	0.74	-
	Head And Gut With Roe	1.32	-	1.28	-	0.90	-	0.83	-	0.91	-
	Fillets	-	*	*	-	-	-	-	-	-	-
	Other Products	0.58	0.56	0.79	0.52	0.86	0.55	0.54	0.60	0.97	0.96
Rock Sole	All Products	0.83	0.56	0.72	0.52	0.55	0.55	0.76	0.60	0.76	0.96
	Whole Fish	0.80	-	0.58	*	0.42	-	*	-	0.45	-
	Head And Gut	0.86	-	0.64	-	0.59	*	0.78	-	0.73	-
	Fillets	-	-	*	-	-	-	-	-	-	-
	Other Products	0.57	0.56	0.80	0.52	0.85	0.55	0.75	0.60	0.99	0.97
Flathead Sole	All Products	0.86	0.56	0.64	0.52	0.58	0.55	0.78	0.60	0.73	0.97
	Whole Fish	*	-	-	-	-	-	-	-	-	-
	Head And Gut	2.51	-	2.24	-	2.17	-	2.49	-	2.51	-
	Other Products	1.03	0.56	1.19	0.52	1.14	*	1.49	*	1.54	*
Turbot	All Products	2.10	0.56	1.95	0.52	1.92	*	2.21	*	2.23	*

Table 4.18: Bering Sea & Aleutian Islands price per pound of groundfish products by species and processing mode, 2019-2023, ($/lb). *(continued)*

		2019		2020		2021		2022		2023	
	Product	At-sea	Shoreside	At-sea	Shoreside	At-sea	Shoreside	At-sea	Shoreside	At-sea	Shoreside
	Whole Fish	-	-	*	-	*	-	-	-	-	-
	Head And Gut	0.88	-	0.72	-	0.73	-	0.90	-	0.98	-
	Fillets	*	-	-	-	-	-	-	-	-	-
	Other Products	0.58	0.56	0.81	0.52	0.84	0.55	0.50	0.60	1.01	0.97
Arrowtooth	All Products	0.87	0.56	0.72	0.52	0.73	0.55	0.89	0.60	0.98	0.97
	Whole Fish	-	-	*	-	-	-	-	-	-	-
	Head And Gut	0.99	-	0.88	-	0.92	-	1.04	-	1.10	-
	Fishmeal	0.57	*	0.78	-	0.86	-	0.68	-	0.95	-
	Other Products	-	-	*	-	-	-	-	-	*	-
Kamchatka Flounder	All Products	0.99	*	0.88	-	0.92	-	1.04	-	1.10	-
	Whole Fish	1.26	1.37	1.03	0.30	0.76	*	0.94	-	0.88	-
	Head And Gut	0.65	*	0.60	-	0.44	*	0.64	-	0.75	-
	Fillets	-	-	-	*	-	-	-	-	-	-
	Other Products	0.57	0.57	0.80	0.54	0.83	0.57	0.47	0.60	0.96	0.97
Other Flatfish	All Products	0.68	1.19	0.62	0.41	0.46	0.57	0.67	0.60	0.77	0.97
	Whole Fish	0.72	0.44	0.75	0.41	0.48	*	*	0.59	0.55	*
	Head And Gut	0.82	*	0.75	-	0.77	-	1.00	1.25	0.92	*
	Other Products	0.57	1.33	0.82	0.52	0.87	0.55	0.67	0.86	0.95	0.97
Pacific Ocean Perch	All Products	0.80	0.74	0.75	0.48	0.77	0.55	0.99	0.87	0.88	0.97

Table 4.18: Bering Sea & Aleutian Islands price per pound of groundfish products by species and processing mode, 2019-2023, ($/lb). *(continued)*

		2019		2020		2021		2022		2023	
	Product	At-sea	Shoreside	At-sea	Shoreside	At-sea	Shoreside	At-sea	Shoreside	At-sea	Shoreside
	Whole Fish	-	*	-	*	-	-	-	-	*	-
	Head And Gut	0.69	*	0.47	-	0.43	-	0.69	*	0.65	-
	Other	0.57	0.69	0.81	0.52	0.87	0.55	0.94	0.60	0.97	0.97
Northern	Products										
Rockfish	All Products	0.69	0.69	0.47	0.52	0.43	0.55	0.69	0.60	0.65	0.97
	Whole Fish	1.71	*	1.58	*	1.79	*	2.01	*	1.72	-
	Head And Gut	1.26	2.00	0.95	1.60	0.91	*	0.93	1.79	0.87	1.38
	Other	0.57	0.78	0.79	0.84	1.21	0.94	0.70	4.26	0.90	1.03
Other	Products										
Rockfish	All Products	1.35	1.71	1.21	1.41	1.32	0.94	1.55	2.24	1.31	1.25
	Whole Fish	1.54	0.64	*	1.11	0.59	0.47	1.09	1.11	-	0.97
	Head And Gut	1.19	1.10	0.71	1.09	2.09	*	0.72	*	*	*
	Fishmeal	0.57	0.57	0.84	0.52	0.88	0.55	0.73	0.60	0.95	0.95
	Other	0.89	*	0.83	*	0.74	1.24	0.96	1.14	1.22	*
Other	Products										
Groundfish	All Products	0.88	0.62	0.83	0.56	0.77	0.51	0.96	0.77	1.21	0.95

Note: These estimates are based on data from both federal and state of Alaska fisheries. Prices based on confidential data have been excluded. Values are not adjusted for inflation. "*" indicates a confidential value; "-" indicates no applicable data or value.
Source: NMFS Alaska Region At-sea and Shoreside Production Reports; and ADF&G Commercial Operators Annual Reports (COAR). Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.19: Bering Sea & Aleutian Islands total product value per round metric ton of retained catch by processor type, species, and year, 2019-2023, ($/mt).

	Species	2019	2020	2021	2022	2023
Motherships	Pollock	1,007	918	1,011	1,258	1,015
	Pacific Cod	331	297	*	*	*
Catcher/processors	Pollock	1,192	1,108	1,120	1,413	1,248
	Sablefish	3,671	2,748	3,517	3,451	3,129
	Pacific Cod	1,808	1,615	1,837	2,490	2,118
	Flatfish	1,060	860	735	959	940
	Rockfish	864	753	787	1,028	937
	Atka Mackerel	1,501	1,357	1,171	1,295	1,368
	Other	575	484	421	477	738
Shoreside processors	Pollock	1,032	893	958	1,307	1,262
	Sablefish	3,089	1,983	4,511	6,822	5,492
	Pacific Cod	1,706	1,558	1,728	2,234	2,038
	Flatfish	625	502	404	600	1,009
	Rockfish	733	459	619	1,302	1,056
	Other	4,647	5,191	5,255	14,501	14,396

Note: These estimates include the product value of catch from both federal and state of Alaska fisheries. Values are not adjusted for inflation. "*" indicates a confidential value; "-" indicates no applicable data or value.
Source: NMFS Alaska Region At-sea and Shoreside Production Reports; ADF&G Commercial Operators Annual Reports (COAR); and NMFS Alaska Region Blend and Catch-accounting System estimates. Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.20: Bering Sea & Aleutian Islands number of processors permits, gross product value, value per processor, and percent value of BSAI FMP groundfish of processed groundfish by processor group, 2019-2023 ($ millions).

		Processors	Wholesale Value ($million)	Wholesale Value per Processor ($1,000)	Percent Value, BSAI FMP Groundfish
	2019	15	808.70	53,913.09	36.67
	2020	13	688.03	52,925.11	36.48
	2021	15	727.83	48,521.69	39.79
	2022	13	723.08	55,621.83	34.59
AFA CP	2023	13	758.43	58,340.56	35.00
	2019	20	373.07	18,653.72	16.92
	2020	19	311.26	16,382.01	16.50
	2021	19	244.16	12,850.41	13.35
	2022	18	355.10	19,727.84	16.98
A80	2023	17	329.50	19,382.19	15.21
	2019	24	183.18	7,632.61	8.31
	2020	21	139.73	6,653.95	7.41
	2021	17	130.30	7,664.92	7.12
CP Hook and	2022	19	198.07	10,424.99	9.47
Line	2023	18	163.11	9,061.61	7.53
	2019	5	0.70	139.83	0.03
	2020	4	1.61	402.35	0.09
	2021	4	2.48	619.37	0.14
	2022	6	4.86	810.43	0.23
Sablefish IFQ	2023	7	6.28	896.49	0.29
	2019	4	123.52	30,879.46	5.60
Motherships	2020	3	111.94	37,312.65	5.94
& Inshore	2021	3	122.18	40,727.51	6.68
Floating	2022	3	119.78	39,927.24	5.73
Procs.	2023	3	114.80	38,266.44	5.30
	2019	8	709.36	88,670.29	32.16
	2020	7	605.58	86,511.87	32.11
BSAI	2021	8	598.19	74,773.50	32.70
Shoreside	2022	5	645.81	129,162.85	30.89
Processors	2023	4	753.58	188,394.71	34.77

Note: The data are for catch from both federal and state of Alaska fisheries. The processor groups are defined as follows: "AFA CP" are the AFA catcher processors. "A80" are the catcher processors as defined under Amendment 80 of the BSAI FMP. "CP Hook and Line" are the hook and line catcher processors. "Sablefish IFQ" are processors processing sablefish IFQ. Values are not adjusted for inflation.
Source: ADF&G Commercial Operators Annual Reports (COAR); and ADF&G Intent to Operate (ITO) file. Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.21: Bering Sea & Aleutian Islands number of vessels, average and median length, and average and median capacity (tonnage) of vessels that caught groundfish by vessel type, and gear, 2019-2023.

		Vessels	Average Length (feet)	Median Length (feet)	Average Capacity (tons)	Median Capacity (tons)
	2019	82	127	123	160	133
	2020	86	128	124	163	135
	2021	82	128	124	163	135
	2022	80	128	124	162	134
AFA CV	2023	75	128	124	162	135
	2019	16	290	275	1,852	1,747
	2020	13	307	300	2,129	2,262
	2021	15	291	286	1,898	1,747
	2022	14	305	300	2,122	2,262
AFA CP	2023	13	308	304	2,190	2,488
	2019	20	185	185	471	473
	2020	19	189	186	501	586
	2021	19	191	186	508	586
	2022	18	200	194	550	624
A80	2023	17	205	215	572	674
	2019	18	127	130	188	132
	2020	15	148	144	296	276
	2021	14	116	102	156	128
	2022	21	146	138	278	156
BSAI Trawl	2023	18	151	138	301	156
	2019	8	44	38	27	29
	2020	9	44	39	26	21
	2021	2	35	35	20	20
CV Hook	2022	5	44	48	27	21
and Line	2023	2	59	58.50	30	30
	2019	23	152	150	374	308
	2020	20	151	140	381	308
	2021	17	151	140	394	308
CP Hook and	2022	19	151	141	397	308
Line	2023	18	149	140	367	308
	2019	21	92	72	144	105
	2020	18	85	58	127	105
	2021	24	85	58	126	98
	2022	31	86	58	102	85
Sablefish IFQ	2023	33	82	57	120	51
	2019	83	76	58	103	105
	2020	94	74	58	100	102
	2021	66	73	58	107	105
	2022	66	76	58	109	105
Pot	2023	58	72	58	109	105

Table 4.21: Bering Sea & Aleutian Islands number of vessels, average and median length, and average and median capacity (tonnage) of vessels that caught groundfish by vessel type, and gear, 2019-2023. *(continued)*

		Vessels	Average Length (feet)	Median Length (feet)	Average Capacity (tons)	Median Capacity (tons)
	2019	3	46	42	29	26
	2020	3	41	42	28	26
	2021	1	42	42	26	26
	2022	1	42	42	26	26
Jig	2023	1	42	42	26	26
No Fleet/	2020	1	34	34	17	17
Other	2021	1	51	51	21	21

Note: These estimates include only vessels fishing part of federal TACs. "*" indicates a confidential value; "-" indicates no applicable data or value.
Source: NMFS Alaska Region Blend and Catch-accounting System estimates; CFEC gross earnings (fish tickets) file; NMFS Alaska Region groundfish observer data; NMFS Alaska Region permit data; CFEC vessel registration file. Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.22: Bering Sea & Aleutian Islands number of vessels that caught groundfish by month, vessel type, and gear, 2019-2023.

			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
		2019	2	4	6	6	5	4	3	4	5	4	4	1	17
		2020	1	5	6	10	6	2	4	5	2	2	1	-	17
	Hook	2021	1	1	1	2	2	1	2	1	2	3	3	-	9
	and	2022	1	-	1	2	3	4	6	4	2	-	1	-	15
	Line	2023	-	-	-	4	3	1	5	5	1	2	1	-	13
		2019	73	42	43	5	3	2	1	1	28	12	13	10	81
		2020	77	47	48	7	3	5	4	2	30	7	2	2	96
		2021	46	36	37	10	4	7	7	6	24	10	6	1	70
		2022	45	28	36	42	11	9	12	11	26	26	6	3	80
	Pot	2023	44	27	39	42	15	9	11	8	22	18	2	-	68
		2019	80	92	90	66	6	56	66	74	58	26	6	-	100
		2020	81	85	87	59	14	60	72	74	73	62	6	-	99
		2021	29	80	87	88	42	59	64	69	50	25	2	-	96
		2022	38	89	83	55	3	53	62	62	30	4	2	-	99
	Trawl	2023	58	81	76	60	5	53	60	63	58	21	9	1	91
		2019	155	138	139	77	14	62	70	79	91	42	23	11	196
		2020	159	137	141	76	23	67	77	79	104	71	9	2	206
		2021	76	117	125	100	48	67	72	76	75	37	11	1	171
Catcher	All	2022	84	117	120	98	16	66	78	76	58	30	8	3	182
Vessels	Gear	2023	102	108	115	103	23	62	76	75	81	39	11	1	164
		2019	17	18	20	14	6	10	17	21	21	19	16	14	25
		2020	15	16	15	13	7	7	13	16	17	15	15	8	21
	Hook	2021	12	12	12	11	8	12	13	16	15	10	6	4	17
	and	2022	11	15	14	14	11	16	18	18	16	16	9	9	19
	Line	2023	16	17	17	11	8	15	16	16	17	14	8	8	18
		2019	4	1	1	-	-	-	-	-	5	1	2	2	5
		2020	5	1	2	2	1	-	-	1	5	2	-	-	5
		2021	3	1	1	2	1	-	-	-	3	3	2	1	5
		2022	2	2	3	3	1	2	-	3	4	4	3	-	7
	Pot	2023	1	2	2	2	1	-	-	3	4	4	2	2	7
		2019	27	34	35	25	22	30	29	32	30	29	15	3	35
		2020	27	34	34	24	19	22	28	31	30	28	16	6	34
		2021	26	33	33	31	20	30	27	31	26	19	13	6	34
		2022	30	33	33	20	19	24	28	30	22	19	18	5	33
	Trawl	2023	27	31	31	24	18	28	26	29	26	18	13	4	32
		2019	48	53	56	39	28	40	46	53	56	49	33	19	65
		2020	47	51	51	38	27	29	41	48	52	45	31	14	59
		2021	41	46	46	44	29	42	40	47	43	32	21	11	55
Catcher	All	2022	43	50	50	37	31	40	46	49	42	37	29	14	55
Processors	Gear	2023	44	50	50	37	27	43	42	47	45	34	23	14	52

Note: These estimates include only vessels fishing part of federal TACs. "*" indicates a confidential value; "-" indicates no applicable data or value.
Source: NMFS Alaska Region Blend and Catch-accounting System estimates; CFEC gross earnings (fish tickets) file; NMFS Alaska Region groundfish observer data; NMFS Alaska Region permit data; CFEC vessel registration file. Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.23: Bering Sea & Aleutian Islands catcher vessel (excluding catcher/processors) weeks of fishing groundfish by vessel-length class (feet), gear, and target, 2019-2023.

		Hook & Line		Pot			Trawl			All Gear		
	Year	<60ft	60-124ft	<60ft	60-124ft	>= 125ft	<60ft	60-124ft	>= 125ft	<60ft	60-124ft	>= 125ft
	2019	-	-	-	-	-	0	945	534	0	945	534
	2020	-	-	-	-	-	-	1,206	697	-	1,206	697
	2021	-	-	-	-	-	-	1,019	578	-	1,019	578
	2022	-	-	-	-	-	-	701	390	-	701	390
Pollock	2023	-	-	-	-	-	-	852	505	-	852	505
	2019	6	14	18	13	7	-	-	-	24	27	7
	2020	2	2	32	9	5	-	-	-	34	11	5
	2021	6	3	60	23	10	-	-	-	67	26	10
	2022	9	5	107	34	22	-	1	-	116	39	22
Sablefish	2023	14	8	176	45	11	-	-	0	190	53	11
	2019	82	-	471	153	24	6	143	40	559	296	64
	2020	86	1	484	148	22	7	108	23	577	257	45
	2021	18	-	401	137	7	23	97	21	442	234	28
Pacific	2022	14	3	438	172	28	18	114	23	470	289	51
Cod	2023	3	3	354	103	17	18	114	33	375	220	50
	2019	1	-	-	-	-	-	59	72	1	59	72
	2020	-	-	-	-	-	-	48	51	-	48	51
	2021	-	-	-	-	-	-	28	31	-	28	31
	2022	-	-	-	-	-	-	21	36	-	21	36
Flatfish	2023	-	-	-	-	-	-	12	32	-	12	32
	2019	1	-	-	-	-	-	4	11	1	4	11
	2020	-	-	-	-	-	-	5	13	1	5	13
	2021	-	-	-	-	-	-	2	5	-	2	5
	2022	-	-	-	-	-	-	3	3	-	3	3
Rockfish	2023	-	-	-	-	-	-	3	8	-	3	8
	2019	-	-	-	-	-	-	4	8	-	4	8
	2020	-	-	-	-	-	-	7	18	-	7	18
	2021	-	-	-	-	-	-	5	13	-	5	13
Atka	2022	-	-	-	-	-	-	4	12	-	4	12
Mackerel	2023	-	-	-	-	-	-	4	18	-	4	18

Table 4.23: Bering Sea & Aleutian Islands catcher vessel (excluding catcher/processors) weeks of fishing groundfish by vessel-length class (feet), gear, and target, 2019-2023. *(continued)*

		Hook & Line		Pot			Trawl			All Gear		
	Year	<60ft	60-124ft	<60ft	60-124ft	>= 125ft	<60ft	60-124ft	>= 125ft	<60ft	60-124ft	>= 125ft
	2019	90	14	489	166	31	6	1,154	664	585	1,334	695
	2020	88	3	517	157	27	7	1,374	802	612	1,534	829
	2021	24	3	462	160	17	23	1,151	648	509	1,313	665
All	2022	22	8	546	206	50	18	844	464	586	1,058	514
Groundfish	2023	17	11	530	148	28	18	986	595	565	1,145	623

Note: These estimates include only vessels fishing part of federal TACs. A vessel that fished more than one category in a week is apportioned a partial week based on catch weight. A target is determined based on vessel, week, processing mode, NMFS area, and gear. All groundfish include additional target categories. "*" indicates a confidential value; "-" indicates no applicable data or value.
Source: NMFS Alaska Region Blend and Catch-accounting System estimates; CFEC gross earnings (fish tickets) file; NMFS Alaska Region groundfish observer data; NMFS Alaska Region permit data; CFEC vessel registration file. Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.24: Bering Sea & Aleutian Islands catcher/processor vessel weeks of fishing groundfish by vessel-length class (feet), gear, and target, 2019-2023.

		Hook & Line			Pot		Trawl			All Gear			
	Year	<60ft	60-124ft	125-230ft	60-124ft	125-230ft	60-124ft	125-230ft	>230ft	<60ft	60-124ft	125-230ft	>230ft
	2019	-	-	-	-	-	2	7	312	-	2	7	312
	2020	-	-	-	-	-	0	10	332	-	0	11	332
	2021	-	-	-	-	-	2	8	296	-	2	8	296
	2022	-	-	-	-	-	5	8	227	-	5	8	227
Pollock	2023	-	-	-	-	-	1	7	276	-	1	7	276
	2019	7	-	1	-	7	-	0	-	7	-	9	-
	2020	-	-	2	-	9	0	1	-	-	0	13	-
	2021	-	0	2	-	17	-	1	-	-	0	20	-
	2022	-	-	0	-	27	1	1	-	-	1	29	-
Sablefish	2023	-	-	-	-	39	3	3	0	-	3	42	0
	2019	7	57	599	21	21	1	11	8	7	80	631	8
	2020	2	62	482	19	21	0	5	2	2	81	508	2
	2021	-	45	406	22	15	0	4	4	-	67	425	4
Pacific	2022	-	91	508	25	14	1	1	9	-	117	523	9
Cod	2023	-	95	491	15	12	0	3	12	-	110	505	12
	2019	-	-	16	-	-	95	435	76	-	95	451	76
	2020	-	-	10	-	-	57	425	70	-	57	435	70
	2021	-	-	-	-	-	64	364	66	-	64	364	66
	2022	-	-	-	-	-	59	335	113	-	59	335	113
Flatfish	2023	-	-	-	-	-	50	267	108	-	50	267	108
	2019	-	-	0	-	-	5	60	8	-	5	60	8
	2020	-	-	0	-	-	5	61	7	-	5	61	7
	2021	-	0	0	-	-	9	55	11	-	9	55	11
	2022	-	-	-	-	-	8	59	7	-	8	59	7
Rockfish	2023	-	-	-	-	-	15	56	16	-	15	56	16
	2019	-	-	-	-	-	5	88	12	-	5	88	12
	2020	-	-	-	-	-	5	96	6	-	5	96	6
	2021	-	-	-	-	-	6	113	14	-	6	113	14
Atka	2022	-	-	-	-	-	5	117	14	-	5	117	14
Mackerel	2023	-	-	-	-	-	11	118	13	-	11	118	13

Table 4.24: Bering Sea & Aleutian Islands catcher/processor vessel weeks of fishing groundfish by vessel-length class (feet), gear, and target, 2019-2023. *(continued)*

		Hook & Line			Pot		Trawl			All Gear			
	Year	<60ft	60-124ft	125-230ft	60-124ft	125-230ft	60-124ft	125-230ft	>230ft	<60ft	60-124ft	125-230ft	>230ft
	2019	14	57	618	21	28	108	601	416	14	186	1,247	416
	2020	2	62	494	19	30	67	599	418	2	148	1,123	418
	2021	-	45	409	22	32	81	544	391	-	148	985	391
All	2022	-	91	509	25	41	78	522	370	-	194	1,073	370
Groundfish	2023	-	95	491	15	51	79	453	425	-	189	996	425

Note: These estimates include only vessels fishing part of federal TACs. A vessel that fished more than one category in a week is apportioned a partial week based on catch weight. A target is determined based on vessel, week, processing mode, NMFS area, and gear. All groundfish include additional target categories. "*" indicates a confidential value; "-" indicates no applicable data or value.
Source: NMFS Alaska Region Blend and Catch-accounting System estimates; CFEC gross earnings (fish tickets) file; NMFS Alaska Region groundfish observer data; NMFS Alaska Region permit data; CFEC vessel registration file. Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.25: Bering Sea & Aleutian Islands catcher vessel crew weeks in the groundfish fisheries by month, 2019-2023.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2019	1,082	2,014	2,116	649	225	729	1,050	1,475	1,254	462	346	94	11,495
2020	1,124	2,644	1,842	783	308	601	1,026	1,702	1,676	1,274	53	-	13,034
2021	578	1,442	1,698	1,348	307	640	1,358	1,238	925	550	150	7	10,240
2022	900	1,789	1,814	1,150	145	559	1,238	910	684	382	188	6	9,764
2023	849	1,766	1,936	1,050	236	544	1,261	1,199	1,194	460	84	20	10,600

Note: Crew weeks are calculated by summing weekly reported crew size over vessels and time period. These estimates include only vessels targeting groundfish counted toward federal TACs. "*" indicates a confidential value; "-" indicates no applicable data or value.
Source: NMFS Alaska Region At-sea Production Reports. Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.26: Bering Sea & Aleutian Islands at-sea processor vessel crew weeks in the groundfish fisheries by month, 2019-2023.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2019	3,705	13,534	16,009	4,825	3,979	6,887	11,256	15,040	11,163	7,559	4,094	1,198	99,249
2020	3,824	16,312	12,475	4,929	4,013	4,183	9,344	13,599	11,198	10,443	3,071	834	94,225
2021	3,603	11,024	11,965	6,540	3,711	6,205	13,098	10,813	7,792	3,722	1,979	809	81,261
2022	4,072	12,318	10,261	5,657	3,552	5,183	13,537	9,907	5,826	5,482	2,755	824	79,374
2023	5,460	13,023	12,402	6,247	3,601	6,896	12,286	10,552	9,097	4,572	2,469	895	87,500

Note: Crew weeks are calculated by summing weekly reported crew size over vessels and time period. These estimates include only vessels targeting groundfish counted toward federal TACs. Catcher processors typically account for 90-95% of the total at-sea crew weeks in all areas. "*" indicates a confidential value; "-" indicates no applicable data or value.
Source: NMFS Alaska Region At-sea Production Reports. Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

4.3 Gulf of Alaska Economic Data Tables

Table 4.27: Gulf of Alaska groundfish retained catch by vessel type, gear, and species, 2019-2023 (1,000 metric tons, round weight).

		Central Gulf				Western Gulf				All Gulf			
	Year	Hook and Line	Pot	Trawl	All Gear	Hook and Line	Pot	Trawl	All Gear	Hook and Line	Pot	Trawl	All Gear
	2019	-	-	87.80	87.80	-	-	21.70	21.70	-	-	118.70	118.70
	2020	-	-	80.50	80.50	-	-	19	19	-	-	106.80	106.80
	2021	-	-	74.80	74.80	-	-	15.70	15.70	-	-	97.60	97.60
	2022	-	-	99	99	-	-	23.30	23.30	-	-	131.40	131.50
Pollock	2023	-	-	97.60	97.70	-	-	24	24	-	-	131.70	131.70
	2019	1.50	3.20	2.10	6.80	1.30	4.30	1.60	7.20	3.30	7.50	3.70	14.40
	2020	0.40	1	2.20	3.60	0.20	0.70	0.10	1.10	1	1.70	2.30	5.10
	2021	3.40	4.40	3.30	11	1.40	3.20	1.60	6.20	5.10	7.60	4.90	17.60
	2022	4	6.80	5.30	16.10	1.80	3.70	2.20	7.70	6.20	10.50	7.50	24.20
Pacific Cod	2023	3.80	4.80	4.20	12.90	1.90	2.80	1.50	6.30	6.20	7.60	5.80	19.70
	2019	2.50	1.10	0.70	4.30	0.70	0.40	0.30	1.30	7.80	1.90	1.10	10.80
	2020	1.20	2.50	0.80	4.60	0.20	1	0.20	1.40	5.60	4.70	1	11.30
	2021	0.60	5.20	0.90	6.60	0.10	1.60	0.20	1.90	4.30	9.80	1	15.20
	2022	0.60	5.90	1	7.50	0.10	2.60	0.20	2.80	3.70	13.90	1.20	18.80
Sablefish	2023	0.50	4.60	0.90	6	0.10	2.40	0.20	2.70	3.10	12.20	1.10	16.40
	2019	-	-	0.50	0.50	-	-	0.60	0.60	-	-	1.10	1.10
	2020	-	-	-	-	-	-	0.50	0.50	-	-	0.50	0.50
	2021	-	-	0.20	0.20	-	-	0.30	0.30	-	-	0.60	0.60
Atka	2022	-	-	0.30	0.30	-	-	0.50	0.50	-	-	0.80	0.80
Mackerel	2023	-	-	-	-	-	-	0.40	0.40	-	-	0.40	0.40
	2019	*	-	22.40	22.40	*	-	0.20	0.20	-	-	22.60	22.60
	2020	*	-	19.50	19.50	-	-	0.20	0.20	-	-	19.80	19.80
	2021	-	-	7.60	7.60	*	-	0.10	0.10	-	-	7.70	7.70
	2022	-	-	9.70	9.70	-	-	0.30	0.30	-	-	10	10
Arrowtooth	2023	-	-	7.90	7.90	*	-	0.20	0.20	-	-	8.10	8.10
	2019	-	-	2.10	2.10	*	-	-	-	*	-	2.20	2.20
	2020	-	-	1.80	1.80	-	-	0.10	0.10	-	-	1.80	1.80
	2021	-	-	0.30	0.30	-	-	0.10	0.10	-	-	0.30	0.30
Flathead	2022	-	-	0.30	0.30	-	-	-	-	-	-	0.30	0.30
Sole	2023	-	-	0.40	0.40	-	-	-	-	-	-	0.40	0.40

Table 4.27: Gulf of Alaska groundfish retained catch by vessel type, gear, and species, 2019-2023 (1,000 metric tons, round weight). *(continued)*

		Central Gulf				Western Gulf				All Gulf			
	Year	Hook and Line	Pot	Trawl	All Gear	Hook and Line	Pot	Trawl	All Gear	Hook and Line	Pot	Trawl	All Gear
	2019	-	-	1.10	1.10	-	-	-	-	-	-	1.10	1.10
	2020	-	-	1	1	-	-	-	-	-	-	1	1
	2021	-	-	0.20	0.20	*	-	-	-	*	-	0.20	0.20
	2022	-	-	0.30	0.30	-	-	-	-	-	-	0.40	0.40
Rex Sole	2023	-	-	0.40	0.40	-	-	-	-	-	-	0.40	0.40
	2019	-	-	2.50	2.50	-	-	-	-	-	-	2.50	2.50
	2020	*	-	4.10	4.10	-	-	-	-	*	-	4.10	4.10
	2021	*	-	0.10	0.10	-	-	-	-	*	-	0.20	0.20
Shallow-Water	2022	-	-	0.20	0.20	*	-	-	-	*	-	0.30	0.30
Flatfish	2023	-	-	0.80	0.80	-	-	-	-	*	-	0.90	0.90
	2019	-	-	-	-	*	-	*	*	*	-	-	-
	2020	-	-	0.10	0.10	-	-	*	*	*	-	0.10	0.10
	2021	-	-	-	-	-	-	*	*	*	-	-	-
Deep-Water	2022	-	-	-	-	*	-	*	*	*	-	-	-
Flatfish	2023	-	-	-	-	-	-	*	*	*	-	-	-
	2019	*	-	17.30	17.30	*	-	3.10	3.10	*	-	20.50	20.50
	2020	-	-	21.30	21.30	-	-	1.30	1.30	*	-	22.60	22.60
Pacific	2021	*	-	25.10	25.10	*	-	1.60	1.60	*	-	26.80	26.80
Ocean	2022	-	-	24.60	24.60	*	-	2.40	2.40	*	-	27.10	27.10
Perch	2023	*	-	24.90	24.90	-	-	2.40	2.40	*	-	27.40	27.40
	2019	-	-	1.80	1.80	*	-	0.80	0.80	*	-	2.60	2.60
	2020	*	-	1.60	1.60	-	-	0.80	0.80	*	-	2.40	2.40
	2021	-	-	1.60	1.60	-	-	0.70	0.70	-	-	2.30	2.30
Northern	2022	*	-	1.40	1.40	*	-	0.50	0.50	*	-	1.90	1.90
Rockfish	2023	*	-	0.90	0.90	*	-	0.40	0.40	*	-	1.30	1.30

Table 4.27: Gulf of Alaska groundfish retained catch by vessel type, gear, and species, 2019-2023 (1,000 metric tons, round weight). *(continued)*

		Central Gulf				Western Gulf				All Gulf			
	Year	Hook and Line	Pot	Trawl	All Gear	Hook and Line	Pot	Trawl	All Gear	Hook and Line	Pot	Trawl	All Gear
	2019	-	-	2	2	-	-	0.20	0.20	-	-	2.20	2.20
	2020	-	-	1.80	1.80	*	-	0.20	0.20	-	-	2.10	2.10
	2021	-	-	2.60	2.60	*	-	0.10	0.10	-	-	2.80	2.80
Dusky	2022	-	-	2.40	2.40	-	-	0.10	0.10	-	-	2.50	2.50
Rockfish	2023	-	-	3.40	3.40	*	-	0.10	0.10	-	-	3.40	3.40
	2019	0.20	-	1	1.20	0.10	-	0.20	0.20	0.90	-	1.40	2.30
	2020	0.10	-	0.80	0.90	-	-	0.10	0.10	0.70	-	0.90	1.70
	2021	0.10	-	0.90	1	-	-	0.10	0.10	0.60	-	1.10	1.70
Other	2022	0.10	-	0.90	1.10	-	-	0.20	0.30	0.60	-	1.20	1.90
Rockfish	2023	0.10	-	0.90	1	-	-	0.10	0.20	0.70	-	1.10	1.80
	2019	0.10	-	0.90	1.10	-	-	-	0.10	0.10	-	0.90	1.30
	2020	-	-	0.80	0.80	-	-	-	-	-	-	0.80	0.80
	2021	0.10	-	0.10	0.20	-	-	-	-	0.10	-	0.10	0.20
Other	2022	0.10	-	0.10	0.30	0.10	-	-	0.10	0.20	-	0.10	0.40
Groundfish	2023	0.10	-	0.20	0.30	0.10	-	-	0.10	0.20	-	0.20	0.40

Note: The estimates are of retained catch (i.e., excludes discarded catch). All groundfish include additional species categories. These estimates include only catch counted against federal TACs. Includes FMP groundfish catch on halibut targets. "*" indicates a confidential value; "-" indicates no applicable data or value.
Source: NMFS Alaska Region Blend and Catch-accounting System estimates. Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.28: All Gulf of Alaska groundfish retained catch by species, gear, and target fishery, 2022-2023, (1,000 metric tons, round weight).

Gear	Year	Target	Pollock	Sablefish	Pacific Cod	Arrowtooth	Flathead Sole	Rex Sole	Flat Deep	Flat Shallow	Rockfish	Atka Mackerel	Other	All Species
Hook and Line	2022	Sablefish	*	3.20	-	*	-	-	-	-	0.20	-	*	3.40
		Pacific Cod	-	*	5.30	-	-	-	-	-	-	-	0.20	5.50
		Halibut	*	0.30	0.20	-	-	-	*	*	0.40	-	-	0.90
		Rockfish	-	*	*	-	-	-	-	-	-	-	-	-
		All Targets	-	3.50	5.50	-	-	-	*	*	0.60	-	0.20	9.90
	2023	Sablefish	-	2.50	-	-	-	-	*	-	0.20	-	*	2.70
		Pacific Cod	-	*	5.50	*	-	-	-	-	-	-	0.10	5.70
		Halibut	-	0.30	0.20	-	-	-	-	*	0.40	-	-	0.90
		Rockfish	-	*	-	-	-	-	-	-	-	-	-	-
		All Targets	-	2.80	5.70	-	-	-	*	*	0.70	-	0.20	9.30
Pot	2022	Sablefish	-	13.70	-	-	-	-	-	*	0.10	-	-	13.80
		Pacific Cod	-	-	10.50	*	*	-	-	*	-	-	0.10	10.60
		Halibut	-	0.10	*	-	-	-	-	-	-	-	-	0.10
		All Targets	-	13.80	10.50	-	*	-	-	*	0.10	-	0.10	24.50
	2023	Sablefish	-	12.00	-	-	-	-	-	-	0.10	-	-	12.10
		Pacific Cod	-	-	7.60	-	*	-	-	-	*	-	-	7.70
		Halibut	-	0.10	*	-	-	-	-	-	-	-	-	0.10
		All Targets	-	12.10	7.60	-	*	-	-	-	0.10	-	-	19.90

Table 4.28: All Gulf of Alaska groundfish retained catch by species, gear, and target fishery, 2022-2023, (1,000 metric tons, round weight). *(continued)*

Gear	Year	Target	Pollock	Sablefish	Pacific Cod	Arrowtooth	Flathead Sole	Rex Sole	Flat Deep	Flat Shallow	Rockfish	Atka Mackerel	Other	All Species
Trawl	2022	Pollock, Bottom	33.60	-	3.30	0.30	-	-	-	0.10	1.50	*	0.10	38.90
		Pollock, Pelagic	95.40	-	0.10	0.30	-	-	-	-	0.50	-	-	96.40
		Sablefish	-	0.30	-	-	-	-	*	-	-	*	-	0.40
		Pacific Cod	-	-	3.40	-	*	*	*	0.10	-	-	-	3.60
		Arrowtooth	-	0.10	0.30	6.40	0.20	0.20	-	-	0.50	*	-	7.70
		Rex Sole	*	*	*	*	*	*	*	*	*	-	*	*
		Flatfish, Shallow	*	*	*	*	*	*	*	*	*	-	*	*
		Rockfish	1.20	0.80	0.40	2.60	-	0.10	-	-	30.20	0.80	-	36.20
		All Targets	130.30	1.20	7.50	9.70	0.30	0.40	-	0.20	32.70	0.80	0.10	183.20
	2023	Pollock, Bottom	32.40	-	3.60	0.30	0.10	-	*	0.20	1.30	*	0.10	38.10
		Pollock, Pelagic	97.60	-	0.20	0.20	-	-	*	-	0.50	-	-	98.50
		Sablefish	-	0.30	*	-	*	-	*	*	-	*	*	0.30
		Pacific Cod	-	*	1.30	*	*	-	-	*	*	-	*	1.30
		Arrowtooth	0.10	0.10	0.10	5.60	0.10	0.20	*	*	1.00	*	*	7.20
		Flatfish, Shallow	*	*	0.10	0.10	0.10	-	*	0.50	-	-	-	0.70
		Rockfish	1.50	0.70	0.20	0.70	-	0.10	*	-	30.40	0.40	-	34.10
		All Targets	131.60	1.00	5.60	7.00	0.30	0.30	*	0.70	33.20	0.40	0.10	180.30
All Gear	2022	All Targets	130.30	18.50	23.50	9.70	0.30	0.40	-	0.20	33.40	0.80	0.40	217.60
	2023	All Targets	131.60	15.90	18.90	7.00	0.30	0.30	*	0.70	33.90	0.40	0.30	209.50

Note: Totals may include additional categories. The target is derived from an algorithm used to determine preponderance of catch, accounting for processor, trip, processing

mode, NMFS area, and gear. These estimates include only catch counted against federal TACs. "*" indicates a confidential value; "-" indicates no applicable data or value.
Source: NMFS Alaska Region Blend and Catch-accounting System estimates. Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.29: Western Gulf of Alaska groundfish retained catch by species, gear, and target fishery, 2022-2023, (1,000 metric tons, round weight).

Gear	Year	Target	Pollock	Sablefish	Pacific Cod	Arrowtooth	Flathead Sole	Rex Sole	Flat Deep	Flat Shallow	Rockfish	Atka Mackerel	Other	All Species
Hook and Line	2022	Sablefish	-	0.10	-	*	-	-	-	-	-	-	*	0.10
		Pacific Cod	-	-	1.70	-	-	-	-	-	*	-	0.10	1.90
		Halibut	*	-	-	-	-	-	*	*	-	-	-	0.10
		All Targets	-	0.10	1.80	-	-	-	*	*	-	-	0.10	2.00
	2023	Sablefish	-	0.10	*	-	-	-	-	-	-	-	-	0.10
		Pacific Cod	-	-	1.30	-	-	-	-	-	*	-	0.10	1.40
		Halibut	-	-	-	*	-	-	-	-	-	-	-	-
		All Targets	-	0.10	1.30	*	-	-	-	-	-	-	0.10	1.50
Pot	2022	Sablefish	-	2.60	*	*	-	-	-	-	-	-	-	2.60
		Pacific Cod	*	-	3.70	-	*	-	-	*	-	-	*	3.70
		Halibut	-	*	*	-	-	-	-	-	*	-	-	*
		All Targets	*	2.60	3.70	*	*	-	-	*	-	-	*	6.30
	2023	Sablefish	-	2.40	-	-	-	-	-	-	-	-	-	2.40
		Pacific Cod	*	-	2.80	-	*	-	-	-	-	-	*	2.80
		Halibut	-	*	*	-	-	-	-	-	-	-	-	*
		All Targets	*	2.40	2.80	-	*	-	-	-	-	-	*	5.20

Table 4.29: Western Gulf of Alaska groundfish retained catch by species, gear, and target fishery, 2022-2023, (1,000 metric tons, round weight). *(continued)*

Gear	Year	Target	Pollock	Sablefish	Pacific Cod	Arrowtooth	Flathead Sole	Rex Sole	Flat Deep	Flat Shallow	Rockfish	Atka Mackerel	Other	All Species
Trawl	2022	Pollock, Bottom	*	*	*	*	*	*	-	*	*	-	*	*
		Pollock, Pelagic	21.90	-	-	0.20	-	-	-	-	-	*	-	22.20
		Pacific Cod	-	-	2.10	*	*	-	-	*	-	-	*	2.10
		Rockfish	0.20	0.20	0.10	-	-	-	*	-	3.20	0.50	-	4.30
		All Targets	22.20	0.20	2.20	0.30	-	-	*	-	3.20	0.50	-	28.70
	2023	Pollock, Bottom	*	*	*	*	*	*	-	*	*	*	*	*
		Pollock, Pelagic	23.70	-	0.20	0.20	-	-	*	-	-	-	-	24.10
		Pacific Cod	-	-	1.30	*	*	-	-	*	-	-	*	1.30
		Rockfish	0.20	0.20	0.10	-	-	-	*	-	2.90	0.40	-	3.90
		All Targets	23.90	0.20	1.50	0.20	-	-	*	-	3.00	0.40	-	29.30
All Gear	2022	All Targets	22.20	2.80	7.70	0.30	-	-	*	-	3.20	0.50	0.10	37.00
	2023	All Targets	24.00	2.70	5.70	0.20	-	-	*	-	3.00	0.40	0.10	36.10

Note: Totals may include additional categories. The target is derived from an algorithm used to determine preponderance of catch, accounting for processor, trip, processing mode, NMFS area, and gear. These estimates include only catch counted against federal TACs. "*" indicates a confidential value; "-" indicates no applicable data or value.
Source: NMFS Alaska Region Blend and Catch-accounting System estimates. Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.30: Central Gulf of Alaska groundfish retained catch by species, gear, and target fishery, 2022-2023, (1,000 metric tons, round weight).

Gear	Year	Target	Pollock	Sablefish	Pacific Cod	Arrowtooth	Flathead Sole	Rex Sole	Flat Deep	Flat Shallow	Rockfish	Atka Mackerel	Other	All Species
		Sablefish	-	0.50	-	-	-	-	-	-	-	-	*	0.50
		Pacific Cod	-	*	3.20	-	-	-	-	-	-	-	0.10	3.30
		Halibut	-	0.10	0.10	-	-	-	-	-	0.10	-	-	0.30
		Rockfish	-	-	*	-	-	-	-	-	-	-	-	-
	2022	All Targets	-	0.60	3.30	-	-	-	-	-	0.10	-	0.10	4.10
		Sablefish	-	0.30	-	-	-	-	-	-	-	-	*	0.30
		Pacific Cod	-	*	3.70	*	-	-	-	-	-	-	0.10	3.70
		Halibut	-	0.10	0.10	-	-	-	-	-	0.10	-	-	0.30
Hook and		Rockfish	-	-	-	-	-	-	-	-	-	-	-	-
Line	2023	All Targets	-	0.40	3.80	-	-	-	-	-	0.10	-	0.10	4.40
		Sablefish	-	5.90	-	-	-	-	-	-	-	-	-	5.90
		Pacific Cod	-	-	6.80	*	-	-	-	*	-	-	0.10	6.80
		Halibut	-	-	*	-	-	-	-	-	*	-	-	-
	2022	All Targets	-	5.90	6.80	-	-	-	-	*	-	-	0.10	12.70
		Sablefish	-	4.50	-	*	-	-	-	-	-	-	-	4.50
		Pacific Cod	-	-	4.80	-	-	-	-	-	*	-	-	4.90
		Halibut	-	*	*	-	-	-	-	-	*	-	-	*
Pot	2023	All Targets	-	4.50	4.80	*	-	-	-	-	-	-	-	9.40

Table 4.30: Central Gulf of Alaska groundfish retained catch by species, gear, and target fishery, 2022-2023, (1,000 metric tons, round weight). *(continued)*

Gear	Year	Target	Pollock	Sablefish	Pacific Cod	Arrowtooth	Flathead Sole	Rex Sole	Flat Deep	Flat Shallow	Rockfish	Atka Mackerel	Other	All Species
		Pollock, Bottom	29.60	-	3.30	0.30	-	-	-	0.10	1.40	*	0.10	34.70
		Pollock, Pelagic	68.40	-	0.10	0.10	-	-	-	-	0.50	-	-	69.00
		Sablefish	-	0.30	-	-	-	-	*	-	-	*	-	0.40
		Pacific Cod	-	-	1.30	-	*	*	*	0.10	-	-	-	1.50
		Arrowtooth	-	0.10	0.30	6.40	0.20	0.20	-	-	0.50	*	-	7.70
		Rex Sole	*	*	*	*	*	*	*	*	*	-	*	*
		Flatfish, Shallow	*	*	*	*	*	*	*	*	*	-	*	*
		Rockfish	1.00	0.60	0.30	2.60	-	0.10	-	-	27.00	0.30	-	31.90
	2022	All Targets	99.00	1.00	5.30	9.40	0.30	0.30	-	0.20	29.40	0.30	0.10	145.30
		Pollock, Bottom	28.50	-	3.60	0.30	0.10	-	*	0.20	1.10	*	0.10	34.00
		Pollock, Pelagic	67.70	-	0.10	0.10	-	-	*	-	0.40	-	-	68.20
		Sablefish	-	0.30	*	-	*	-	*	*	-	*	*	0.30
		Pacific Cod	-	*	*	*	-	-	-	*	*	-	*	*
		Arrowtooth	0.10	0.10	0.10	5.60	0.10	0.20	*	*	1.00	*	*	7.20
		Flatfish, Shallow	*	*	0.10	0.10	0.10	-	*	0.50	-	-	-	0.70
		Rockfish	1.30	0.50	0.20	0.70	-	0.10	*	-	27.50	*	-	30.20
Trawl	2023	All Targets	97.60	0.90	4.10	6.80	0.30	0.30	*	0.70	30.00	*	0.10	140.80
All Gear	2022	All Targets	99.00	7.50	15.40	9.40	0.30	0.30	-	0.20	29.50	0.30	0.20	162.10
	2023	All Targets	97.60	5.80	12.70	6.80	0.30	0.30	*	0.70	30.10	*	0.20	154.60

Note: Totals may include additional categories. The target is derived from an algorithm used to determine preponderance of catch, accounting for processor, trip, processing

mode, NMFS area, and gear. These estimates include only catch counted against federal TACs. "*" indicates a confidential value; "-" indicates no applicable data or value.
Source: NMFS Alaska Region Blend and Catch-accounting System estimates. Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.31: Gulf of Alaska ex-vessel prices in the groundfish fisheries by gear, and species, 2019-2023; calculations based on COAR ($/lb, round weight).

	Year	Fixed	Trawl	All Gear
	2019	0.12	0.14	0.14
	2020	0.03	0.12	0.12
	2021	0.08	0.12	0.12
	2022	0.56	0.17	0.17
Pollock	2023	0.12	0.13	0.13
	2019	0.50	0.46	0.49
	2020	0.42	0.36	0.39
	2021	0.41	0.35	0.39
	2022	0.48	0.44	0.47
Pacific Cod	2023	0.45	0.36	0.42
	2019	2.99	1.31	2.81
	2020	1.95	0.60	1.82
	2021	2.26	1.26	2.18
	2022	2.57	1.47	2.49
Sablefish	2023	1.85	0.77	1.77
	2019	-	0.29	0.29
	2020	-	0.27	0.27
	2021	-	0.30	0.30
Atka	2022	-	0.25	0.25
Mackerel	2023	-	0.26	0.26
	2019	0.06	0.07	0.07
	2020	0.02	0.07	0.07
	2021	0.25	0.07	0.07
	2022	0.07	0.11	0.11
Arrowtooth	2023	0.40	0.07	0.07
	2019	*	0.14	0.14
	2020	-	0.11	0.11
	2021	*	0.06	0.06
Flathead	2022	*	0.10	0.10
Sole	2023	*	0.06	0.06
	2019	-	0.22	0.22
	2020	-	0.21	0.21
	2021	*	0.07	0.07
	2022	-	0.11	0.11
Rex Sole	2023	-	0.12	0.12
	2019	-	0.15	0.15
	2020	*	0.12	0.12
	2021	*	0.08	0.08
Shallow-Water	2022	0.07	0.11	0.11
Flatfish	2023	*	0.10	0.10
	2019	*	0.13	0.13
	2020	*	0.14	0.14
	2021	*	0.07	0.07
Deep-Water	2022	*	0.11	0.11
Flatfish	2023	*	0.07	0.07

Table 4.31: Gulf of Alaska ex-vessel prices in the groundfish fisheries by gear, and species, 2019-2023; calculations based on COAR ($/lb, round weight). *(continued)*

	Year	Fixed	Trawl	All Gear
	2019	0.42	0.20	0.20
	2020	*	0.13	0.13
Pacific	2021	0.14	0.13	0.13
Ocean	2022	0.05	0.15	0.15
Perch	2023	0.30	0.13	0.13
	2019	*	0.19	0.19
	2020	*	0.13	0.13
	2021	-	0.13	0.13
Northern	2022	0.72	0.14	0.14
Rockfish	2023	0.68	0.13	0.13
	2019	0.58	0.19	0.19
	2020	0.77	0.13	0.13
	2021	0.63	0.13	0.13
Dusky	2022	0.58	0.14	0.14
Rockfish	2023	0.59	0.13	0.13
	2019	0.82	0.19	0.44
	2020	0.66	0.14	0.36
	2021	0.56	0.13	0.28
Other	2022	0.74	0.15	0.35
Rockfish	2023	0.74	0.12	0.36

Note: Prices are for catch from both federal and state of Alaska fisheries. The unfrozen landings price is calculated as landed value divided by estimated or actual round weight. Prices for catch processed by an at-sea processor without a COAR buying record (e.g., from catcher processors) are set using the prices for the matching species (group), region and gear-types for which buying records exist. Trawl-caught sablefish, rockfish and flatfish in the GOA and trawl-caught Atka mackerel in both the GOA and the GOA are not well represented in the COAR buying records. A price was calculated for these categories from product-report prices; the price in this case is the value of the first wholesale products divided by the calculated round weight and multiplied by a constant 0.4 to correct for value added by processing. The "All Alaska/All gear" column is the average weighted by retained catch. Values are not adjusted for inflation. "*" indicates a confidential value; "-" indicates no applicable data or value.
Source: NMFS Alaska Region Blend and Catch-accounting System estimates; NMFS Alaska Region At-sea Production Reports; and ADF&G Commercial Operators Annual Reports (COAR). Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.32: Gulf of Alaska ex-vessel value of the groundfish catch by vessel category, gear, and species, 2019-2023; calculations based on COAR ($ millions).

		Central Gulf				Western Gulf				All Gulf			
	Year	Hook and Line	Pot	Trawl	All Gear	Hook and Line	Pot	Trawl	All Gear	Hook and Line	Pot	Trawl	All Gear
	2019	-	-	26.68	26.68	-	-	6.59	6.59	-	-	36.12	36.12
	2020	-	-	20.92	20.92	-	-	4.94	4.94	-	-	27.80	27.80
	2021	-	-	20.50	20.50	-	-	4.83	4.83	-	-	27.32	27.32
	2022	-	-	36.87	36.88	-	-	8.65	8.68	-	-	48.95	48.99
Pollock	2023	-	-	27.40	27.40	-	-	7.29	7.29	-	-	37.52	37.52
	2019	1.69	3.60	2.18	7.46	1.36	4.84	1.59	7.79	3.54	8.44	3.77	15.74
	2020	0.39	0.95	1.74	3.08	0.18	0.71	0.11	1.00	0.91	1.66	1.85	4.42
	2021	3.02	3.94	2.55	9.51	1.25	2.92	1.36	5.52	4.58	6.86	3.91	15.35
Pacific	2022	4.26	7.20	5.20	16.66	1.87	3.98	2.16	8.01	6.56	11.19	7.37	25.11
Cod	2023	3.75	4.77	3.43	11.95	1.92	2.76	1.26	5.95	6.18	7.56	4.69	18.43
	2019	16.49	7.18	2.17	25.84	4.77	2.60	0.76	8.12	51.81	12.67	3.29	67.78
	2020	5.31	10.88	1.14	17.32	0.76	4.51	0.22	5.49	23.98	20.24	1.35	45.58
	2021	2.83	25.79	2.45	31.08	0.62	7.99	0.42	9.03	21.32	49.10	3.18	73.60
	2022	3.21	33.58	3.44	40.24	0.48	13.98	0.59	15.05	21.07	78.70	4.04	103.81
Sablefish	2023	2.13	18.91	1.51	22.55	0.35	9.51	0.33	10.19	12.43	49.91	1.99	64.33
	2019	-	-	0.31	0.31	-	-	0.42	0.42	-	-	0.73	0.73
	2020	-	-	-	-	-	-	0.30	0.30	-	-	0.30	0.30
	2021	-	-	0.33	0.33	-	-	0.23	0.23	-	-	0.56	0.56
Atka	2022	-	-	0.17	0.17	-	-	0.30	0.30	-	-	0.46	0.46
Mackerel	2023	-	-	-	-	-	-	0.26	0.26	-	-	0.26	0.26
	2019	-	-	3.67	3.67	-	-	0.07	0.07	-	-	3.75	3.76
	2020	*	-	2.89	2.89	-	-	0.03	0.03	-	-	2.92	2.92
	2021	-	-	1.17	1.17	*	-	0.03	0.03	-	-	1.20	1.20
	2022	-	-	2.38	2.38	-	-	0.08	0.08	-	-	2.46	2.46
Arrowtooth	2023	-	-	1.22	1.22	*	-	0.03	0.03	-	-	1.25	1.25

Table 4.32: Gulf of Alaska ex-vessel value of the groundfish catch by vessel category, gear, and species, 2019-2023; calculations based on COAR ($ millions). *(continued)*

		Central Gulf				Western Gulf				All Gulf			
	Year	Hook and Line	Pot	Trawl	All Gear	Hook and Line	Pot	Trawl	All Gear	Hook and Line	Pot	Trawl	All Gear
	2019	-	-	0.74	0.74	*	-	0.04	0.04	*	-	0.77	0.77
	2020	-	-	0.42	0.42	-	-	0.02	0.02	-	-	0.44	0.44
	2021	-	-	0.06	0.06	-	-	0.01	0.01	-	-	0.07	0.07
Flathead	2022	-	-	0.10	0.10	-	-	-	-	-	-	0.10	0.10
Sole	2023	-	-	0.06	0.06	-	-	-	-	-	-	0.06	0.06
	2019	-	-	0.74	0.74	-	-	0.01	0.01	-	-	0.75	0.75
	2020	-	-	0.53	0.53	-	-	0.01	0.01	-	-	0.54	0.54
	2021	-	-	0.04	0.04	*	-	-	-	*	-	0.04	0.04
Rex	2022	-	-	0.14	0.14	-	-	0.01	0.01	-	-	0.15	0.15
Sole	2023	-	-	0.10	0.10	-	-	-	-	-	-	0.10	0.10
	2019	-	-	0.86	0.86	-	-	0.01	0.01	-	-	0.87	0.87
	2020	*	-	1.06	1.06	-	-	-	-	*	-	1.06	1.06
	2021	*	-	0.25	0.25	-	-	-	-	*	-	0.25	0.25
Shallow-Water	2022	-	-	0.24	0.24	*	-	-	-	*	-	0.24	0.24
Flatfish	2023	-	-	0.19	0.19	-	-	-	-	*	-	0.19	0.19
	2019	-	-	0.01	0.01	*	-	-	-	*	-	0.01	0.01
	2020	-	-	0.02	0.02	-	-	*	*	*	-	0.02	0.02
	2021	-	-	-	-	-	-	*	*	*	-	-	-
Deep-Water	2022	-	-	-	-	*	-	*	*	*	-	-	-
Flatfish	2023	-	-	-	-	-	-	-	-	*	-	0.01	0.01
	2019	*	-	7.53	7.53	*	-	1.32	1.32	*	-	10.18	10.18
	2020	-	-	5.99	5.99	-	-	0.37	0.37	*	-	6.76	6.76
Pacific	2021	*	-	7.11	7.11	*	-	0.45	0.45	*	-	8.04	8.04
Ocean	2022	-	-	8.09	8.09	*	-	0.79	0.79	-	-	9.33	9.33
Perch	2023	*	-	6.95	6.95	-	-	0.68	0.68	*	-	8.01	8.01

Table 4.32: Gulf of Alaska ex-vessel value of the groundfish catch by vessel category, gear, and species, 2019-2023; calculations based on COAR ($ millions). *(continued)*

		Central Gulf				Western Gulf				All Gulf			
	Year	Hook and Line	Pot	Trawl	All Gear	Hook and Line	Pot	Trawl	All Gear	Hook and Line	Pot	Trawl	All Gear
	2019	-	-	0.73	0.73	*	-	0.34	0.34	*	-	1.07	1.07
	2020	*	-	0.45	0.45	-	-	0.21	0.21	*	-	0.67	0.67
	2021	-	-	0.46	0.46	-	-	0.20	0.20	-	-	0.66	0.66
Northern	2022	*	-	0.45	0.45	*	-	0.15	0.15	*	-	0.60	0.60
Rockfish	2023	*	-	0.26	0.26	*	-	0.11	0.11	*	-	0.36	0.36
	2019	0.02	-	0.83	0.85	0.01	-	0.08	0.09	0.03	-	0.91	0.94
	2020	0.01	-	0.51	0.53	*	-	0.06	0.06	0.01	-	0.58	0.59
	2021	0.01	-	0.75	0.75	*	-	0.04	0.04	0.01	-	0.79	0.80
Dusky	2022	-	-	0.75	0.75	-	-	0.03	0.03	0.01	-	0.78	0.79
Rockfish	2023	-	-	0.94	0.94	-	-	0.02	0.02	0.01	-	0.96	0.97
	2019	0.40	-	0.42	0.82	0.12	-	0.07	0.19	1.70	-	0.60	2.30
	2020	0.19	-	0.25	0.45	0.03	-	0.03	0.06	1.08	-	0.33	1.44
	2021	0.13	-	0.27	0.40	0.02	-	0.03	0.05	0.77	-	0.35	1.16
Other	2022	0.19	-	0.32	0.52	0.06	-	0.08	0.14	1.09	-	0.45	1.60
Rockfish	2023	0.23	-	0.23	0.47	0.06	-	0.04	0.11	1.18	-	0.32	1.57
	2019	0.07	-	0.95	1.13	0.02	-	0.02	0.14	0.11	-	0.98	1.30
	2020	0.01	-	0.78	0.79	-	-	0.01	0.01	0.02	-	0.78	0.81
	2021	0.09	-	0.08	0.18	0.03	-	-	0.03	0.13	-	0.08	0.23
Other	2022	0.08	-	0.03	0.18	0.14	-	-	0.14	0.24	-	0.04	0.33
Groundfish	2023	0.11	-	0.05	0.20	0.11	-	-	0.11	0.24	-	0.06	0.33

Note: Ex-vessel value is calculated by multiplying ex-vessel prices by the retained round weight catch from Tables 4.13 and 4.31. Please refer to Tables 4.13 and 4.31 for a description of the price derivation. The value added by at-sea processing is not included in these estimates of ex-vessel value. All groundfish includes additional species categories. Values are not adjusted for inflation. "*" indicates a confidential value; "-" indicates no applicable data or value.
Source: NMFS Alaska Region Blend and Catch-accounting System estimates; NMFS Alaska Region At-sea Production Reports; and ADF&G Commercial Operators Annual Reports (COAR). Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.33: Gulf of Alaska vessel and permit counts, ex-vessel value, value per vessel, and percent value of GOA FMP groundfish and all GOA fisheries by processor group, 2019-2023; calculations based on COAR ($ millions).

	Year	Vessels	Processors	Ex-vessel Value per Vessel $1,000	Ex-vessel Value $million	Percent Value, GOA FMP Groundfish	Percent Value, All GOA Fisheries
	2019	35	10	323.28	11.31	8.23	1.92
	2020	33	10	190.84	6.30	6.92	1.82
Western	2021	33	11	230.68	7.61	6.00	1.11
Gulf	2022	33	8	389.57	12.86	6.73	1.85
Trawl	2023	32	12	313.00	10.02	7.65	1.87
	2019	62	16	771.39	47.83	34.77	8.11
	2020	62	15	591.89	36.70	40.33	10.61
Central	2021	52	13	692.72	36.02	28.41	5.24
Gulf	2022	50	16	1,163.69	58.18	30.44	8.37
Trawl	2023	45	11	941.01	42.35	32.34	7.91
	2019	72	31	32.35	2.33	1.69	0.40
	2020	29	19	19.37	0.56	0.62	0.16
	2021	59	21	42.22	2.49	1.96	0.36
CV Hook	2022	54	22	60.27	3.25	1.70	0.47
and Line	2023	55	24	48.28	2.66	2.03	0.50
	2019	3	3	554.43	1.66	1.21	0.28
	2021	2	2	*	*	*	*
CP Hook	2022	6	6	416.20	2.50	1.31	0.36
and Line	2023	5	5	413.03	2.07	1.58	0.39
	2019	250	42	241.74	60.44	43.93	10.25
	2020	242	45	175.69	42.52	46.73	12.30
	2021	238	42	286.29	68.14	53.75	9.91
Sablefish	2022	245	45	395.70	96.95	50.72	13.94
IFQ	2023	233	40	259.33	60.42	46.15	11.29
	2019	59	17	146.60	8.65	6.29	1.47
	2020	38	17	49.20	1.87	2.05	0.54
	2021	70	24	103.52	7.25	5.72	1.05
	2022	79	23	152.44	12.04	6.30	1.73
Pot	2023	77	29	106.69	8.22	6.28	1.53
	2019	110	40	5.80	0.64	0.46	0.11
	2020	97	46	5.26	0.51	0.56	0.15
	2021	100	39	10.41	1.04	0.82	0.15
	2022	77	28	14.01	1.08	0.56	0.16
Jig	2023	125	41	14.26	1.78	1.36	0.33

Note: These tables include the value of groundfish purchases reported by processing plants, as well as by other entities, such as markets and restaurants, that normally would not report sales of groundfish products. Keep this in mind when comparing ex-vessel values in this table to gross processed-product values. The data are for catch from both federal and state of Alaska fisheries. The column "permits" is a count of federal groundfish processor permits. Values are not adjusted for inflation.
Source: ADF&G Commercial Operators Annual Reports (COAR); and ADF&G Intent to Operate (ITO) file. Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.34: Gulf of Alaska production of groundfish products by species, 2019-2023 (1,000 metric tons, round weight).

	Product	2019	2020	2021	2022	2023
	Whole Fish	3.12	0.42	0.33	0.22	0.19
	Head And Gut	28.41	22.62	14.02	20.10	20.29
	Roe	1.89	1.55	1.03	1.34	1.96
	Deep-Skin Fillets	*	0.23	*	*	*
	Other Fillets	8.80	7.60	8.65	11.77	13.19
	Surimi	6.95	5.43	5.93	6.48	9.59
	Minced Fish	0.84	1.80	0.76	0.66	0.95
	Fishmeal	*	*	0.50	*	1.33
	Other Products	1.07	0.30	0.42	0.89	0.74
Pollock	All Products	51.09	39.95	31.64	41.47	48.24
	Whole Fish	0.26	0.03	0.05	0.07	0.02
	Head And Gut	3.02	1.15	1.69	2.92	2.65
	Salted/Split	-	*	-	-	*
	Roe	0.38	0.19	0.53	0.89	0.55
	Fillets	2.37	1.12	2.70	3.85	3.03
	Other Products	1.44	0.47	1.56	1.99	1.33
Pacific Cod	All Products	7.47	2.97	6.54	9.72	7.58
	Head And Gut	6.54	6.44	8.90	11.97	9.88
	Other Products	0.43	0.35	0.60	0.41	0.54
Sablefish	All Products	6.97	6.78	9.50	12.38	10.43
	Head And Gut	0.63	0.25	0.47	0.43	0.26
	Other Products	*	*	*	*	*
Atka Mackerel	All Products	0.63	0.25	0.47	0.43	0.26
	Whole Fish	2.04	1.97	-	-	*
	Head And Gut	8.97	7.31	4.28	5.14	4.32
	Kirimi	-	*	-	-	-
	Fillets	*	-	-	-	*
	Other Products	*	*	*	*	0.20
Arrowtooth	All Products	11.01	9.28	4.28	5.14	4.52
	Whole Fish	1.09	1.09	-	*	*
	Head And Gut	0.27	0.20	0.20	0.15	0.10
	Kirimi	*	*	-	-	*
	Fillets	*	*	-	-	-
	Other Products	*	*	*	*	*
Flathead Sole	All Products	1.35	1.29	0.20	0.15	0.10
	Whole Fish	1.44	1.04	0.21	0.45	0.28
	Head And Gut	0.01	*	0.00	*	*
	Fillets	*	*	*	-	*
	Other Products	*	*	*	*	0.00
Rex Sole	All Products	1.46	1.04	0.21	0.45	0.28

Table 4.34: Gulf of Alaska production of groundfish products by species, 2019-2023 (1,000 metric tons, round weight). *(continued)*

	Product	2019	2020	2021	2022	2023
	Whole Fish	0.91	1.52	-	0.04	0.28
	Head And Gut	0.43	1.00	0.69	0.31	0.19
	Kirimi	*	*	*	-	*
	Fillets	*	*	-	*	*
	Other	*	*	*	*	*
Shallow-Water	Products					
Flatfish	All Products	1.33	2.51	0.69	0.35	0.47
	Whole Fish	*	*	-	-	-
	Head And Gut	*	*	-	*	*
	Fillets	*	*	-	-	-
	Other	-	-	-	*	*
Deep-Water	Products					
Flatfish	All Products	*	*	-	*	*
	Whole Fish	2.75	4.87	2.88	1.12	4.64
	Head And Gut	10.00	9.26	12.07	12.50	10.98
	Other	0.25	0.16	0.35	1.18	0.80
Pacific Ocean	Products					
Perch	All Products	13.01	14.29	15.31	14.80	16.43
	Whole Fish	*	*	*	*	*
	Head And Gut	1.39	1.26	1.21	0.99	0.70
	Other	0.00	0.00	*	0.05	0.00
Northern	Products					
Rockfish	All Products	1.39	1.26	1.21	1.04	0.70
	Whole Fish	0.14	0.32	0.25	0.04	0.16
	Head And Gut	1.17	0.88	1.32	1.29	1.71
	Other	0.01	0.02	0.02	0.01	0.00
Dusky	Products					
Rockfish	All Products	1.32	1.22	1.59	1.34	1.88
	Whole Fish	0.45	0.31	0.27	0.30	0.21
	Head And Gut	0.59	0.44	0.46	0.43	0.37
	Other	0.10	0.10	0.07	0.12	0.10
	Products					
Other Rockfish	All Products	1.14	0.84	0.80	0.85	0.69
	Whole Fish	0.23	0.04	0.15	0.36	0.49
	Head And Gut	0.05	0.01	0.00	*	0.00
	Fishmeal	*	*	*	*	0.03
	Other	0.40	0.31	0.13	0.48	0.25
Other	Products					
Groundfish	All Products	0.68	0.36	0.29	0.84	0.77

Table 4.34: Gulf of Alaska production of groundfish products by species, 2019-2023 (1,000 metric tons, round weight). *(continued)*

	Product	2019	2020	2021	2022	2023
	Whole Fish	12.43	11.60	4.14	2.60	6.28
	Head And Gut	61.48	50.81	45.33	56.25	51.46
	Salted/Split	-	*	-	-	*
	Kirimi	*	*	*	-	*
	Roe	2.27	1.74	1.56	2.23	2.51
	Fillets	2.37	1.12	2.70	3.85	3.03
	Deep-Skin Fillets	*	0.23	*	*	*
	Other Fillets	8.80	7.60	8.65	11.77	13.19
	Surimi	6.95	5.43	5.93	6.48	9.59
	Minced Fish	0.84	1.80	0.76	0.66	0.95
	Fishmeal	*	*	0.50	*	1.36
	Other Products	3.70	1.71	3.16	5.13	3.97
All Species	All Products	98.84	82.05	72.74	88.97	92.34

Note: Total includes additional species not listed in the production details as well as confidential data from Tables 4.31 and 4.32. These estimates are for catch from both federal and state of Alaska fisheries. "*" indicates a confidential value; "-" indicates no applicable data or value.
Source: NMFS Alaska Region At-sea and Shoreside Production Reports; and ADF&G Commercial Operators Annual Reports (COAR). Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.35: Gulf of Alaska gross value of groundfish products by species, 2019-2023, ($ million).

	Product	2019	2020	2021	2022	2023
	Whole Fish	1.90	0.30	0.40	0.30	0.30
	Head And Gut	32.60	25.90	14.40	30.10	23.40
	Roe	5.90	3.80	4.20	8.70	11.20
	Deep-Skin Fillets	*	0.80	*	*	*
	Other Fillets	26.90	23.20	29.50	54.60	52.10
	Surimi	16.60	12.80	16.70	22.30	21.90
	Minced Fish	1.40	3.40	1.40	2.60	1.70
	Fishmeal	*	*	0.90	*	2.90
	Other Products	0.70	0.20	1.00	1.10	1.40
Pollock	All Products	85.90	70.50	68.60	119.80	114.90
	Whole Fish	0.80	0.00	0.10	0.10	0.00
	Head And Gut	8.50	3.50	5.80	11.30	10.20
	Salted/Split	-	*	-	-	*
	Roe	0.90	0.40	1.30	3.00	1.80
	Fillets	21.50	10.10	25.50	46.80	33.20
	Other Products	3.50	0.90	3.10	5.30	4.50
Pacific Cod	All Products	35.20	15.00	35.80	66.50	49.60
	Head And Gut	73.80	58.20	89.50	131.70	74.00
	Other Products	5.30	3.70	6.90	3.90	6.50
Sablefish	All Products	79.00	61.90	96.40	135.70	80.50
	Head And Gut	1.60	0.60	1.30	1.00	0.60
	Other Products	*	*	*	*	*
Atka Mackerel	All Products	1.60	0.60	1.30	1.00	0.60
	Whole Fish	0.80	1.60	-	-	*
	Head And Gut	11.00	7.60	5.20	9.50	8.10
	Kirimi	-	*	-	-	-
	Fillets	*	-	-	-	*
	Other Products	*	*	*	*	0.40
Arrowtooth	All Products	11.70	9.20	5.20	9.50	8.50
	Whole Fish	0.90	0.90	-	*	*
	Head And Gut	0.50	0.30	0.30	0.20	0.10
	Kirimi	*	*	-	-	*
	Fillets	*	*	-	-	-
	Other Products	*	*	*	*	*
Flathead Sole	All Products	1.40	1.20	0.30	0.20	0.10
	Whole Fish	3.10	1.90	0.20	0.60	0.40
	Head And Gut	0.00	*	0.00	*	*
	Fillets	*	*	*	-	*
	Other Products	*	*	*	*	0.00
Rex Sole	All Products	3.20	1.90	0.20	0.60	0.50

Table 4.35: Gulf of Alaska gross value of groundfish products by species, 2019-2023, ($ million). *(continued)*

	Product	2019	2020	2021	2022	2023
	Whole Fish	0.90	1.50	-	0.00	0.40
	Head And Gut	0.90	1.70	1.40	0.40	0.30
	Kirimi	*	*	*	-	*
	Fillets	*	*	-	*	*
	Other	*	*	*	*	*
Shallow-Water	Products					
Flatfish	All Products	1.80	3.20	1.40	0.50	0.70
	Whole Fish	*	*	-	-	-
	Head And Gut	*	*	-	*	*
	Fillets	*	*	-	-	-
	Other	-	-	-	*	*
Deep-Water	Products					
Flatfish	All Products	*	*	-	*	*
	Whole Fish	2.80	4.70	2.60	1.70	6.80
	Head And Gut	19.10	15.90	24.40	30.90	23.80
	Other	1.90	1.60	2.30	3.40	3.30
Pacific Ocean	Products					
Perch	All Products	23.80	22.20	29.40	35.90	34.00
	Whole Fish	*	*	*	*	*
	Head And Gut	2.50	1.70	1.80	1.90	1.20
	Other	0.00	0.00	*	0.00	0.00
Northern	Products					
Rockfish	All Products	2.50	1.70	1.80	1.90	1.20
	Whole Fish	0.20	0.50	0.30	0.10	0.20
	Head And Gut	2.30	1.50	2.50	2.80	2.60
	Other	0.10	0.20	0.20	0.10	0.00
Dusky	Products					
Rockfish	All Products	2.60	2.20	3.00	3.00	2.90
	Whole Fish	1.80	1.10	0.90	1.10	0.80
	Head And Gut	2.00	1.40	1.10	1.20	0.90
	Other	1.20	0.90	0.90	1.60	1.10
	Products					
Other Rockfish	All Products	5.00	3.40	2.90	3.90	2.80
	Whole Fish	0.80	0.10	0.50	0.90	1.00
	Head And Gut	0.20	0.00	0.00	*	0.00
	Fishmeal	*	*	*	*	0.10
	Other	1.70	1.30	0.50	1.40	0.80
Other	Products					
Groundfish	All Products	2.70	1.40	1.00	2.30	1.90

Note: Total includes additional species not listed in the production details as well as confidential data from Tables 4.31 and 4.32. These estimates are for catch from both federal and state of Alaska fisheries. Values are not adjusted for inflation. "*" indicates a confidential value; "-" indicates no applicable data or value.
Source: NMFS Alaska Region At-sea and Shoreside Production Reports; and ADF&G Commercial Operators Annual Reports (COAR). Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.36: Gulf of Alaska price per pound of groundfish products by species, 2019-2023, ($/lb).

	Product	2019	2020	2021	2022	2023
	Whole Fish	0.27	0.32	0.52	0.62	0.76
	Head And Gut	0.52	0.52	0.47	0.68	0.52
	Roe	1.42	1.10	1.88	2.94	2.60
	Deep-Skin Fillets	*	1.46	*	*	*
	Other Fillets	1.39	1.39	1.54	2.10	1.79
	Surimi	1.08	1.07	1.28	1.56	1.04
	Minced Fish	0.75	0.87	0.86	1.81	0.81
	Fishmeal	*	*	0.82	*	0.98
	Other Products	0.28	0.37	1.12	0.56	0.86
Pollock	All Products	0.76	0.80	0.98	1.31	1.08
	Whole Fish	1.42	0.59	0.79	0.59	0.66
	Head And Gut	1.28	1.39	1.55	1.76	1.74
	Roe	1.04	0.99	1.11	1.53	1.46
	Fillets	4.12	4.09	4.28	5.52	4.96
	Other Products	1.09	0.88	0.89	1.20	1.52
Pacific Cod	All Products	2.14	2.30	2.48	3.11	2.97
	Head And Gut	5.12	4.11	4.56	4.99	3.39
	Other Products	5.58	4.84	5.25	4.36	5.44
Sablefish	All Products	5.15	4.14	4.60	4.97	3.50
	Head And Gut	1.17	1.10	1.25	1.03	1.08
	Other Products	*	*	*	*	*
Atka Mackerel	All Products	1.17	1.10	1.25	1.03	1.08
	Whole Fish	0.17	0.37	-	-	*
	Head And Gut	0.55	0.47	0.55	0.83	0.85
	Fillets	*	-	-	-	*
	Other Products	*	*	*	*	0.97
Arrowtooth	All Products	0.48	0.45	0.55	0.83	0.85
	Whole Fish	0.39	0.38	-	*	*
	Head And Gut	0.87	0.66	0.76	0.72	0.64
	Fillets	*	*	-	-	-
	Other Products	*	*	*	*	*
Flathead Sole	All Products	0.49	0.42	0.76	0.72	0.64
	Whole Fish	0.98	0.83	0.51	0.65	0.72
	Head And Gut	1.44	*	0.58	*	*
	Fillets	*	*	*	-	*
	Other Products	*	*	*	*	0.97
Rex Sole	All Products	0.98	0.83	0.51	0.65	0.72

Table 4.36: Gulf of Alaska price per pound of groundfish products by species, 2019-2023, ($/lb). *(continued)*

	Product	2019	2020	2021	2022	2023
	Whole Fish	0.44	0.43	-	0.45	0.59
	Head And Gut	0.93	0.79	0.91	0.60	0.72
	Fillets	*	*	-	*	*
	Other	*	*	*	*	*
Shallow-Water	Products					
Flatfish	All Products	0.60	0.58	0.91	0.58	0.64
	Whole Fish	*	*	-	-	-
	Head And Gut	*	*	-	*	*
	Fillets	*	*	-	-	-
	Other	-	-	-	*	*
Deep-Water	Products					
Flatfish	All Products	*	*	-	*	*
	Whole Fish	0.46	0.44	0.42	0.67	0.67
	Head And Gut	0.87	0.78	0.92	1.12	0.98
	Other	3.36	4.29	2.98	1.29	1.88
Pacific Ocean	Products					
Perch	All Products	0.83	0.70	0.87	1.10	0.94
	Whole Fish	*	*	*	*	*
	Head And Gut	0.83	0.63	0.69	0.86	0.78
	Other	2.81	2.44	*	0.25	1.65
Northern	Products					
Rockfish	All Products	0.83	0.63	0.69	0.83	0.79
	Whole Fish	0.77	0.71	0.57	0.74	0.64
	Head And Gut	0.88	0.77	0.86	0.99	0.70
	Other	3.04	4.87	3.79	5.50	2.31
Dusky	Products					
Rockfish	All Products	0.88	0.82	0.86	1.01	0.69
	Whole Fish	1.81	1.62	1.55	1.74	1.68
	Head And Gut	1.55	1.44	1.07	1.29	1.11
	Other	5.34	4.52	5.62	6.02	5.03
	Products					
Other Rockfish	All Products	1.99	1.86	1.65	2.10	1.87
	Whole Fish	1.66	0.92	1.66	1.15	0.90
	Head And Gut	1.79	0.79	2.11	*	0.78
	Fishmeal	*	*	*	0.60	0.95
	Other	1.89	1.89	1.60	1.34	1.55
Other	Products					
Groundfish	All Products	1.81	1.76	1.64	1.24	1.11

Note: These estimates are based on data from both federal and state of Alaska fisheries. Prices based on confidential data have been excluded. Values are not adjusted for inflation. "*" indicates a confidential value; "-" indicates no applicable data or value.

Source: NMFS Alaska Region At-sea and Shoreside Production Reports; and ADF&G Commercial Operators Annual Reports (COAR). Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.37: Gulf of Alaska total product value per round metric ton of retained catch by species and year, 2019-2023, ($/mt).

	2019	2020	2021	2022	2023
Pollock	735	664	710	925	879
Sablefish	7,229	5,444	6,305	7,148	4,880
Pacific Cod	2,422	2,952	2,012	2,744	2,497
Flatfish	641	593	689	875	1,023
Rockfish	1,098	974	1,048	1,282	1,156
Atka Mackerel	1,443	1,165	1,552	1,181	1,394
Other	2,085	1,670	3,482	5,591	4,075

Note: These estimates include the product value of catch from both federal and state of Alaska fisheries. Values are not adjusted for inflation. "*" indicates a confidential value; "-" indicates no applicable data or value.
Source: NMFS Alaska Region At-sea and Shoreside Production Reports; ADF&G Commercial Operators Annual Reports (COAR); and NMFS Alaska Region Blend and Catch-accounting System estimates. Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.38: Gulf of Alaska number of processors, gross product value, value per processor, and percent value of GOA FMP groundfish of processed groundfish by processor group, 2019-2023 ($ millions).

		Processors	Wholesale Value ($million)	Wholesale Value per Processor ($1,000)	Percent Value, GOA FMP Groundfish
Central	2019	11	28.78	2,616.46	9.52
and	2020	9	21.89	2,431.82	9.50
Western	2021	7	27.58	3,939.59	8.74
Gulf	2022	8	38.38	4,797.01	7.49
Trawl	2023	8	30.10	3,762.48	7.68
	2019	7	2.46	351.83	0.81
	2020	4	0.08	20.63	0.04
	2021	5	3.28	655.13	1.04
CP Hook	2022	9	6.13	680.92	1.20
and Line	2023	7	5.05	721.06	1.29
	2019	7	3.89	555.68	1.29
	2020	5	2.08	416.94	0.90
	2021	5	5.26	1,051.81	1.67
Sablefish	2022	7	7.75	1,106.61	1.51
IFQ	2023	5	4.71	941.62	1.20
	2019	2	*	*	*
Motherships	2020	2	*	*	*
& Inshore	2021	2	*	*	*
Floating	2022	3	98.89	32,964.50	19.30
Procs.	2023	2	*	*	*
	2019	6	111.06	18,509.63	36.72
	2020	7	98.76	14,108.99	42.86
Kodiak	2021	6	113.64	18,940.64	36.02
Shoreside	2022	5	176.33	35,266.76	34.41
Procs.	2023	5	141.52	28,303.62	36.11
	2019	10	24.43	2,442.82	8.08
Southcentral	2020	10	15.55	1,554.54	6.75
Gulf	2021	8	28.24	3,529.56	8.95
Shoreside	2022	11	48.66	4,423.78	9.50
Procs.	2023	10	34.90	3,489.97	8.91
	2019	17	33.28	1,957.36	11.00
Southeastern	2020	15	25.78	1,718.70	11.19
Gulf	2021	17	37.43	2,201.87	11.87
Shoreside	2022	16	48.86	3,053.51	9.53
Procs.	2023	12	32.02	2,668.53	8.17
	2019	3	63.45	21,149.68	20.98
Western	2020	4	38.55	9,638.21	16.73
Gulf	2021	3	50.09	16,695.63	15.88
Shoreside	2022	2	*	*	*
Procs.	2023	3	57.05	19,015.50	14.56

Note: The data are for catch from both federal and state of Alaska fisheries. The processor groups are defined as follows: "Western and Central Gulf Trawl" are the processors in the Western and Central Gulf. "CP Hook and Line" are the hook and line catcher processors. "Sablefish IFQ" are processors processing sablefish IFQ. Values are not adjusted for inflation.
Source: ADF&G Commercial Operators Annual Reports (COAR); and ADF&G Intent to Operate (ITO) file. Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700,

Seattle, WA 98115-0070.

Table 4.39: Gulf of Alaska number of vessels, average and median length, and average and median capacity (tonnage) of vessels that caught groundfish by vessel type, and gear, 2019-2023.

		Vessels	Average Length (feet)	Median Length (feet)	Average Capacity (tons)	Median Capacity (tons)
	2019	76	90	88	124	103
Central	2020	70	91	88	130	103
and	2021	67	93	90	135	103
Western	2022	68	94	90	129	106
Gulf Trawl	2023	65	93	90	128	103
	2019	32	44	42	26	24
	2020	2	47	47	20	19.50
	2021	36	44	42	27	24
CV Hook	2022	34	42	41	27	24
and Line	2023	30	40	41	24	24
	2019	3	127	119	251	133
	2021	2	158	157.50	418	417.50
CP Hook	2022	6	147	150	399	315
and Line	2023	5	132	121.50	246	133
	2019	259	57	57	48	36
	2020	243	57	57	49	39
	2021	245	58	58	52	42
Sablefish	2022	247	59	58	53	43
IFQ	2023	253	59	58	53	41
	2019	60	66	58	67	51
	2020	39	52	55	43	41
	2021	64	61	58	64	52
	2022	77	61	58	63	52
Pot	2023	72	60	58	57	52
	2019	108	40	41	16	15
	2020	94	39	38	15	15
	2021	96	38	38	21	15
	2022	78	40	38	16	16
Jig	2023	123	39	38	16	16
	2019	11	43	44	14	12
	2020	5	38	38	13	14
	2021	3	62	68	45	24
No Fleet/	2022	2	57	68	15	18
Other	2023	1	34	34	8	8

Note: These estimates include only vessels fishing part of federal TACs. "*" indicates a confidential value; "-" indicates no applicable data or value.
Source: NMFS Alaska Region Blend and Catch-accounting System estimates; CFEC gross earnings (fish tickets) file; NMFS Alaska Region groundfish observer data; NMFS Alaska Region permit data; CFEC vessel registration file. Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.40: Gulf of Alaska number of vessels that caught groundfish by month, vessel type, and gear, 2019-2023.

	Gear	Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
		2019	30	62	142	173	152	123	60	94	114	111	69	10	359
		2020	7	21	89	101	143	88	55	72	100	115	39	6	292
	Hook	2021	31	44	93	116	134	60	50	40	58	85	50	29	280
	and	2022	8	33	87	107	102	44	27	37	66	57	47	25	257
	Line	2023	17	34	100	127	92	63	47	50	59	45	21	7	292
		2019	24	24	39	15	18	13	4	7	22	25	18	3	88
		2020	1	8	37	22	35	28	20	33	56	65	38	3	140
		2021	30	23	52	63	87	57	39	33	60	80	55	27	206
		2022	20	35	94	97	103	71	37	42	80	83	57	29	236
	Pot	2023	20	26	96	112	108	70	37	51	81	56	25	4	241
		2019	32	47	50	25	25	22	1	20	47	50	21	-	65
		2020	28	37	43	19	24	16	4	33	44	51	11	-	61
		2021	17	51	45	19	16	12	5	-	48	35	13	-	60
		2022	17	53	43	34	17	14	3	3	48	45	8	-	60
	Trawl	2023	22	45	42	30	19	17	2	1	44	39	16	-	57
		2019	86	133	223	209	193	156	65	120	181	182	106	13	476
		2020	36	66	164	137	190	125	73	127	176	199	77	9	417
		2021	77	116	169	169	204	111	77	61	152	168	101	49	431
Catcher	All	2022	45	120	203	199	187	117	58	68	169	159	92	46	437
Vessels	Gear	2023	59	104	218	234	192	136	76	86	160	124	56	10	475
		2019	-	1	1	1	3	2	2	1	4	2	2	-	8
		2020	-	-	1	1	2	1	-	1	1	-	-	-	4
	Hook	2021	-	3	2	1	-	-	2	1	1	2	3	-	5
	and	2022	1	1	2	1	1	1	1	1	1	2	3	1	9
	Line	2023	1	2	2	1	1	1	-	1	1	-	4	2	7
		2020	-	-	-	-	-	-	-	-	-	1	1	-	1
		2021	-	-	-	-	2	2	-	-	-	1	1	-	3
		2022	-	-	1	1	-	2	1	1	1	2	-	-	6
	Pot	2023	-	-	1	1	-	1	1	3	1	-	-	-	4
		2019	-	-	1	1	1	3	6	6	5	4	2	1	11
		2020	-	-	1	3	2	4	7	5	2	1	1	-	9
		2021	-	-	-	-	1	5	6	6	3	2	1	1	7
		2022	-	-	-	2	2	6	7	6	3	1	-	-	8
	Trawl	2023	-	-	-	1	1	4	7	5	1	-	-	-	8
		2019	-	1	2	2	4	5	8	7	9	6	4	1	19
		2020	-	-	2	4	4	5	7	6	3	2	2	-	14
		2021	-	3	2	1	3	7	8	7	4	5	5	1	14
Catcher	All	2022	1	1	3	4	3	8	9	7	4	5	3	1	21
Processors	Gear	2023	1	2	3	3	2	6	8	8	2	-	4	2	18

Note: These estimates include only vessels fishing part of federal TACs. "*" indicates a confidential value; "-" indicates no applicable data or value.
Source: NMFS Alaska Region Blend and Catch-accounting System estimates; CFEC gross earnings (fish tickets) file; NMFS Alaska Region groundfish observer data; NMFS Alaska Region permit data; CFEC vessel registration file. Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.41: Gulf of Alaska catcher vessel (excluding catcher/processors) weeks of fishing groundfish by vessel-length class (feet), gear, and target ,2019-2023.

		Hook & Line		Pot		Trawl		All Gear	
	Year	<60ft	60-124ft	<60ft	60-124ft	<60ft	60-124ft	<60ft	60-124ft
	2019	-	-	-	-	142	389	142	389
	2020	-	-	-	-	144	422	144	422
	2021	-	-	-	-	82	463	82	463
	2022	-	-	-	-	107	516	107	516
Pollock	2023	-	-	-	-	126	485	126	485
	2019	1,329	299	200	62	-	12	1,529	372
	2020	1,016	167	476	201	1	10	1,493	378
	2021	727	47	785	316	-	10	1,513	373
	2022	466	35	1,041	357	-	14	1,506	406
Sablefish	2023	394	33	956	334	-	11	1,350	378
	2019	414	1	171	80	41	7	626	88
	2020	275	-	80	5	-	2	356	7
	2021	528	8	223	37	58	8	809	53
Pacific	2022	443	2	251	59	39	35	733	96
Cod	2023	612	4	187	47	30	11	829	62
	2019	-	-	-	-	17	165	17	165
	2020	-	-	-	-	2	150	3	150
	2021	-	-	-	-	-	1	-	1
	2022	-	-	-	-	-	3	-	3
Flatfish	2023	1	-	-	-	-	15	1	15
	2019	238	1	-	-	6	113	245	114
	2020	186	-	-	-	6	112	192	112
	2021	109	-	-	-	3	116	113	116
	2022	79	-	-	-	5	80	84	80
Rockfish	2023	106	-	-	-	4	93	110	93
	2019	1,986	301	370	142	207	686	2,563	1,128
	2020	1,484	167	557	206	152	696	2,193	1,069
	2021	1,366	55	1,010	353	142	599	2,518	1,007
All	2022	993	37	1,291	416	152	648	2,436	1,101
Groundfish	2023	1,114	37	1,143	381	160	616	2,417	1,034

Note: These estimates include only vessels fishing part of federal TACs. A vessel that fished more than one category in a week is apportioned a partial week based on catch weight. A target is determined based on vessel, week, processing mode, NMFS area, and gear. All groundfish include additional target categories. "*" indicates a confidential value; "-" indicates no applicable data or value.
Source: NMFS Alaska Region Blend and Catch-accounting System estimates; CFEC gross earnings (fish tickets) file; NMFS Alaska Region groundfish observer data; NMFS Alaska Region permit data; CFEC vessel registration file. Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.42: Gulf of Alaska catcher/processor vessel weeks of fishing groundfish by vessel-length class (feet), gear, and target, 2019-2023.

		Hook & Line			Pot		Trawl			All Gear			
	Year	<60ft	60-124ft	125-230ft	<60ft	125-230ft	60-124ft	125-230ft	>230ft	<60ft	60-124ft	125-230ft	>230ft
	2020	-	-	-	-	-	-	0	-	-	-	0	-
	2021	-	-	-	-	-	1	0	-	-	1	0	-
Pollock	2022	-	-	-	-	-	-	0	-	-	-	0	-
	2019	8	-	23	-	-	0	-	-	8	0	23	-
	2020	9	-	11	-	7	-	-	-	9	-	18	-
	2021	9	-	7	-	17	-	-	-	9	-	24	-
	2022	7	-	7	4	15	-	-	-	11	-	22	-
Sablefish	2023	13	-	2	1	16	-	-	-	14	-	18	-
	2019	2	6	3	-	-	-	-	-	2	6	3	-
	2021	-	-	11	-	-	-	-	-	-	-	11	-
Pacific	2022	-	4	10	-	-	-	-	-	-	4	10	-
Cod	2023	-	10	6	-	-	-	-	-	-	10	6	-
	2019	-	-	-	-	-	45	10	-	-	45	10	-
	2020	-	-	-	-	-	28	10	3	-	28	10	3
	2021	-	-	-	-	-	22	11	3	-	22	11	3
	2022	-	-	-	-	-	20	11	5	-	20	11	5
Flatfish	2023	-	-	-	-	-	-	11	2	-	-	11	2
	2019	-	-	-	-	-	5	34	1	-	5	34	1
	2020	-	-	-	-	-	1	33	4	-	1	33	4
	2021	-	-	-	-	-	2	40	7	-	2	40	7
	2022	-	-	-	-	-	-	35	8	-	-	35	8
Rockfish	2023	-	-	-	-	-	-	30	8	-	-	30	8
	2019	10	6	25	-	-	50	44	1	10	56	69	1
	2020	9	-	11	-	7	29	43	7	9	29	61	7
	2021	9	-	18	-	17	25	51	10	9	25	86	10
All	2022	7	4	17	4	15	20	46	13	11	24	77	13
Groundfish	2023	13	10	10	1	16	-	42	10	14	10	67	10

Note: These estimates include only vessels fishing part of federal TACs. A vessel that fished more than one category in a week is apportioned a partial week based on catch weight. A target is determined based on vessel, week, processing mode, NMFS area, and gear. All groundfish include additional target categories. "*" indicates a confidential value; "-" indicates no applicable data or value.

Source: NMFS Alaska Region Blend and Catch-accounting System estimates; NMFS Alaska Region At-sea Production Reports; ADF&G Commercial Operators Annual Reports (COAR); and NMFS Office of Science and Technology, Fisheries Statistics Division, Fisheries of the United States. Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.43: Gulf of Alaska catcher vessel crew weeks in the groundfish fisheries by month, 2019-2023.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2019	428	1,055	1,492	1,396	1,642	1,209	442	924	1,456	1,712	729	72	12,558
2020	116	640	1,018	970	1,525	852	458	914	1,395	2,004	512	34	10,436
2021	467	966	1,390	1,118	1,740	793	584	503	1,208	1,882	774	223	11,646
2022	264	1,003	1,540	1,779	1,374	957	522	608	1,746	1,730	679	264	12,466
2023	308	764	1,634	1,786	1,522	951	528	562	1,608	1,148	372	41	11,224

Note: Crew weeks are calculated by summing weekly reported crew size over vessels and time period. These estimates include only vessels targeting groundfish counted toward federal TACs. "*" indicates a confidential value; "-" indicates no applicable data or value.
Source: NMFS Alaska Region At-sea Production Reports. Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.44: Gulf of Alaska at-sea processor vessel crew weeks in the groundfish fisheries by month, 2019-2023.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2019	-	*	*	*	134	332	604	556	526	346	312	*	2,810
2020	-	-	*	203	318	571	670	429	86	*	*	-	2,277
2021	-	72	*	*	126	609	1,164	408	294	250	205	*	3,128
2022	*	*	128	209	217	666	1,129	574	226	237	172	*	3,558
2023	*	*	107	56	*	645	1,211	510	*	*	109	*	2,638

Note: Crew weeks are calculated by summing weekly reported crew size over vessels and time period. These estimates include only vessels targeting groundfish counted toward federal TACs. Catcher processors typically account for 90-95% of the total at-sea crew weeks in all areas. "*" indicates a confidential value; "-" indicates no applicable data or value.
Source: NMFS Alaska Region At-sea Production Reports. Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

4.4 Economic Data Tables for the Commercial Pacific Halibut Fishery

Table 4.45: Catch (net landed weight) in the commercial Pacific halibut fisheries off Alaska by region, 2019-2023, (hundreds of metric tons).

	Gulf of Alaska	Bering Sea and Aleutian Islands	All Alaska
2019	69.67	17.16	86.83
2020	62.57	15.33	77.90
2021	76.66	13.58	90.24
2022	78.58	13.22	91.80
2023	68.00	10.30	78.31

Note: These estimates include catch from all Alaska commercial fisheries (including CDQ). Net weight is dressed, head-off, slime and ice deducted. "*" indicates a confidential value; "-"indicates no applicable data or value.
Source: ADF&G fish tickets; CFEC gross earnings (fish tickets) file. Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.46: Catch (net landed weight) and percent of regional catch in the commercial Pacific halibut fisheries off Alaska by vessel length (feet) and region, 2019-2023, (hundreds of metric tons).

		Gulf of Alaska		Bering Sea and Aleutian Islands		All Alaska	
	Length	Net tons	Percent	Net tons	Percent	Net tons	Percent
	<20	0.09	-	*	*	0.09	-
	20-29	1.73	0.02	0.92	0.05	2.65	0.03
	30-39	12.53	0.18	3.09	0.18	15.62	0.18
	40-49	26.12	0.38	2.93	0.17	29.05	0.34
	50-59	20.21	0.29	5.95	0.35	26.16	0.30
2019	>=60	8.86	0.13	3.93	0.23	12.79	0.15
	<20	*	*	*	*	-	-
	20-29	1.75	0.03	*	*	1.75	0.02
	30-39	11.45	0.18	1.26	0.08	12.71	0.16
	40-49	23.60	0.38	2.67	0.18	26.26	0.34
	50-59	17.75	0.28	7.10	0.47	24.85	0.32
2020	>=60	7.85	0.13	3.93	0.26	11.78	0.15
	<20	0.07	-	*	*	0.07	-
	20-29	2.19	0.03	*	*	2.19	0.03
	30-39	13.77	0.18	0.60	0.08	14.37	0.17
	40-49	28.33	0.37	2.53	0.35	30.86	0.37
	50-59	23.04	0.30	*	*	23.04	0.28
2021	>=60	9.13	0.12	4.08	0.57	13.21	0.16
	<20	0.05	-	*	*	0.05	-
	20-29	1.78	0.02	*	*	1.78	0.02
	30-39	13.01	0.17	0.22	0.02	13.23	0.14
	40-49	29.68	0.38	2.13	0.16	31.80	0.35
	50-59	23.96	0.31	6.40	0.49	30.36	0.33
2022	>=60	9.94	0.13	4.37	0.33	14.31	0.16
	<20	0.02	-	*	*	0.02	-
	20-29	1.42	0.02	*	*	1.42	0.02
	30-39	11.21	0.17	0.06	0.01	11.27	0.14
	40-49	27.08	0.40	1.57	0.16	28.65	0.37
	50-59	19.53	0.29	5.09	0.50	24.62	0.32
2023	>=60	8.55	0.13	3.39	0.34	11.94	0.15

Note: Excludes vessels in the Annette Island commercial Pacific halibut fishery. These estimates include catch from all Alaska commercial fisheries (including CDQ). Net weight is dressed, head-off, slime and ice deducted. "*" indicates a confidential value; "-" indicates no applicable data or value.
Source: ADF&G fish tickets; CFEC gross earnings (fish tickets) file. Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.47: Non-halibut prohibited species catch on commercial Pacific halibut target trips off Alaska by PSC species and area, 2019-2023.

	Year	Chinook Salmon (Count)	Non-Chinook Salmon (Count)	Herring (Tons)	Bairdi Tanner Crab (Count)	Opilio Tanner (Snow) Crab (Count)	Red King Crab (Count)	Other King Crab (Count)
	2019	17	93	-	57	-	2	28
	2020	-	-	-	1	-	-	199
	2021	-	21	-	76	-	*	572
Gulf of	2022	-	66	-	89	-	-	2
Alaska	2023	-	159	-	32	-	-	140
	2019	*	*	*	22	47	3	551
Bering Sea	2020	*	-	-	28	75	-	558
and	2021	-	-	-	32	147	20	22
Aleutian	2022	-	-	*	28	34	12	88
Islands	2023	*	*	*	7	33	23	424

Note: These estimates include catch from all Alaska commercial fisheries (including CDQ). For details on prohibited species catch estimation see Cahalan, J., J. Gasper, and J. Mondragon. 2014. Catch sampling and estimation in the federal groundfish fisheries off Alaska, 2015 edition. U.S. Dep. Commer., NOAA Tech. Memo. NMFS-AFSC-286, 46 p. "*" indicates a confidential value; "-"indicates no applicable data or value.
Source: NMFS Alaska Regional Office Prohibited Species Catch database. Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.48: Ex-vessel value and price in the commercial Pacific halibut fisheries off Alaska by region, 2019-2023, ($ millions and $/lb net weight, respectively).

	Gulf of Alaska		Bering Sea and Aleutian Islands		All Alaska	
	Value	Price	Value	Price	Value	Price
2019	79.59	$ 5.18	15.31	$ 4.05	94.89	$ 4.96
2020	59.22	$ 4.29	13.02	$ 3.85	72.24	$ 4.21
2021	110.51	$ 6.54	17.68	$ 5.91	128.20	$ 6.44
2022	126.98	$ 7.33	20.83	$ 7.14	147.81	$ 7.30
2023	82.58	$ 5.51	11.32	$ 4.98	93.89	$ 5.44

Note: These estimates include catch from all Alaska commercial fisheries (including CDQ). Price is calculated as landed value divided by net weight. Values are not adjusted for inflation. Net weight is dressed, head-off, slime and ice deducted. "*" indicates a confidential value; "-"indicates no applicable data or value.
Source: ADF&G fish tickets; CFEC gross earnings (fish tickets) file. Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.49: Ex-vessel value and price in the commercial Pacific halibut fisheries off Alaska by IPHC area, 2019-2023, ($ millions and $/lb net weight, respectively).

Area		2019	2020	2021	2022	2023
2C	Value	19.79	15.17	27.28	30.12	21.68
	Price	5.26	4.28	6.34	7.33	5.83
3A	Value	45.25	31.41	65.57	73.80	46.11
	Price	5.28	4.32	6.66	7.37	5.48
3B	Value	12.24	10.35	12.13	17.26	11.86
	Price	5.03	4.33	6.66	7.23	5.24
4A	Value	5.79	4.70	9.28	10.09	5.08
	Price	3.86	3.82	5.89	7.10	4.96
4B	Value	4.50	3.77	4.93	-	2.22
	Price	4.16	3.80	5.88	-	4.98
4CDE	Value	7.32	6.85	9.01	12.25	6.94
	Price	4.07	3.91	5.95	7.18	4.98

Note: Values and prices are for catch from all Alaska commercial fisheries (including CDQ). Price is calculated as landed value divided by net weight. Values are not adjusted for inflation. Net weight is dressed, head-off, slime and ice deducted. "*" indicates a confidential value; "-" indicates no applicable data or value.
Source: ADF&G fish tickets; CFEC gross earnings (fish tickets) file. Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.50: Ex-vessel value and average annual revenue per vessel in the commercial Pacific halibut fisheries off Alaska by region and vessel length (feet), 2019-2023, ($ millions and $ thousands, respectively).

		Gulf of Alaska		Bering Sea and Aleutian Islands		All Alaska	
	Length	Value	Avg. Value/Vessel	Value	Avg. Value/Vessel	Value	Avg. Value/Vessel
	<20	0.10	6.29	*	*	0.50	18.42
	20-29	1.98	22.47	0.83	31.82	2.80	24.82
	30-39	14.11	54.91	2.71	77.32	16.82	60.06
	40-49	30.08	121.78	2.66	177.23	32.74	129.40
	50-59	22.91	180.42	5.24	227.72	28.15	219.93
2019	>=60	10.25	256.24	3.48	193.39	13.73	319.31
	<20	*	*	*	*	0.29	17.09
	20-29	1.66	21.04	*	*	1.72	19.94
	30-39	10.77	47.03	1.09	49.71	11.86	49.63
	40-49	22.45	90.89	2.29	143.05	24.74	97.78
	50-59	16.76	138.51	5.98	314.61	22.74	184.86
2020	>=60	7.42	200.43	3.34	196.76	10.76	269.02
	<20	0.09	6.51	*	*	0.25	11.81
	20-29	3.13	44.03	*	*	3.18	40.27
	30-39	19.60	84.11	0.79	43.62	20.38	84.57
	40-49	40.90	174.04	3.23	268.82	44.13	184.63
	50-59	33.10	266.92	*	*	41.09	326.08
2021	>=60	13.50	385.85	5.47	341.99	18.98	499.38
	<20	0.07	6.14	*	*	0.27	13.29
	20-29	2.91	37.36	*	*	2.92	36.49
	30-39	21.26	93.25	0.34	24.56	21.60	92.72
	40-49	48.16	200.65	3.31	184.16	51.47	212.69
	50-59	38.31	301.64	10.09	560.74	48.40	378.14
2022	>=60	16.01	421.34	6.88	430.03	22.89	558.33
	<20	0.03	2.86	*	*	0.25	14.10
	20-29	1.78	29.73	*	*	1.82	29.83
	30-39	13.72	62.93	0.08	7.33	13.80	61.33
	40-49	33.02	143.57	1.71	100.84	34.74	149.08
	50-59	23.47	190.84	5.53	325.51	29.01	230.22
2023	>=60	10.32	294.85	3.73	248.61	14.05	369.71

Note: Values are for catch from all Alaska commercial fisheries (including CDQ). Excludes vessels in the Annette Island commercial Pacific halibut fishery. Length is measured in feet. Values are not adjusted for inflation. "*" indicates a confidential value; "-" indicates no applicable data or value.
Source: ADF&G fish tickets; CFEC gross earnings (fish tickets) file. Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.51: Ex-vessel value port ranking, annual ex-vessel value, price and percent of statewide value in the commercial Pacific halibut fisheries off Alaska, 2019-2023, ($ millions and $/lb net weight).

Port		2019	2020	2021	2022	2023
	Homer	15.07	13.86	25.62	21.39	19.94
	Kodiak	10.35	7.20	13.11	20.98	10.23
	Seward	11.82	5.81	15.44	16.59	8.11
	Dutch Harbor	*	*	*	*	*
	Juneau	*	6.17	9.79	9.41	6.86
	Sitka	7.35	5.08	8.74	10.47	*
	Yakutat	*	*	*	*	*
Ex-vessel	Petersburg	6.43	4.15	7.77	8.65	5.46
Value	Akutan	*	*	*	*	*
	Homer	5.43	4.50	7.11	7.78	5.56
	Kodiak	4.80	4.03	6.32	6.94	4.73
	Seward	5.40	4.37	6.93	7.44	5.70
	Dutch Harbor	*	*	*	*	*
	Juneau	*	4.51	6.48	7.63	6.13
	Sitka	5.54	4.21	6.24	6.70	*
	Yakutat	*	*	*	*	*
	Petersburg	4.98	4.17	6.28	7.48	5.84
Price	Akutan	*	*	*	*	*
	Homer	16 %	19 %	20 %	14 %	21 %
	Kodiak	11 %	10 %	10 %	14 %	11 %
	Seward	12 %	8 %	12 %	11 %	9 %
	Dutch Harbor	*	*	*	*	*
	Juneau	*	9 %	8 %	6 %	7 %
	Sitka	8 %	7 %	7 %	7 %	*
Percent	Yakutat	*	*	*	*	*
State	Petersburg	7 %	6 %	6 %	6 %	6 %
Value	Akutan	*	*	*	*	*
	Homer	1	1	1	1	1
	Kodiak	3	3	3	2	2
	Seward	2	5	2	3	3
	Dutch Harbor	8	2	9	7	4
	Juneau	5	4	5	6	5
	Sitka	4	6	6	5	6
	Yakutat	7	9	7	10	7
	Petersburg	6	8	8	9	8
Rank	Akutan	15	7	4	8	10

Note: Displays only the 10 Alaska ports of landing with the highest average ex-vessel value over the last 5 years. Values and prices are for catch from all Alaska commercial fisheries (including CDQ). Price is calculated as landed value divided by net weight. Net weight is dressed, head-off, slime and ice deducted. Values are not adjusted for inflation. "*" indicates a confidential value; "-" indicates no applicable data or value.
Source: ADF&G fish tickets; CFEC gross earnings (fish tickets) file. Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.52: First wholesale production volume, value and price in the commercial Pacific halibut fisheries off Alaska by product, 2019-2023, (1000s of metric tons, $ millions and $/lb net weight, respectively).

Product		Price	Quantity	Value
	2019	$ 6.37	5.07	71.12
	2020	$ 5.75	3.42	43.34
	2021	$ 8.35	5.27	97.07
Head and	2022	$ 9.19	5.10	103.25
Gut	2023	$ 7.14	4.40	69.28
	2019	$ 11.44	1.38	34.76
	2020	$ 10.26	1.70	38.47
	2021	$ 14.45	1.66	52.81
	2022	$ 16.14	1.68	59.90
Fillet	2023	$ 13.29	1.31	38.27
	2019	$ 1.92	0.66	2.80
	2020	$ 1.64	0.50	1.81
	2021	$ 2.32	0.61	3.12
Other	2022	$ 2.31	0.45	2.32
Products	2023	$ 2.10	0.40	1.86
	2019	$ 6.94	7.11	108.69
	2020	$ 6.75	5.62	83.62
	2021	$ 9.21	7.54	153.01
All	2022	$ 10.38	7.23	165.46
Products	2023	$ 8.12	6.11	109.41

Note: Landings, values and prices for catch from all Alaska commercial fisheries (including CDQ). Price is calculated as landed value divided by net weight. Net weight is dressed, head-off, slime and ice deducted. Values are not adjusted for inflation. "*" indicates a confidential value; "-" indicates no applicable data or value.
Source: NMFS Alaska Region Production Reports. ADF&G Commercial Operators Annual Reports (COAR). Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.53: Number of vessels catching Pacific halibut commercially off Alaska and median vessel length by region and vessel length class, 2019-2023.

Class	Year	Gulf of Alaska		Bering Sea and Aleutian Islands		All Alaska	
		Vessels	Median Length	Vessels	Median Length	Vessels	Median Length
	2019	16	18	11	18	27	18
	2020	7	18	10	18	17	18
	2021	14	18	7	18	21	18
	2022	12	18	8	18	20	18
<20	2023	10	17	8	18	18	18
	2019	88	26	26	28	113	27
	2020	79	26	7	28	86	26
	2021	71	26	8	28	79	26
	2022	78	26	2	27	80	26
20-29	2023	60	26	2	27	61	26
	2019	257	34	35	32	280	33
	2020	229	34	22	32	239	34
	2021	233	34	18	32	241	34
	2022	228	33	14	32	233	33
30-39	2023	218	33	11	32	225	33
	2019	247	45	15	48	253	45
	2020	247	45	16	48	253	45
	2021	235	45	12	48	239	45
	2022	240	45	18	48	242	45
40-49	2023	230	45	17	48	233	45
	2019	127	58	23	58	128	58
	2020	121	58	19	58	123	58
	2021	124	58	21	58	126	58
	2022	127	58	18	58	128	58
50-59	2023	123	58	17	58	126	58
	2019	40	72	18	76	43	74
	2020	37	73	17	76	40	74
	2021	35	74	16	75	38	74
	2022	38	73	16	75	41	74
>=60	2023	35	75	15	76	38	76

Note: Excludes vessels in the Annette Island commercial Pacific halibut fishery. "*" indicates a confidential value; "-" indicates no applicable data or value.
Source: ADF&G fish tickets; CFEC gross earnings (fish tickets) file. Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.54: Total vessel days fishing Pacific halibut commercially off Alaska by area, 2019-2023.

	Gulf of Alaska	Bering Sea and Aleutian Islands	All Alaska
2019	12,960	3,220	15,745
2020	12,020	2,380	14,003
2021	13,578	2,060	15,227
2022	15,219	2,007	16,783
2023	15,037	1,834	16,493

Note: Excludes vessels in the Annette Island commercial Pacific halibut fishery. "*" indicates a confidential value; "-" indicates no applicable data or value.
Source: ADF&G fish tickets; CFEC gross earnings (fish tickets) file. Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Table 4.55: Crew days fishing Pacific halibut commercially off Alaska by month and area, 2019-2023.

Area	Year	Mar-Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
	2019	10,090	8,244	5,040	3,816	5,450	5,832	5,208	1,615
	2020	4,899	6,384	4,543	4,121	5,393	6,475	6,072	1,919
	2021	7,686	6,938	5,120	4,329	5,443	5,650	5,567	3,364
Gulf of	2022	8,620	8,193	5,029	4,769	7,725	8,001	5,723	3,521
Alaska	2023	9,176	8,245	5,461	5,355	6,966	8,264	5,954	1,899
	2019	864	1,566	1,927	2,376	2,577	1,986	950	260
Bering Sea	2020	722	1,047	1,284	1,350	2,541	1,876	735	45
and	2021	294	873	1,119	1,271	1,986	1,864	1,086	423
Aleutian	2022	262	725	893	1,757	2,131	1,895	881	152
Islands	2023	357	458	591	1,599	2,110	1,461	1,012	365
	2019	10,857	9,635	6,863	5,938	7,727	7,289	5,893	1,835
	2020	5,585	7,284	5,668	5,391	7,478	7,890	6,603	1,961
	2021	7,956	7,791	6,120	5,329	7,155	7,086	6,352	3,513
	2022	8,797	8,751	5,709	6,281	9,499	9,461	6,469	3,634
All Alaska	2023	9,485	8,598	5,904	6,465	8,801	9,416	6,792	2,201

Note: Excludes vessels in the Annette Island commercial Pacific halibut fishery because crew size is not reported for this fishery. Minimal fishing occurs in March and to ensure confidentiality it is combined with April. "*" indicates a confidential value; "-" indicates no applicable data or value.
Source: ADF&G fish tickets; CFEC gross earnings (fish tickets) file. Data compiled and provided by the Alaska Fisheries Information Network (AKFIN). National Marine Fisheries Service, P.O. Box 15700, Seattle, WA 98115-0070.

Chapter 5

Economic Performance Indices for the North Pacific Groundfish Fisheries

5.1 Introduction

Fisheries markets are complex. A multitude of factors influence demand, supply, price, catch composition, product types produced and other market activity. Indices are a common method used by agencies to synthesize market information in a digestible format. Indices establish a baseline that helps characterize trends in the market for values, prices and quantities of fisheries goods. Market indices have many uses. From a management perspective indices can both retrospectively characterize changes in the market that may be related to policy decisions (such as a change in TAC), or allow managers to evaluate current market conditions in the context of future policy change. Indices may also be useful to market participants when making business decisions.

This section of the Economic Status of the Groundfish Fisheries off Alaska attempts to distill the numerous factors that affect the North Pacific groundfish markets into a simple set of indices that can be used to track performance. Indices of value, price and quantity are presented for the Bering Sea and Aleutian Island (BSAI) at-sea, the BSAI shoreside, and the Gulf of Alaska (GOA). Figure 5.1 displays the ex-vessel and first-wholesale values for the BSAI and GOA at-sea and shoreside sectors. For the BSAI at-sea sector, index analysis will focus on the wholesale market; for the BSAI shoreside and GOA sectors, index analysis will consider the wholesale and ex-vessel markets. To help understand and evaluate the indices, we plot the value share stratified by species and product type for wholesale markets, and by species and gear type for the ex-vessel markets. Value share is the proportion of total value from each of the stratified components, such as the proportion of total value that comes from pollock. Additionally, bar graphs provide detail on the division of production among species, product types and gear types. Specifically, for the wholesale market, these graphs show the composition of species within product types and the composition of product type for a given species, and in the ex-vessel market, they show composition of species harvested by a given gear type and the composition of gear types used to harvest a species.

Aggregate indices, by their very nature, are cumulative over the many species, products types, and gear types in a sector. The values, prices, and quantities from individual components of these factors (e.g., individual species) may contribute to the movements of the aggregate indices in very different ways. The myriad of market influences make it difficult to disentangle the relative importance of different species or products when monitoring aggregate performance, a problem that

can be approached by using a value-share decomposition to examine the influence of these different components on the aggregate index. Decomposition relates the indices for each of the components of a single factor to the aggregate through its value share. For example, consider an aggregate price index for a sector. The aggregate price index is a function of the prices of all the species sold (e.g., pollock, Pacific cod, sablefish). Here, species type is the factor and the component indices of this factor are the price indices for all the species (e.g., pollock price index, Pacific cod price index). The importance of each individual species price index is determined by the proportion of total value in the sector for the species. By decomposing the aggregate index in this way, one can see how each of the species price indices influence the movement in the aggregate price index. Similar value-share decompositions are also constructed for product types in the wholesale market, and for gear types in the ex-vessel market.

The primary tools we will use to analyze market performance are Figures 5.2-5.11. The index figures in Figures 5.2-5.11 are designed to help the reader visualize changes in the indices and relate the changes to shifts in aggregate value, prices, and quantities. All indices use 2018 as the base year for the index. All calculations and statistics are made using nominal U.S. dollars (i.e., not adjusted for inflation).[1] Aggregate indices are located in the upper-left panel and the value share decomposition of the aggregate index is below in the lower-left panels of the figures. Changes in the indices have been color coded to indicate the relevance in determining aggregate index movements. The relevance of a change in the price index in year t is calculated by $(year-on-year\ growth\ rate)*(share\ weight) = (I_{i,t}/I_{i,t-1}-1)*\tilde{w}(i,t)$ where $I_{i,t}$ is the level of the index and $\tilde{w}(i,t) = \frac{p_{i,t}*q_{i,t}}{\sum_j p_{j,t}*q_{j,t}}$ is the year t value share and i, j enumerates species, products, or gear types depending on the index. When the value $(year-on-year\ growth\ rate)*(share\ weight)$ is roughly zero, indicating little to no change or influence on the aggregate index, it is colored blue. When this value is less than -0.1, the index is colored red to indicate that it has had a significant negative impact on the aggregate index. When this value is greater than 0.1, the index is colored green, indicating a significant positive impact on the aggregate index. Shades in between these colors indicate intermediate impacts. The indices can take on these "significant colors" if the percentage change is large and/or the value share is large. The value share plot in the upper-right corner of each figure helps to discern the difference. For each sector and market, two decompositions are presented. The wholesale market is decomposed by species and product type, and the ex-vessel market is decomposed by species and gear type. To help relate the different decompositions, bar graphs in the lower-right panel of each figure show the composition of one factor (e.g., product type) for each relevant category of the other factor (e.g., species) as measured by production. The height of the bars shows the annual output in that market. Only the components of a factor with a value share greater than 1% have been plotted, although all prices and quantities were used in the construction of the aggregate index. Ex-vessel indices are constructed using catch that is counted against a federal total allowable catch (TAC). Hereafter, "wholesale value" and "ex-vessel value" refer to the revenue from production at the first wholesale level or from sales of catch on the ex-vessel market, respectively. Walleye pollock will often be referred to simply as "pollock"; similarly, Pacific cod will often be referred to as "cod". The "other" product type contains all products that are not fillets, H&G, surimi, meal and oil, or roe. In particular, the "other" product type includes whole fish and minced fish.

Understanding the indices and their construction facilitates accurate interpretation. To properly

[1] U.S. nominal dollars are used so price indices capture unadjusted changes in prices throughout time, allowing them to be used as deflator indices. For readers comparing these indices to other figures in the SAFE denominated in inflation adjusted terms, this adjustment should be kept in mind.

interpret the indices, the reader must realize that the indices are merely descriptive and characterize the state of the market relative to other periods, and display the co-movement of different species, product types, or gear types both individually and in aggregate. The indices have no inherent causal interpretation. For example, it would be wrong to assert from these indices that a change in surimi prices "caused" a change in pollock price. Nor could we say the opposite. We can say that they are connected, as surimi is a significant portion of the value from pollock in some regions, but causality is beyond the scope of indices. Carefully designed regression analysis is better suited for addressing such causality questions. The indices are displayed graphically in Section 5.2 followed by tables with the index values.

5.2 Economic Indices of the North Pacific Groundfish Fisheries

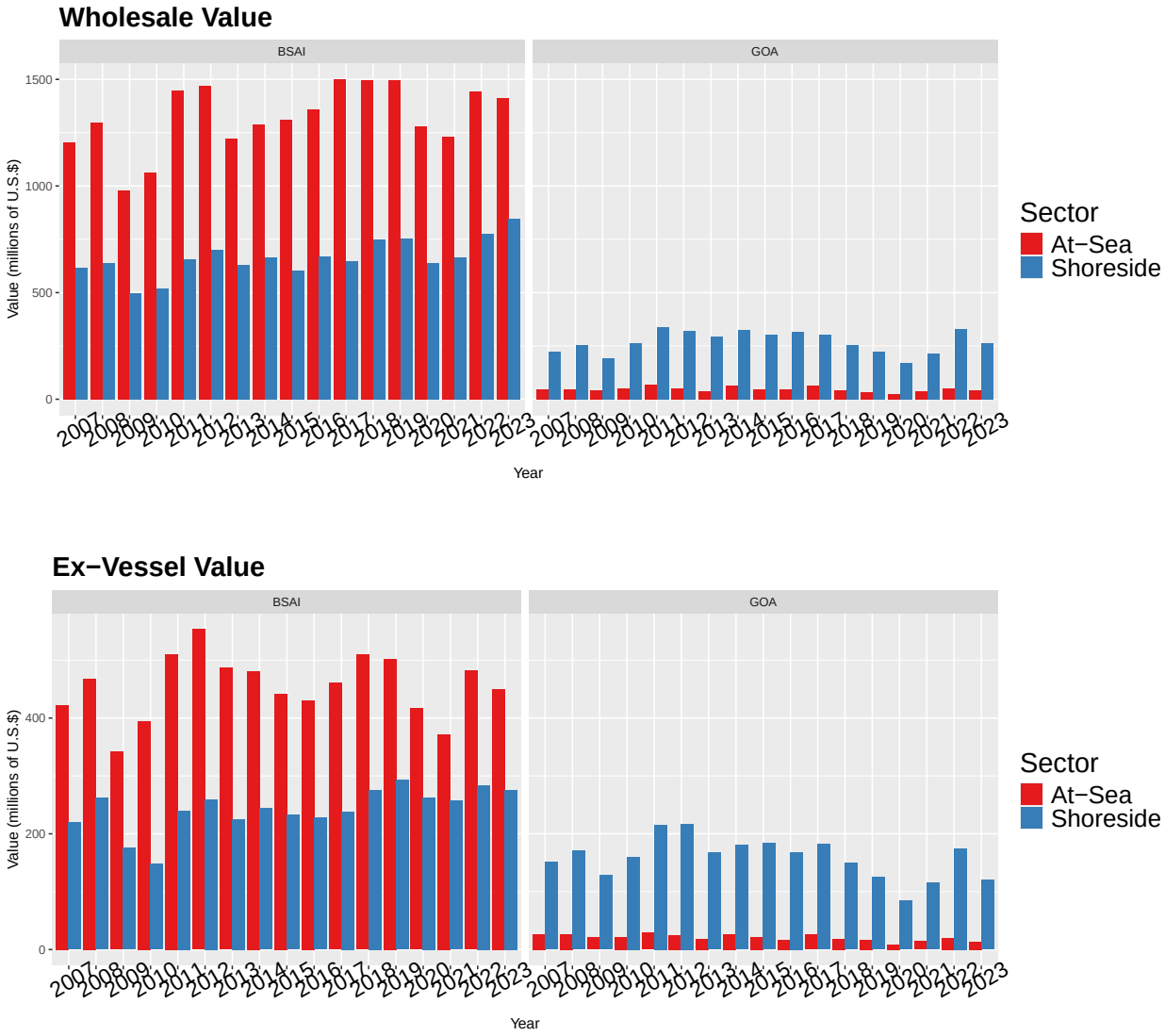


Figure 5.1: Wholesale and ex-vessel value by region and sector2007-2023.

Source NMFS Alaska Region's Catch-accounting system (CAS) and Weekly Production Report (WPR) estimates; Alaska Department of Fish and Game (ADF&G) Commercial Operator's Annual Report (COAR), National Marine Fisheries Service. P.O. Box 15700, Seattle, WA 98115-0070.

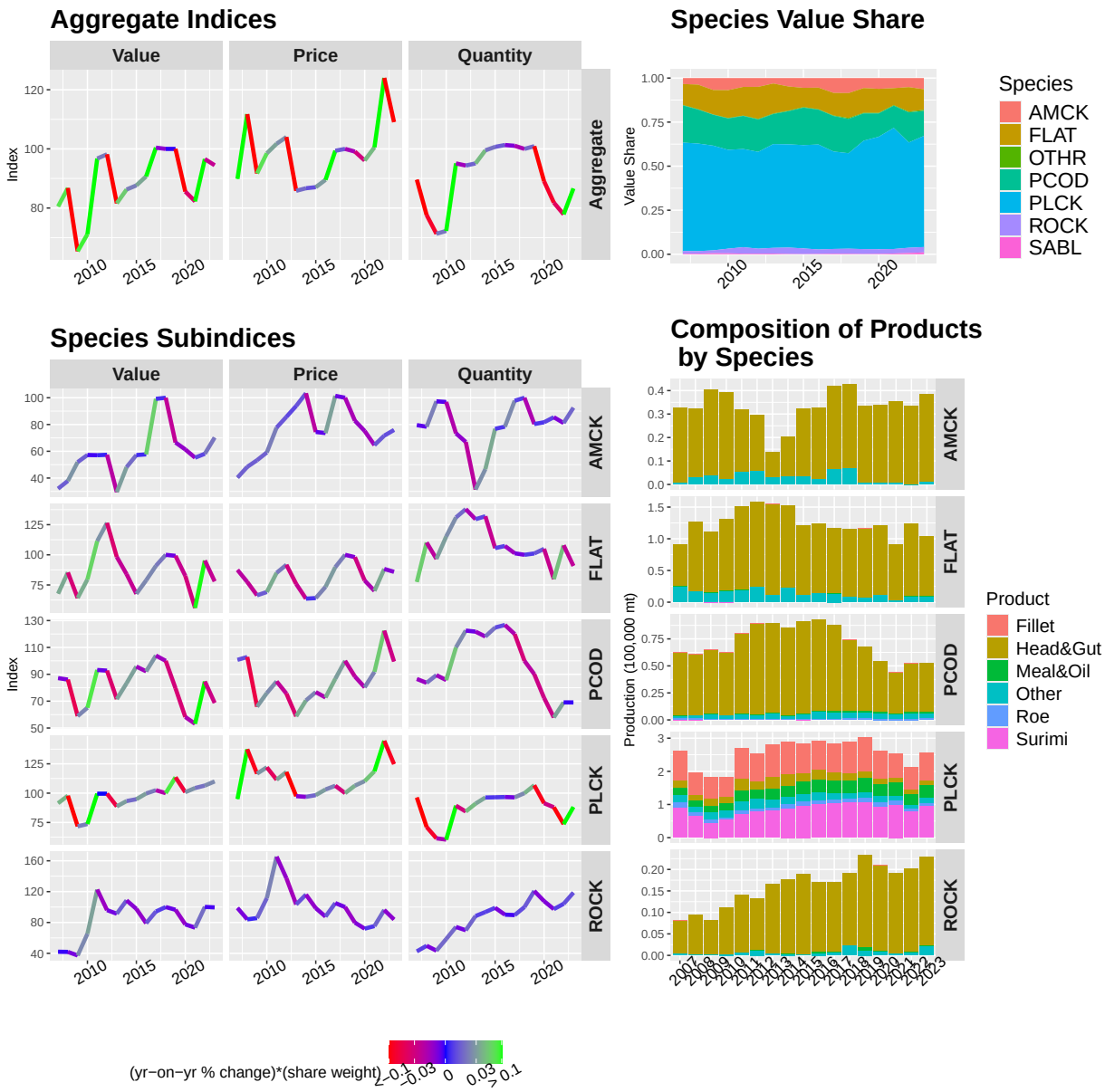


Figure 5.2: BSAI at-sea wholesale market: species decomposition 2007 - 2023 (Index 2018 = 100).

Notes Index values for 2018- 2023, notes and source information for the indices are in Table 5.1. Index coloring indicates its influence on aggregate index movements, see Section 5.1 for details.

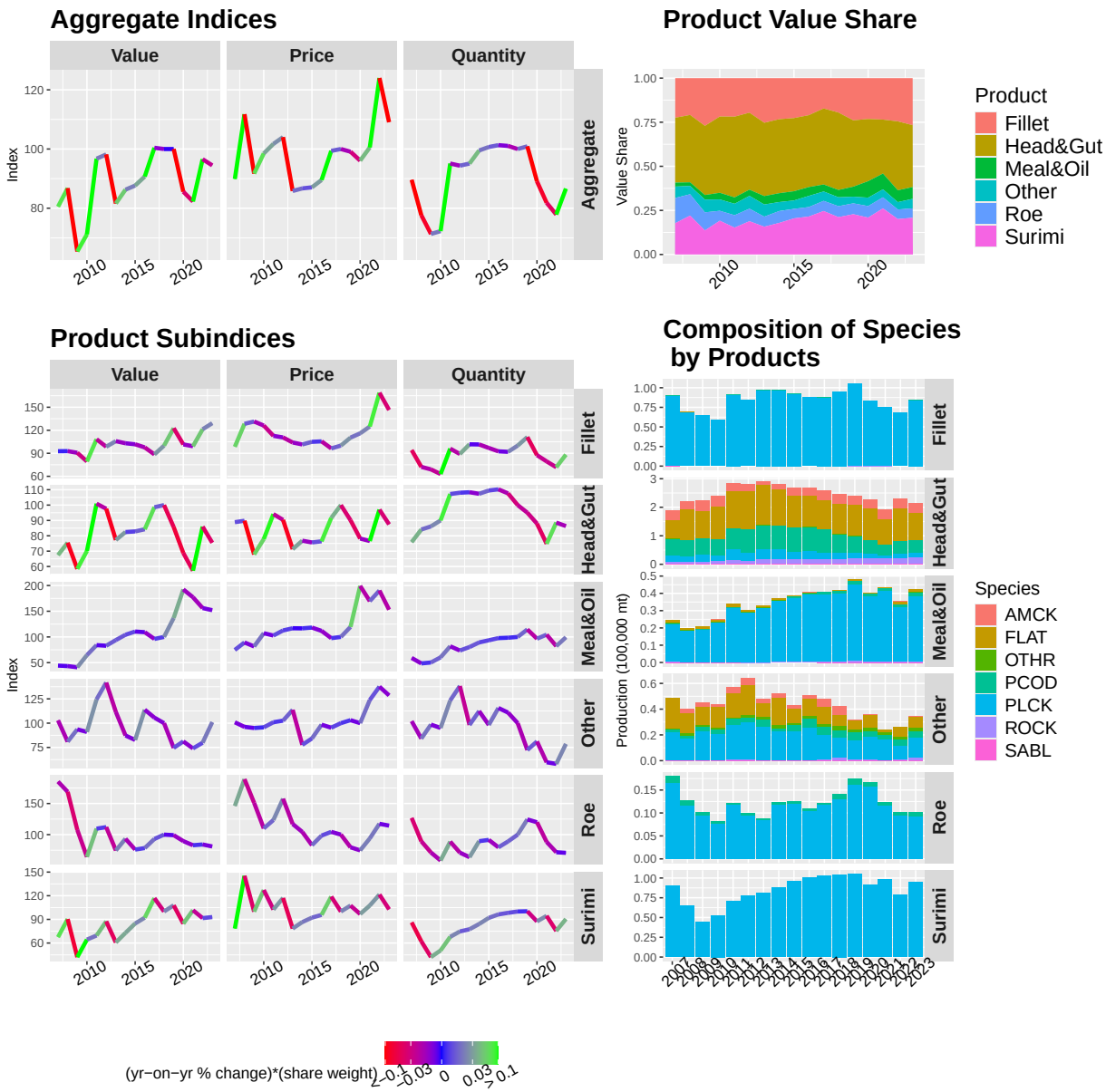


Figure 5.3: BSAI at-sea wholesale market: species decomposition 2007 - 2023 (Index 2018 = 100).

Notes Index values for 2018-2023, notes and source information for the indices are in Table 5.2. Index coloring indicates its influence on aggregate index movements, see Section 5.1 for details.

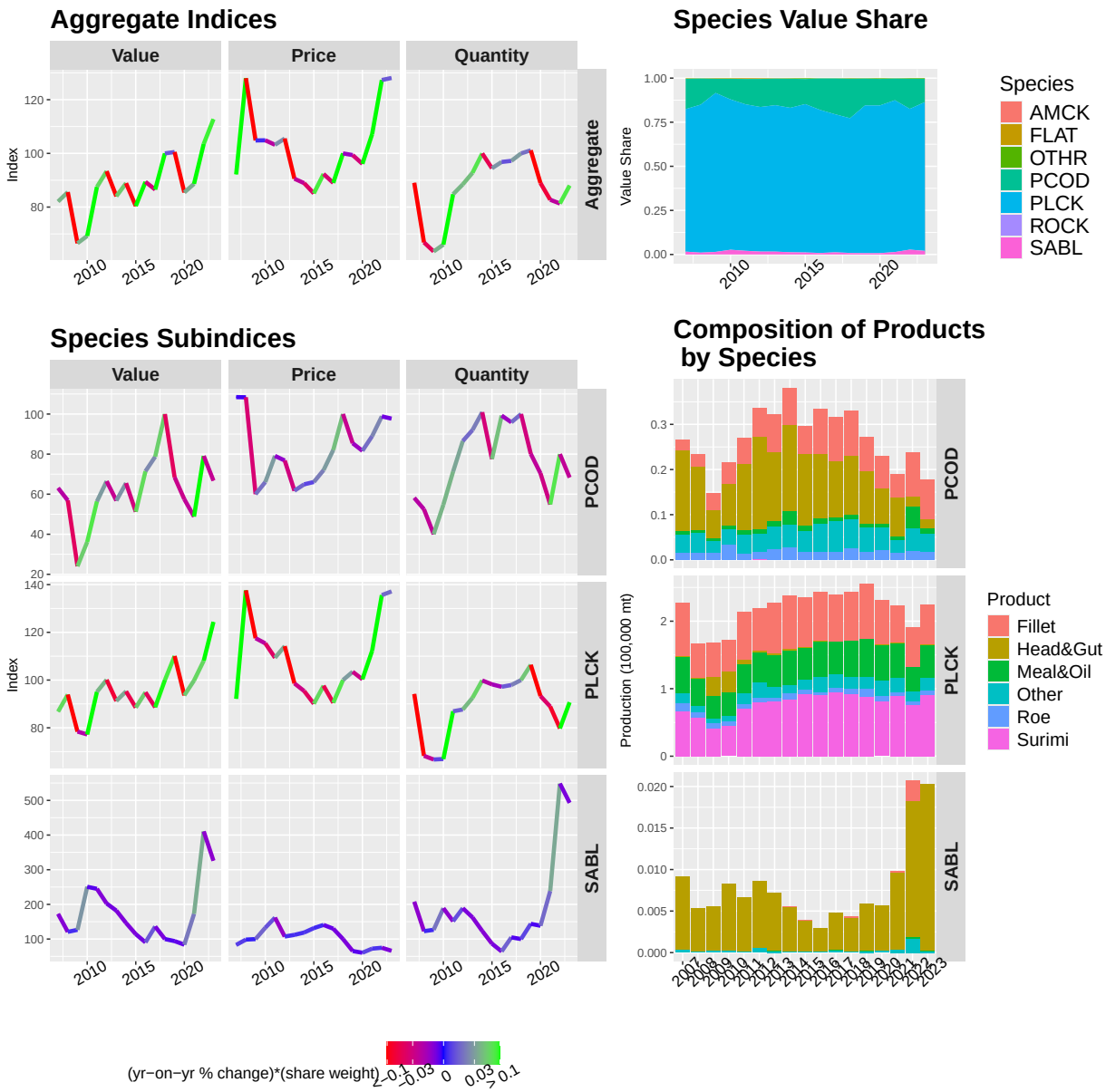


Figure 5.4: BSAI shoreside wholesale market: species decomposition 2007 - 2023 (Index 2018 = 100).

Notes Index values for 2018-2023, notes and source information for the indices are in Table 5.3. Index coloring indicates its influence on aggregate index movements, see Section 5.1 for details.

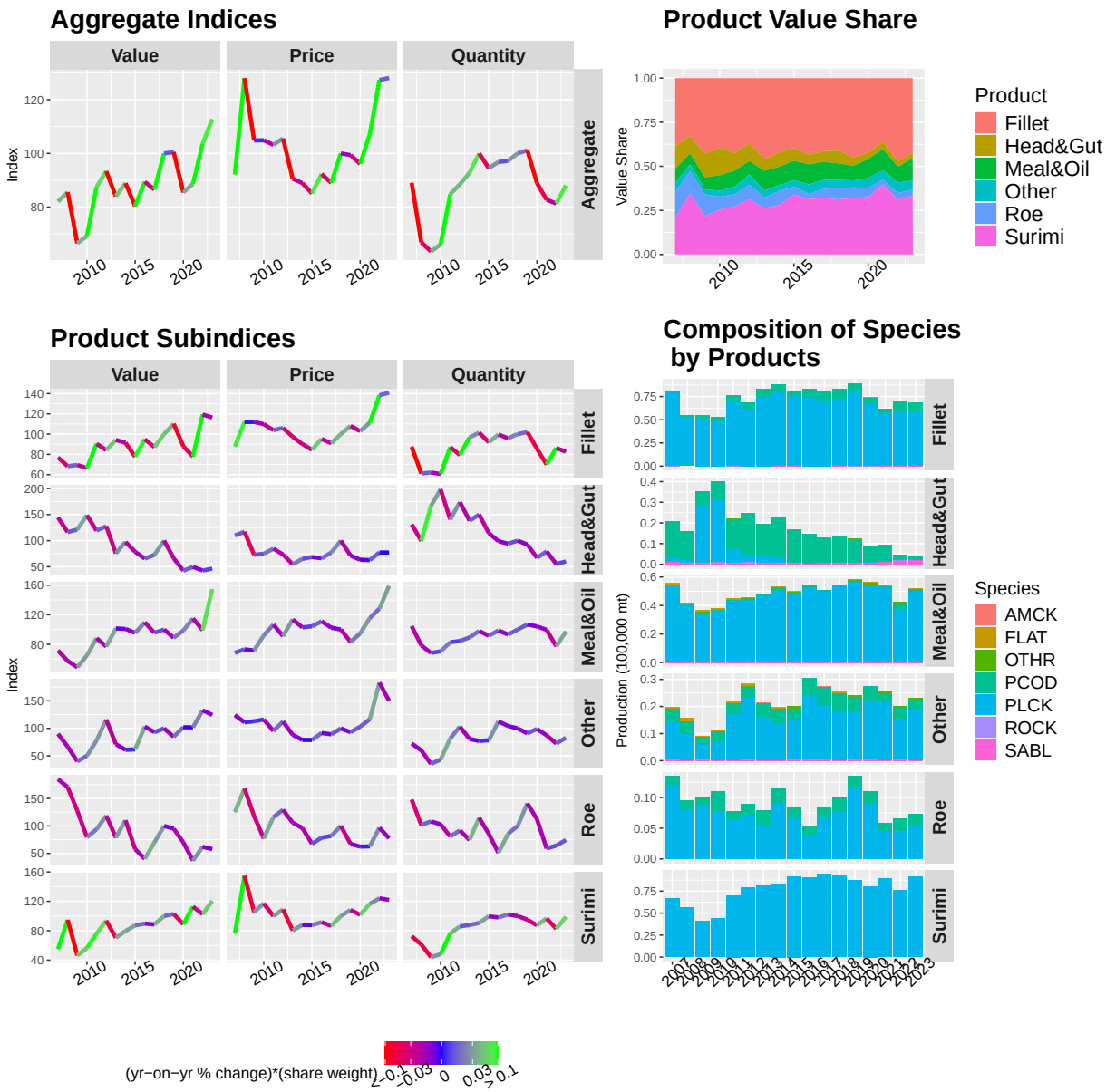


Figure 5.5: BSAI shoreside wholesale market: product decomposition 2007 - 2023 (Index 2018 = 100).

Notes Index values for 2018-2023, notes and source information for the indices are in Table 5.4. Index coloring indicates its influence on aggregate index movements, see Section 5.1 for details.

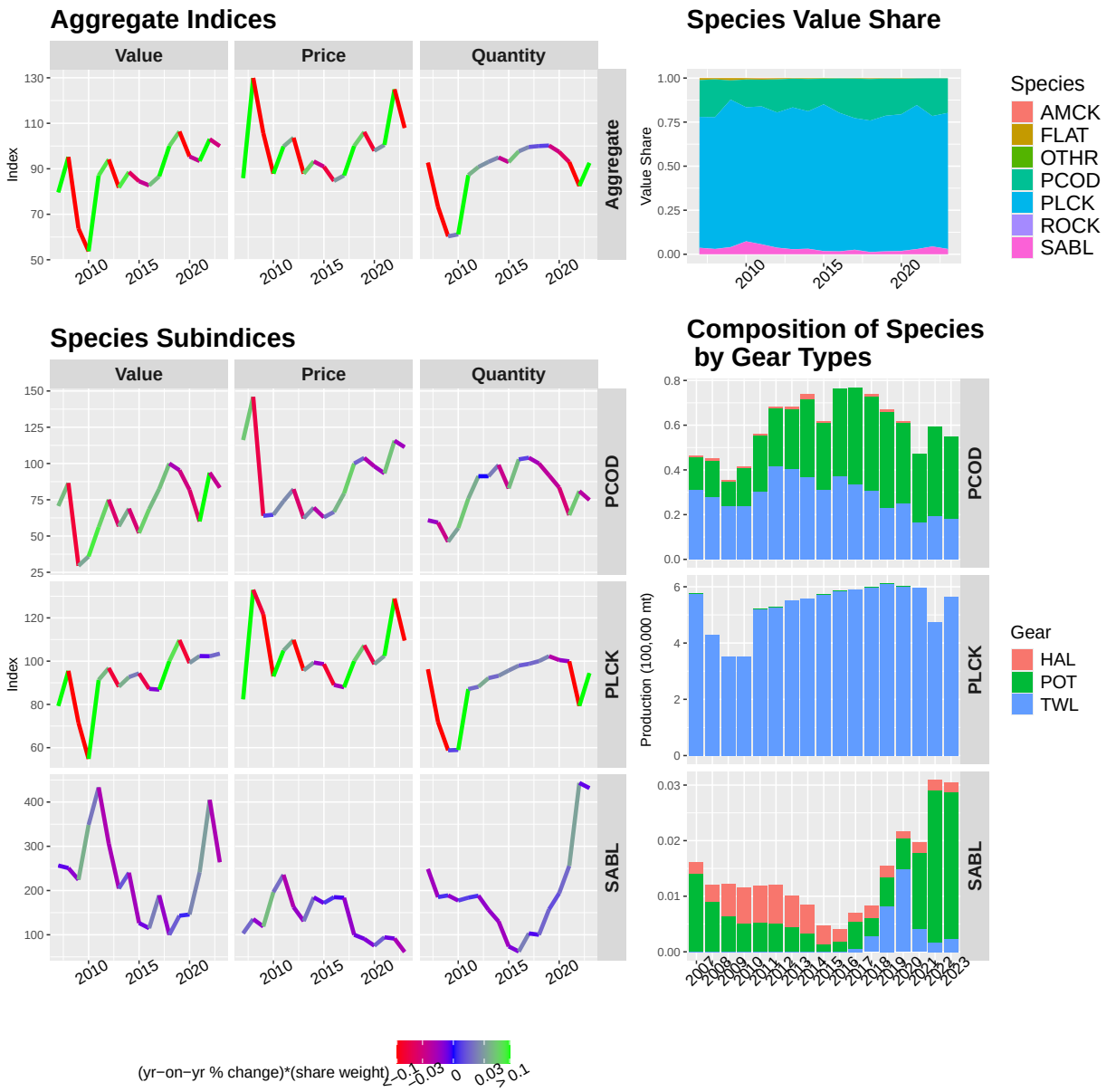


Figure 5.6: BSAI shoreside ex-vessel market: species decomposition 2007 - 2023 (Index 2018 = 100).

Notes Index values for 2018-2023, notes and source information for the indices are in Table 5.5. Index coloring indicates its influence on aggregate index movements, see Section 5.1 for details.

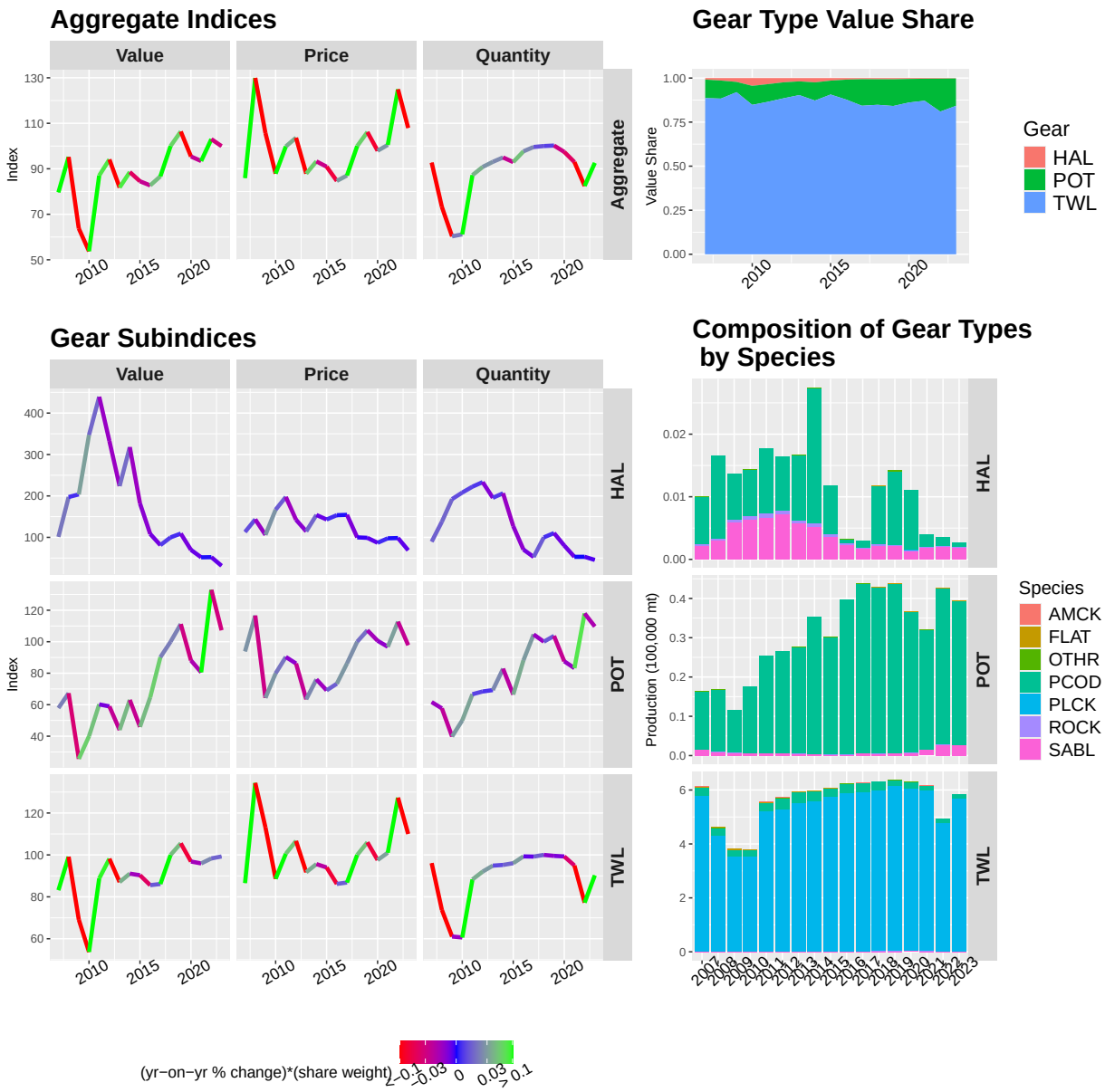


Figure 5.7: BSAI shoreside ex-vessel market: gear decomposition 2007 - 2023 (Index 2018 = 100).

Notes Index values for 2018-2023, notes and source information for the indices are in Table 5.6. Index coloring indicates its influence on aggregate index movements, see Section 5.1 for details.

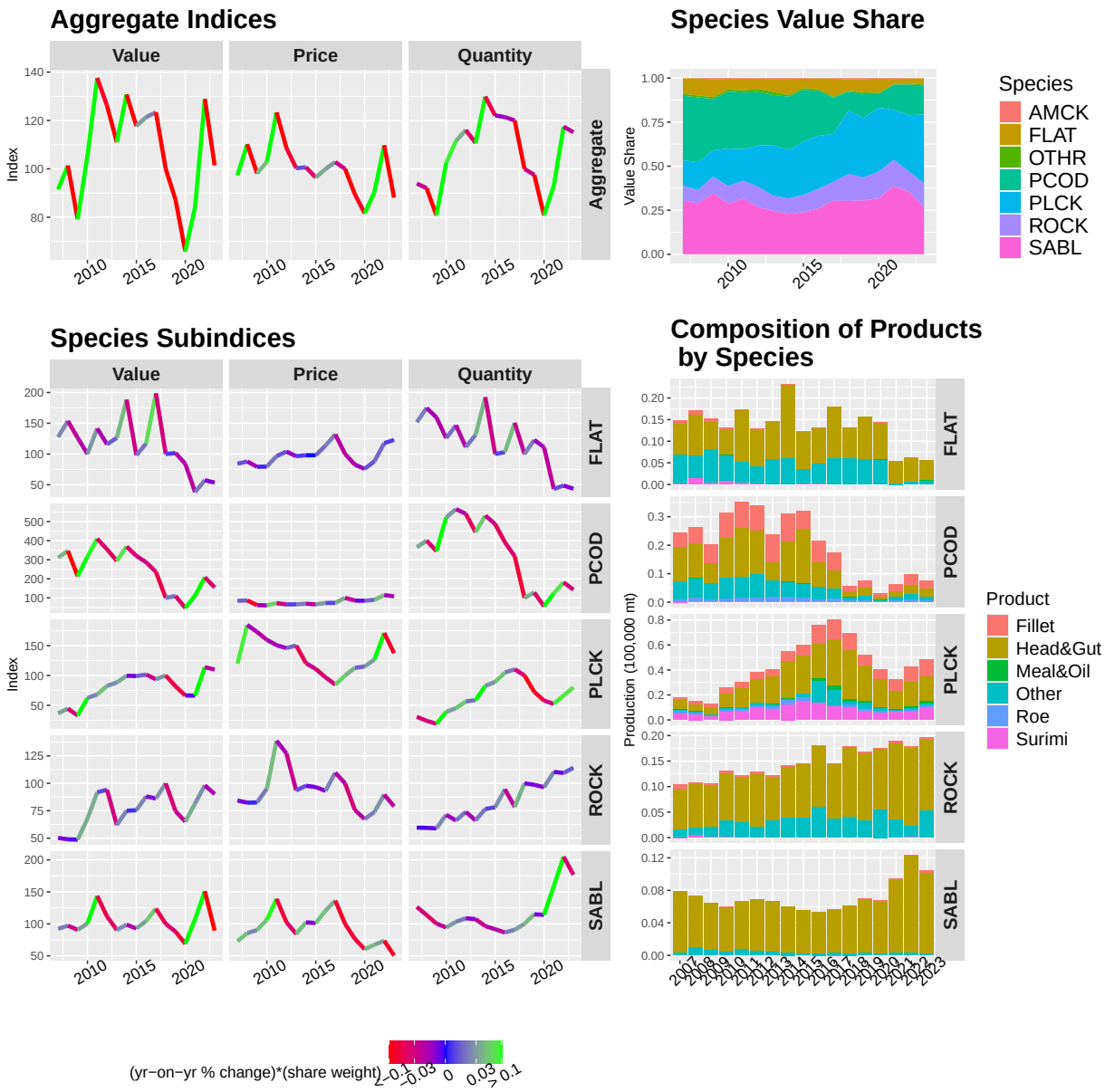


Figure 5.8: GOA wholesale market: species decomposition 2007 - 2023 (Index 2018 = 100).

Notes Index values for 2018- 2023, notes and source information for the indices are in Table 5.7. Index coloring indicates its influence on aggregate index movements, see Section 5.1 for details.

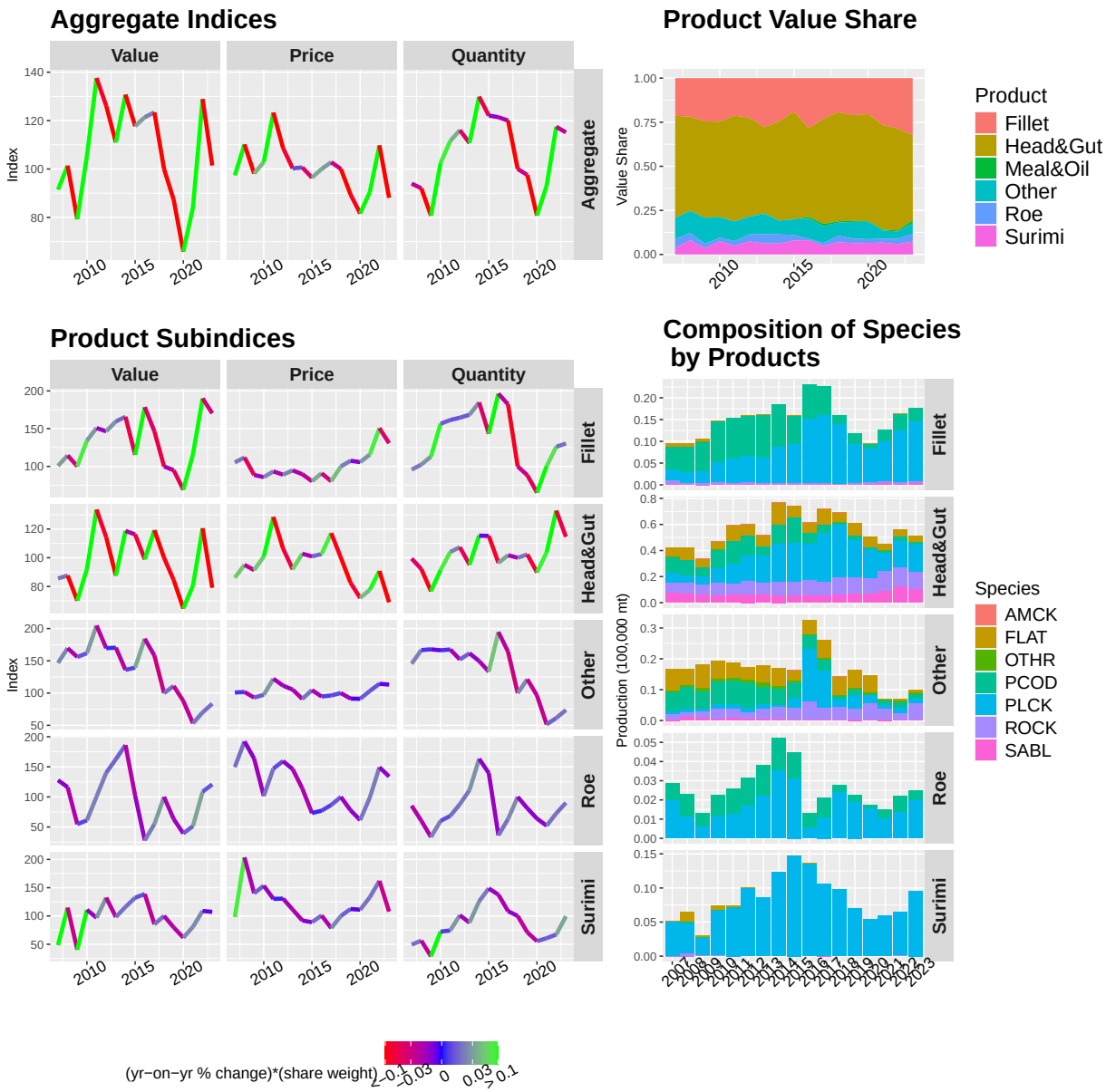


Figure 5.9: GOA wholesale market: product decomposition 2007 - 2023 (Index 2018 = 100).

Notes Index values for 2018- 2023, notes and source information for the indices are in Table 5.8. Index coloring indicates its influence on aggregate index movements, see Section 5.1 for details.

Figure 5.10: GOA ex-vessel market: species decomposition 2007 - 2023 (Index 2018 = 100).

Notes Index values for 2018- 2023, notes and source information for the indices are in Table 5.9. Index coloring indicates its influence on aggregate index movements, see Section 5.1 for details.

Figure 5.11: GOA ex-vessel market: gear decomposition 2007 - 2023 (Index 2018 = 100).

Notes Index values for 2018- 2023, notes and source information for the indices are in Table 5.10. Index coloring indicates its influence on aggregate index movements, see Section 5.1 for details.

Table 5.1: Species indices and value share for the BSAI at-sea first-wholesale market 2018-2023

Species	Index Type	2018	2019	2020	2021	2022	2023
	Value	100.00	100.00	85.57	82.27	96.55	94.47
	Price	100.00	99.10	96.08	100.53	124.00	109.06
Aggregate	Quantity	100.00	100.91	89.06	81.84	77.86	86.62
	Value	100.00	66.57	61.38	55.21	58.14	70.26
	Price	100.00	82.85	75.15	64.61	71.68	75.92
	Quantity	100.00	80.35	81.67	85.44	81.12	92.55
AMCK	Value Share	0.09	0.06	0.06	0.06	0.05	0.06
	Value	100.00	99.13	82.54	55.93	95.25	77.97
	Price	100.00	98.06	78.65	70.06	88.26	85.88
	Quantity	100.00	101.09	104.94	79.84	107.92	90.79
FLAT	Value Share	0.14	0.14	0.14	0.10	0.14	0.12
	Value	100.00	79.58	58.21	53.17	84.62	68.72
	Price	100.00	88.34	80.31	91.85	122.49	99.52
	Quantity	100.00	90.08	72.49	57.89	69.08	69.05
PCOD	Value Share	0.19	0.16	0.13	0.13	0.17	0.14
	Value	100.00	113.55	100.80	104.39	106.46	109.99
	Price	100.00	106.38	110.26	118.67	144.62	124.73
	Quantity	100.00	106.73	91.42	87.97	73.61	88.18
PLCK	Value Share	0.54	0.62	0.64	0.69	0.60	0.63
	Value	100.00	96.49	77.56	73.29	100.20	99.56
	Price	100.00	79.84	71.99	75.32	96.19	83.88
	Quantity	100.00	120.86	107.74	97.29	104.17	118.70
ROCK	Value Share	0.03	0.03	0.03	0.03	0.03	0.03

Notes Species with a value share less than 1% were not included in this table. All groundfish species were used to calculate aggregate indices and value share. The Fisher index method was used to construct the indices. Further details can be found in the text or by contacting russel.a.dame@noaa.gov.

Source NMFS Alaska Region's Catch-accounting system (CAS) and Weekly Production Report (WPR) estimates; Alaska Department of Fish and Game (ADF&G) Commercial Operator's Annual Report (COAR), National Marine Fisheries Service. P.O. Box 15700, Seattle, WA 98115-0070.

Table 5.2: Product indices and value share for the BSAI at-sea first-wholesale market 2018-2023

Product	Index Type	2018	2019	2020	2021	2022	2023
	Value	100.00	100.00	85.57	82.27	96.55	94.47
	Price	100.00	99.10	96.08	100.53	124.00	109.06
Aggregate	Quantity	100.00	100.91	89.06	81.84	77.86	86.62
	Value	100.00	122.70	101.58	99.18	121.29	129.19
	Price	100.00	110.40	115.99	124.84	168.90	146.50
	Quantity	100.00	111.14	87.57	79.44	71.81	88.18
Fillet	Value Share	0.20	0.24	0.23	0.24	0.25	0.27
	Value	100.00	85.67	68.76	57.29	85.97	75.48
	Price	100.00	90.14	78.20	76.60	97.04	87.44
	Quantity	100.00	95.04	87.93	74.80	88.59	86.32
Head&Gut	Value Share	0.44	0.38	0.35	0.31	0.39	0.35
	Value	100.00	136.97	192.33	177.17	156.16	152.05
	Price	100.00	119.54	199.14	169.64	190.21	153.08
	Quantity	100.00	114.57	96.58	104.44	82.10	99.33
Meal&Oil	Value Share	0.04	0.06	0.09	0.09	0.07	0.07
	Value	100.00	74.55	81.19	73.98	79.86	101.06
	Price	100.00	103.05	100.01	123.87	137.56	128.56
	Quantity	100.00	72.35	81.18	59.73	58.05	78.61
Other	Value Share	0.05	0.04	0.05	0.05	0.04	0.05
	Value	100.00	99.13	89.58	82.94	84.17	80.97
	Price	100.00	79.64	74.71	93.90	117.41	114.47
	Quantity	100.00	124.46	119.89	88.32	71.69	70.74
Roe	Value Share	0.06	0.06	0.07	0.06	0.05	0.05
	Value	100.00	107.84	84.60	101.63	91.62	92.95
	Price	100.00	107.52	96.79	107.59	121.48	102.76
	Quantity	100.00	100.30	87.41	94.46	75.42	90.45
Surimi	Value Share	0.21	0.23	0.21	0.26	0.20	0.21

Notes Products types 'Minced', 'Other' and those with a value share less than 1% were not included in this table. All product types were used to construct aggregate indices and value share. The Fisher index method was used to construct the indices. Further details can be found in the text or by contacting russel.a.dame@noaa.gov.

Source NMFS Alaska Region's Catch-accounting system (CAS) and Weekly Production Report (WPR) estimates; Alaska Department of Fish and Game (ADF&G) Commercial Operator's Annual Report (COAR), National Marine Fisheries Service. P.O. Box 15700, Seattle, WA 98115-0070.

Table 5.3: Species indices and value share for the BSAI shoreside first-wholesale market 2018-2023

Species	Index Type	2018	2019	2020	2021	2022	2023
	Value	100.00	100.51	85.46	88.65	103.56	112.76
	Price	100.00	99.37	96.11	107.15	127.34	128.09
Aggregate	Quantity	100.00	101.15	88.93	82.73	81.33	88.03
	Value	100.00	68.44	57.48	48.82	79.07	66.76
	Price	100.00	85.42	81.66	88.95	98.85	97.71
	Quantity	100.00	80.12	70.39	54.88	80.00	68.32
PCOD	Value Share	0.22	0.15	0.15	0.12	0.17	0.13
	Value	100.00	110.06	93.60	99.81	108.12	124.36
	Price	100.00	103.47	100.33	112.26	135.60	137.14
	Quantity	100.00	106.38	93.30	88.91	79.74	90.68
PLCK	Value Share	0.76	0.84	0.84	0.86	0.80	0.84
	Value	100.00	94.09	83.72	172.59	410.51	325.90
	Price	100.00	65.40	60.51	72.36	74.84	66.10
	Quantity	100.00	143.88	138.36	238.53	548.49	493.07
SABL	Value Share	0.01	0.01	0.01	0.01	0.03	0.02

Notes Species with a value share less than 1% were not included in this table. All groundfish species were used to calculate aggregate indices and value share. The Fisher index method was used to construct the indices. Further details can be found in the text or by contacting russel.a.dame@noaa.gov.

Source NMFS Alaska Region's Catch-accounting system (CAS) and Weekly Production Report (WPR) estimates; Alaska Department of Fish and Game (ADF&G) Commercial Operator's Annual Report (COAR), National Marine Fisheries Service. P.O. Box 15700, Seattle, WA 98115-0070.

Table 5.4: Product indices and value share for the BSAI shoreside first-wholesale market 2018-2023

Product	Index Type	2018	2019	2020	2021	2022	2023
	Value	100.00	100.51	85.46	88.65	103.56	112.76
	Price	100.00	99.37	96.11	107.15	127.34	128.09
Aggregate	Quantity	100.00	101.15	88.93	82.73	81.33	88.03
	Value	100.00	110.17	88.08	77.82	119.29	116.42
	Price	100.00	108.03	103.00	111.25	138.37	140.90
	Quantity	100.00	101.98	85.51	69.95	86.21	82.63
Fillet	Value Share	0.41	0.45	0.42	0.36	0.47	0.42
	Value	100.00	66.27	42.50	49.80	42.73	46.43
	Price	100.00	71.51	63.35	62.70	77.39	77.24
	Quantity	100.00	92.67	67.09	79.42	55.22	60.11
Head&Gut	Value Share	0.07	0.05	0.04	0.04	0.03	0.03
	Value	100.00	88.86	98.71	114.96	99.19	154.70
	Price	100.00	83.26	94.66	115.50	128.33	158.96
	Quantity	100.00	106.73	104.28	99.53	77.29	97.32
Meal&Oil	Value Share	0.09	0.08	0.11	0.12	0.09	0.13
	Value	100.00	84.81	102.12	101.88	132.87	124.41
	Price	100.00	93.14	103.08	116.68	183.19	149.94
	Quantity	100.00	91.05	99.06	87.32	72.53	82.97
Other	Value Share	0.05	0.04	0.06	0.05	0.06	0.05
	Value	100.00	95.02	70.03	37.13	62.12	57.82
	Price	100.00	67.42	62.37	62.89	96.69	77.65
	Quantity	100.00	140.93	112.29	59.04	64.25	74.47
Roe	Value Share	0.06	0.06	0.05	0.03	0.04	0.03
	Value	100.00	102.78	88.81	112.72	102.55	120.52
	Price	100.00	108.18	101.69	116.50	124.15	121.90
	Quantity	100.00	95.01	87.34	96.76	82.60	98.87
Surimi	Value Share	0.31	0.32	0.32	0.40	0.31	0.33

Notes Products types 'Minced', 'Other' and those with a value share less than 1% were not included in this table. All product types "were used to contruct aggregate indices and value share. The Fisher index method was used to construct the indices. Further details can be found in the text or by contacting russel.a.dame@noaa.gov.

Source NMFS Alaska Region's Catch-accounting system (CAS) and Weekly Production Report (WPR) estimates; Alaska Department of Fish and Game (ADF&G) Commercial Operator's Annual Report (COAR), National Marine Fisheries Service. P.O. Box 15700, Seattle, WA 98115-0070.

Table 5.5: Species indices and value share for the BSAI shoreside ex-vessel market 2018-2023

Species	Index Type	2018	2019	2020	2021	2022	2023
	Value	100.00	106.38	95.41	93.41	103.02	99.95
	Price	100.00	106.16	97.93	100.50	124.93	107.96
Aggregate	Quantity	100.00	100.21	97.42	92.95	82.47	92.59
	Value	100.00	95.36	81.81	60.07	93.65	83.34
	Price	100.00	103.87	98.03	93.22	115.72	111.30
	Quantity	100.00	91.81	83.46	64.43	80.93	74.87
PCOD	Value Share	0.24	0.21	0.20	0.15	0.21	0.20
	Value	100.00	109.75	99.17	102.36	102.27	103.47
	Price	100.00	107.30	98.65	102.45	128.93	109.54
	Quantity	100.00	102.29	100.52	99.91	79.32	94.46
PLCK	Value Share	0.75	0.77	0.78	0.82	0.74	0.77
	Value	100.00	143.06	145.84	241.28	405.00	264.01
	Price	100.00	90.83	75.24	94.35	91.38	61.18
	Quantity	100.00	157.50	193.82	255.72	443.19	431.51
SABL	Value Share	0.01	0.02	0.02	0.03	0.04	0.03

Notes Species with a value share less than 1% were not included in this table. All groundfish species were used to calculate" aggregate indices and value share. The Fisher index method was used to construct the indices. Further details can be found in the text or by contacting russel.a.dame@noaa.gov.

Source NMFS Alaska Region's Catch-accounting system (CAS) and Weekly Production Report (WPR) estimates; Alaska Department of Fish and Game (ADF&G) Commercial Operator's Annual Report (COAR), National Marine Fisheries Service. P.O. Box 15700, Seattle, WA 98115-0070.

Table 5.6: Gear indices and value share for the BSAI shoreside ex-vessel market 2018-2023

Gear	Index Type	2018	2019	2020	2021	2022	2023
	Value	100.00	106.38	95.41	93.41	103.02	99.95
	Price	100.00	106.16	97.93	100.50	124.93	107.96
Aggregate	Quantity	100.00	100.21	97.42	92.95	82.47	92.59
	Value	100.00	109.10	69.80	51.77	52.19	31.36
	Price	100.00	98.85	86.92	97.74	98.35	68.89
	Quantity	100.00	110.37	80.31	52.97	53.07	45.52
HAL	Value Share	0.01	0.01	0.01	0.00	0.00	0.00
	Value	100.00	111.20	88.11	80.56	132.93	107.28
	Price	100.00	107.25	100.60	96.79	112.70	97.82
	Quantity	100.00	103.68	87.58	83.23	117.95	109.67
POT	Value Share	0.14	0.15	0.13	0.12	0.19	0.16
	Value	100.00	105.54	96.86	95.95	98.33	99.26
	Price	100.00	106.03	97.57	101.05	127.32	110.01
	Quantity	100.00	99.54	99.27	94.95	77.23	90.23
TWL	Value Share	0.85	0.84	0.86	0.87	0.81	0.84

Notes The Fisher index method was used to construct the indices. Further details on index construction and gear decomposition can be found in the text or by contacting russel.a.dame@noaa.gov.

Source NMFS Alaska Region's Catch-accounting system (CAS) and Weekly Production Report (WPR) estimates; Alaska Department of Fish and Game (ADF&G) Commercial Operator's Annual Report (COAR), National Marine Fisheries Service. P.O. Box 15700, Seattle, WA 98115-0070.

Table 5.7: Species indices and value share for the GOA first-wholesale market 2018-2023

Species	Index Type	2018	2019	2020	2021	2022	2023
	Value	100.00	87.29	65.92	84.12	128.89	101.46
	Price	100.00	89.51	81.62	90.42	109.75	88.12
Aggregate	Quantity	100.00	97.53	80.77	93.04	117.44	115.13
	Value	100.00	101.66	84.18	38.13	57.43	53.46
	Price	100.00	82.72	75.83	88.25	117.66	122.95
	Quantity	100.00	122.90	111.00	43.20	48.81	43.48
FLAT	Value Share	0.06	0.07	0.08	0.03	0.03	0.03
	Value	100.00	110.15	47.37	111.80	207.75	154.99
	Price	100.00	85.92	84.89	89.87	114.80	108.07
	Quantity	100.00	128.20	55.81	124.40	180.96	143.41
PCOD	Value Share	0.11	0.14	0.08	0.14	0.17	0.16
	Value	100.00	81.82	66.47	66.32	113.89	110.00
	Price	100.00	112.78	115.03	126.62	171.27	137.42
	Quantity	100.00	72.55	57.78	52.38	66.50	80.05
PLCK	Value Share	0.36	0.34	0.36	0.28	0.32	0.39
	Value	100.00	74.67	65.07	81.67	98.13	90.23
	Price	100.00	75.68	67.44	73.96	89.69	78.98
	Quantity	100.00	98.66	96.48	110.43	109.41	114.24
ROCK	Value Share	0.15	0.13	0.15	0.15	0.12	0.14
	Value	100.00	87.97	68.92	107.32	150.97	89.57
	Price	100.00	76.52	60.37	67.47	73.64	50.65
	Quantity	100.00	114.97	114.16	159.06	205.01	176.84
SABL	Value Share	0.30	0.31	0.32	0.39	0.35	0.27

Notes Species with a value share less than 1% were not included in this table. All groundfish species were used to calculate aggregate indices and value share. The Fisher index method was used to construct the indices. Further details can be found in the text or by contacting russel.a.dame@noaa.gov.

Source NMFS Alaska Region's Catch-accounting system (CAS) and Weekly Production Report (WPR) estimates; Alaska Department of Fish and Game (ADF&G) Commercial Operator's Annual Report (COAR), National Marine Fisheries Service. P.O. Box 15700, Seattle, WA 98115-0070.

Table 5.8: Product indices and value share for the GOA first-wholesale market 2018-2023

Product	Index Type	2018	2019	2020	2021	2022	2023
	Value	100.00	87.29	65.92	84.12	128.89	101.46
	Price	100.00	89.51	81.62	90.42	109.75	88.12
Aggregate	Quantity	100.00	97.53	80.77	93.04	117.44	115.13
	Value	100.00	94.94	69.19	115.96	190.01	170.39
	Price	100.00	107.49	105.69	115.67	150.72	130.77
	Quantity	100.00	88.32	65.47	100.25	126.07	130.30
Fillet	Value Share	0.19	0.21	0.20	0.27	0.29	0.33
	Value	100.00	84.44	64.67	80.52	120.53	79.12
	Price	100.00	82.58	71.99	77.58	90.76	69.01
	Quantity	100.00	102.25	89.84	103.79	132.80	114.66
Head&Gut	Value Share	0.62	0.60	0.61	0.59	0.58	0.48
	Value	100.00	110.89	87.74	53.14	70.08	83.39
	Price	100.00	91.40	91.13	103.21	114.40	113.10
	Quantity	100.00	121.33	96.28	51.48	61.26	73.73
Other	Value Share	0.07	0.09	0.10	0.05	0.04	0.06
	Value	100.00	63.15	39.33	51.51	108.63	120.83
	Price	100.00	77.84	61.50	98.80	149.29	133.96
	Quantity	100.00	81.12	63.94	52.13	72.77	90.20
Roe	Value Share	0.04	0.03	0.02	0.02	0.03	0.04
	Value	100.00	79.87	61.71	80.78	108.90	107.25
	Price	100.00	112.30	111.10	133.02	162.02	107.82
	Quantity	100.00	71.12	55.55	60.73	67.22	99.47
Surimi	Value Share	0.07	0.06	0.07	0.07	0.06	0.07

Notes Products types 'Minced' and those with a value share less than 1% were not included in this table. All product types were used to contruct aggregate indices and value share. The Fisher index method was used to construct the indices. Further details can be found in the text or by contacting russel.a.dame@noaa.gov.

Source NMFS Alaska Region's Catch-accounting system (CAS) and Weekly Production Report (WPR) estimates; Alaska Department of Fish and Game (ADF&G) Commercial Operator's Annual Report (COAR), National Marine Fisheries Service. P.O. Box 15700, Seattle, WA 98115-0070.

Table 5.9: Species indices and value share for the GOA ex-vessel market 2018-2023

Species	Index Type	2018	2019	2020	2021	2022	2023
	Value	100.00	84.95	55.59	76.90	115.57	79.33
	Price	100.00	88.90	64.87	71.02	85.26	64.48
Aggregate	Quantity	100.00	95.55	85.70	108.28	135.55	123.03
	Value	100.00	96.14	77.64	24.58	46.20	25.08
	Price	100.00	76.18	67.90	53.19	84.10	57.60
	Quantity	100.00	126.20	114.35	46.22	54.94	43.54
FLAT	Value Share	0.04	0.04	0.05	0.01	0.02	0.01
	Value	100.00	110.18	30.95	107.44	175.75	128.99
	Price	100.00	110.42	90.68	87.67	105.39	94.29
	Quantity	100.00	99.78	34.14	122.55	166.76	136.81
PCOD	Value Share	0.09	0.11	0.05	0.12	0.13	0.14
	Value	100.00	85.50	65.80	64.67	115.95	88.82
	Price	100.00	112.14	96.03	101.14	137.53	103.61
	Quantity	100.00	76.24	68.52	63.95	84.31	85.72
PLCK	Value Share	0.25	0.25	0.30	0.21	0.25	0.28
	Value	100.00	98.24	64.17	72.02	83.26	73.71
	Price	100.00	100.46	68.06	67.14	78.27	68.07
	Quantity	100.00	97.79	94.28	107.27	106.38	108.27
ROCK	Value Share	0.09	0.10	0.10	0.08	0.06	0.08
	Value	100.00	77.26	51.71	83.34	117.93	72.84
	Price	100.00	74.82	48.26	57.24	65.22	46.36
	Quantity	100.00	103.27	107.15	145.59	180.82	157.14
SABL	Value Share	0.52	0.48	0.49	0.57	0.54	0.48

Notes Species with a value share less than 1% were not included in this table. All groundfish species were used to calculate aggregate indices and value share. The Fisher index method was used to construct the indices. Further details can be found in the text or by contacting russel.a.dame@noaa.gov.

Source NMFS Alaska Region's Catch-accounting system (CAS) and Weekly Production Report (WPR) estimates; Alaska Department of Fish and Game (ADF&G) Commercial Operator's Annual Report (COAR), National Marine Fisheries Service. P.O. Box 15700, Seattle, WA 98115-0070.

Table 5.10: Gear indices and value share for the GOA ex-vessel market 2018-2023

Gear	Index Type	2018	2019	2020	2021	2022	2023
	Value	100.00	84.95	55.59	76.90	115.57	79.33
	Price	100.00	88.90	64.87	71.02	85.26	64.48
Aggregate	Quantity	100.00	95.55	85.70	108.28	135.55	123.03
	Value	100.00	73.22	33.30	34.33	37.13	25.65
	Price	100.00	78.09	52.03	58.41	67.19	52.73
	Quantity	100.00	93.76	64.00	58.77	55.26	48.64
HAL	Value Share	0.47	0.40	0.28	0.21	0.15	0.15
	Value	100.00	119.21	120.93	308.73	496.01	317.31
	Price	100.00	88.54	61.87	70.55	80.71	59.96
	Quantity	100.00	134.64	195.46	437.58	614.52	529.18
POT	Value Share	0.11	0.15	0.23	0.43	0.46	0.43
	Value	100.00	89.18	63.59	64.90	105.20	77.91
	Price	100.00	101.15	80.54	84.28	109.46	83.29
	Quantity	100.00	88.17	78.95	77.00	96.11	93.54
TWL	Value Share	0.43	0.45	0.49	0.36	0.39	0.42

Notes The Fisher index method was used to construct the indices. Further details on index construction and gear decomposition can be found in the text or by contacting russel.a.dame@noaa.gov.

Source NMFS Alaska Region's Catch-accounting system (CAS) and Weekly Production Report (WPR) estimates; Alaska Department of Fish and Game (ADF&G) Commercial Operator's Annual Report (COAR), National Marine Fisheries Service. P.O. Box 15700, Seattle, WA 98115-0070.

Chapter 6

Groundfish Ex-Vessel Price Nowcast Estimates for 2024

6.0.1 Executive Summary

This section represents an ongoing effort to provide the NPFMC, industry, and the public with economic information that is up to date through October 2024 for use in setting Total Allowable Catches (TACs) for 2025 during the groundfish harvest specifications process. Other sections of the Groundfish Economic SAFE (hereafter GFEconSAFE) are currently reporting final 2023 prices and revenues. The data presented in this section are estimates, "nowcasts", of current 2024 annual ex-vessel prices for Alaska groundfish fisheries (methods are summarized below). These ex-vessel price estimates are the best estimates of 2024 North Pacific fisheries prices currently available, but are likely to be different than the values that will be presented in the 2025 GFEconSAFE. Ex-vessel prices were estimated for 11 species/groups of groundfish: arrowtooth flounder, Atka mackerel, halibut, Pacific cod, pollock, rockfish, rock sole, sablefish, yellowfin sole, other groundfish, and other flatfish.

Table 6.1 presents a summary of the 2024 nowcasts and compares them with 2023 as well as the mean over the prior five years (2019-2023). Six of the 11 species experienced a decline in prices from 2023-2024 while 10 of the 11 species experienced a decline in estimated prices in 2024 compared with their average from 2019-2023. These price declines come on top of large price declines in 2023 across many important species in Alaska and substantial increases in costs since 2022 (NMFS Snapshot report 2024).

Table 6.1: Groundfish Ex-Vessel Price Nowcast Estimates for 2024.

	2023 Mean	2024 Nowcast Mean	% Change 2023-2024	% Change (2019-2023)-2024	2024 Nowcast Lower Bound	2024 Nowcast Upper Bound
Arrowtooth flounder	$0.05	$0.07	40%	7%	$0.05	$0.09
Atka mackerel	$0.08	$0.07	-17%	-17%	$0.06	$0.07
Other groundfish	$0.14	$0.14	5%	-27%	$0.13	$0.16
Other flatfish	$0.06	$0.06	-8%	-37%	$0.05	$0.06
Halibut	$5.42	$5.48	1%	-12%	$5.22	$5.75
Pacific cod	$0.44	$0.35	-20%	-23%	$0.33	$0.37
Pollock	$0.16	$0.15	-3%	-13%	$0.14	$0.16
Rockfish	$0.14	$0.13	-7%	-23%	$0.12	$0.15
Rock sole	$0.08	$0.08	1%	-27%	$0.06	$0.09
Sablefish	$2.35	$1.84	-22%	-45%	$1.76	$1.92
Yellowfin sole	$0.07	$0.07	10%	-13%	$0.07	$0.08

While limited ex-vessel markets exist for Atka mackerel, yellowfin sole, and some other flatfish species these models were estimated to assist with first wholesale price projections presented in the following chapter of the GFEconSAFE. These models all have very good statistical fits to the data, and in some cases may be overfitting which results in smaller standard errors than seem reasonable from a retrospective analysis of the number of years in which the reported COAR Buying price is outside the 95% confidence bounds. All three sources of ex-vessel price data are reported in the figures to allow the reader to make their own assessment of the quality of fit and prediction given the underlying data, whether or not included in the final regression model for each species or group.

6.0.2 Introduction

The method of "nowcasting" current year ex-vessel prices has changed this year as a result of additional scrutiny and use of these data by researchers. Prior efforts focused on estimating monthly ex-vessel prices sourced from the Commercial Fisheries Entry Commission (CFEC) Gross Earnings file, accessed via the Alaska Fisheries Information Network's (AKFIN) COUNCIL.COMPREHENSIVE_FT database (CFEC fish tickets). The current effort attempts to estimate the 2024 Alaska Department of Fish and Game's (ADF&G) Commercial Operators Annual Report (COAR) ex-vessel prices (COAR_Buying) that are presented elsewhere in the GFEconSAFE. Reported ex-vessel price information for 2024 is only available through e-landings reports sourced from the Alaska Department of Fish and Game's (ADF&G) in-season table ADF&G.GF_FT_ALL accessed from AKFIN (ADF&G fish tickets). These in-season ADF&G fish ticket prices are preliminary and do not include year-end adjustments (e.g., bonuses). However, along with import and export prices, they are the only source of current year (2024) prices available. We use econometric techniques described in each section below to estimate annual current year COAR Buying prices using prior year COAR Buying prices, prior year CFEC prices, as well as current and prior year ADF&G prices for each of the 11 species groups.

These statistical relationships are highly significant with a R2 of 0.98 or higher for all models. AIC and BIC guided model design but author opinion was the ultimate determinant of which variables

to include in the model as the most reasonable predictor of 2024 prices[1]. Described in more detail in the sections below, each model is somewhat unique and includes a variety of other exogenous variables such as time dummies and interaction terms as well as a different period of time over which the model is estimated. The different models and sample periods are a result of changes in data reporting as well as changes in the quality of the data over time. These 2024 nowcast price estimates are based on the best currently available data, but are still considered preliminary. Caution should be taken in interpreting or extrapolating from these estimates as they are preliminary and may change. The baseline period of comparison with 2024 values will be relative to 2023 as well as the five year average from 2019-2023. All revenues were adjusted for inflation using the GDP deflator with 2023 as the base year[2].

These nowcast prices are only as good as the input data that goes into creating them. The current year ADF&G prices for several species are not close to current COAR Buying year prices, but do still provide statistically significant predictions of the current COAR Buying prices and are therefore included in the regressions. Similarly, CFEC prices are not always consistent with COAR Buying prices but can frequently be used to estimate a statistical relationship between prior year prices and current year (2024) COAR Buying prices which will be available in next year's (2025) GFEconSAFE. These relationships (or lack of relationships) are described in more detail for each species group below and shown in Figures 6.1-6.11. While near time reporting of prices and landings may be appropriate and beneficial in some fisheries (particularly those for fresh markets), the majority of fisheries landings in Alaska are frozen for future sale and those sales may occur many months after harvest or processing. Due to the large volume of harvest in Alaska and short fishing seasons for some species (salmon), many seafood products in Alaska are individually quick frozen at sea or shoreside to retain quality but are sold over the course of several months or a year after harvest. This not only requires short term financing for processors to pay fishers before selling their processed products but also leads to a reasonable delay in reporting final year selling prices for the products produced in the current year. It may be useful to include current market "spot prices" in some cases for some species and product forms, but these markets don't exist for most frozen products and are therefore not used in this analysis. Import and export prices of specific Harmonized Trade System (HTS) products of these species were also calculated and included in several regressions but did not materially improve the fits of the ex-vessel price models (they are more closely related to first-wholesale prices and products) and were therefore excluded from all groundfish ex-vessel price models.

[1]Contact Stephen.kasperski@noaa.gov for further information about alternative regression models and why these were not chosen for the final model specifications. Results are available from the author upon request.

[2]BEA Table 1.1.9: https://apps.bea.gov/iTable/iTable.cfm?reqid=19&step=3&isuri=1&nipa table list=13

6.0.3 Nowcast Ex-Vessel Price Estimates for 2024

6.0.3.1 Arrowtooth Flounder

The model estimated for arrowtooth flounder is shown in equation (1), where $COAR^{exv}_{i,t}$ represents the annual COAR Buying (ex-vessel) price for species i in year t, $ADFG^{exv}_{i,t}$ is the ADF&G fish ticket (ex-vessel) price for species i in year t, $COAR^{wls}_{i,t-1}$ is the first wholesale price (reported in COAR Production) for species i in year *t-1*, and *I(Year*=2022) is an indicator or dummy variable equal to one in 2022 and is zero in all other years. Equation (1) is estimated by ordinary least squares regression for the years 2003-2023 using COAR Buying weight purchased as analytic weights and robust (White-corrected) standard errors. Estimated coefficients are shown in Table 6.2.

$$COAR^{exv}_{ATF,t} = \beta_1 COAR^{exv}_{ATF,t-1} + \beta_2 COAR^{exv}_{ATF,t} + \beta_3 COAR^{wls}_{ATF,t-1} + \beta_4 I(Year = 2022) \quad (1)$$

Lagged COAR Buying prices were not significant but improved the fit of the model as determined by AIC and BIC and therefore was retained in the final regression. ADF&G fish ticket prices and first wholesale prices were highly significant as was the 2022 dummy variable at the 1% level.

Table 6.2: Arrowtooth flounder ex-vessel price model

Coefficient	Arrowtooth Flounder $COAR^{exv}_{ATF,t}$
$COAR^{exv}_{ATF,t-1}$	0.256
	(1.57)
$COAR^{exv}_{ATF,t}$	0.979**
	(3.43)
$COAR^{wls}_{ATF,t-1}$	0.0562**
	(3.26)
$I(Year = 2022)$	0.0278***
	(4.79)
R^2	0.983
AIC	-123.1
N	21

t statistics in parentheses
* p < 0.05, ** p < 0.01, *** p < 0.001

The 2024 arrowtooth nowcast is a decrease from its 2023 overly optimistic prediction but an increase from the actual 2023 COAR Buying price by approximately 40% but only 7% above the 2019-2023 mean value. With reported ADF&G prices increasing in 2024, the nowcast model estimates an ex-vessel price of $0.07/lb for arrowtooth flounder with a 95% confidence interval of $0.05-$0.09/lb. Table 6.3 presents the 2023 COAR Buying mean price as well as the 2024 nowcast mean price, % changes from 2023 and the average from 2019-2023, as well as the 95% confidence intervals of the 2024 nowcast estimates.

Table 6.3: Arrowtooth Flounder Ex-Vessel Price Nowcast Estimates for 2024.

	2023 Mean	2024 Nowcast Mean	% Change 2023-2024	% Change (2019-2023)-2024	2024 Nowcast Lower Bound	2024 Nowcast Upper Bound
Arrowtooth flounder	$0.05	$0.07	40%	7%	$0.05	$0.09

Model fits and input data are presented in Figure 6.1.

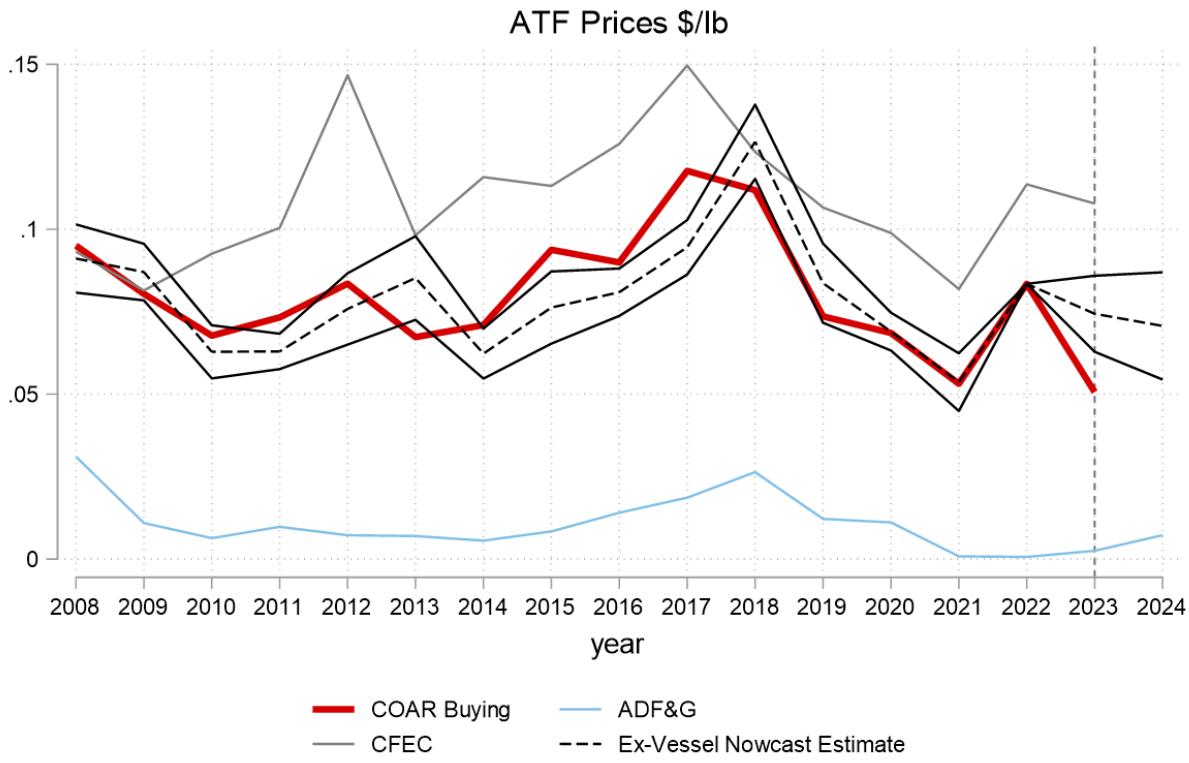


Figure 6.1: Arrowtooth flounder ex-vessel prices and nowcast estimates

6.0.3.2 Atka Mackerel

The model estimated for Atka mackerel is shown in equation (2), where $COAR^{exv}_{i,t}$ represents the annual COAR Buying (ex-vessel) price for species i in year t, $ADFG^{exv}_{i,t}$ is the ADF&G fish ticket (ex-vessel) price for species i in year t, $COAR^{wls}_{i,t-1}$ is the first wholesale price (reported in COAR Production) for species i in year *t-1*, $CFEC^{exv}_{i,t}$ is the CFEC ex-vessel price for species i in year t, and *I(Year*=1996,1997) is an indicator or dummy variable equal to one in 1996 and 1997 and is zero in all other years. Equation (2) is estimated by ordinary least squares regression for the years 1992-2023 using COAR Buying weight purchased as analytic weights and robust (White-corrected) standard errors. Estimated coefficients are shown in Table 6.4.

$$COAR^{exv}_{ATKA,t} = \beta_1 ADFG^{exv}_{ATKA,t} + \beta_2 COAR^{wls}_{ATKA,t-1} + \beta_3 I(Year = 1996, 1997) CFEC^{exv}_{ATKA,t-1} + \beta_4 I(Year = 2015, 2016) CFEC^{exv}_{ATKA,t} + \beta_5 CFEC^{exv}_{ATKA,t-1} + \beta_6 I(Year = 1996, 1997) + \beta_7 I(Year = 2012) + \beta_8 I(Year = 2013) + \beta_9 I(Year = 2015, 2016) \quad (2)$$

Table 6.4: Atka mackerel ex-vessel price model

Coefficient	Atka mackerel $COAR^{exv}_{ATKA,t}$
$ADFG^{exv}_{ATKA,t}$	5.687***
	(10.55)
$COAR^{wls}_{ATKA,t-1}$	0.110***
	(3.88)
$I(Year = 1996, 1997)$	-0.0442*
	(-2.46)
$I(Year = 2012)$	0.0548***
	(15.27)
$I(Year = 2013)$	-0.0571***
	(-11.95)
$I(Year = 2015, 2016)$	-2.381***
	(-9.49)
$I(Year = 1996, 1997) CFEC^{exv}_{ATKA,t}$	-2.042***
	(-4.96)
$I(Year = 2015, 2016) CFEC^{exv}_{ATKA,t}$	7.868***
	(9.82)
$CFEC^{exv}_{ATKA,t-1}$	-0.226
	(-1.86)
R^2	0.986
AIC	-165.4
N	28

t statistics in parentheses
* p < 0.05, ** p < 0.01, *** p < 0.001

Lagged COAR Buying prices were not significant and were not retained in the final regression. This is not surprising as most Atka mackerel is harvested by catcher/processors as part of the

Amendment 80 Program. ADF&G fish ticket prices and lagged first wholesale prices were highly significant as were several year dummies and the CFEC-year interaction terms when CFEC prices and COAR prices had a different relationship from other years.

The 2024 Atka mackerel nowcast is an increase from its 2023 overly negative prediction but a decrease by approximately 16% from the actual 2023 COAR Buying price and the 2019-2023 mean price. With reported ADF&G prices increasing very slightly in 2024, the nowcast model estimates an ex-vessel price of $0.07/lb for Atka mackerel with a 95% confidence interval of $0.06-$0.07/lb. Table 6.5 presents the 2023 COAR Buying mean price as well as the 2024 nowcast mean price, % changes from 2023 and the average from 2019-2023, as well as the 95% confidence intervals of the 2024 nowcast estimates.

Table 6.5: Atka mackerel Ex-Vessel Price Nowcast Estimates for 2024.

	2023 Mean	2024 Nowcast Mean	% Change 2023-2024	% Change (2019-2023)-2024	2024 Nowcast Lower Bound	2024 Nowcast Upper Bound
Atka mackerel	$0.08	$0.07	-17%	-17%	$0.06	$0.07

Model fits and input data are presented in Figure 6.2.

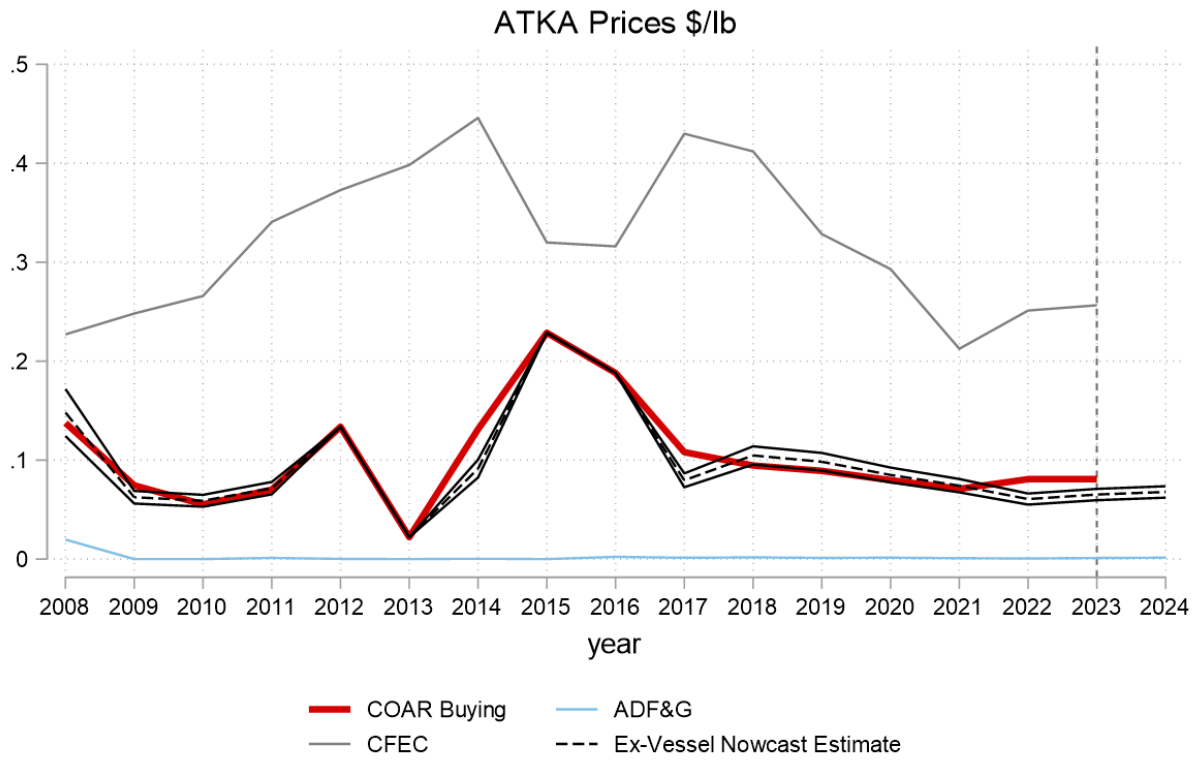


Figure 6.2: Atka mackerel ex-vessel prices and nowcast estimates

6.0.3.3 Pacific Halibut

The model estimated for halibut is shown in equation (3), where $COAR^{exv}_{i,t}$ represents the annual COAR Buying (ex-vessel) price for species i in year t, $ADFG^{exv}_{i,t}$ is the ADF&G fish ticket (ex-vessel) price for species i in year t, $COAR^{wls}_{i,t-1}$ is the first wholesale price (reported in COAR Production) for species i in year *t-1*, and $CFEC^{exv}_{i,t}$ is the CFEC ex-vessel price for species i in year t. Equation (3) is estimated by ordinary least squares regression for the years 2007-2023 using COAR Buying weight purchased as analytic weights and robust (White-corrected) standard errors. Estimated coefficients are shown in Table 6.6.

$$COAR^{exv}_{HLBT,t} = \beta_1 COAR^{exv}_{HLBT,t-1} + \beta_2 ADFG^{exv}_{HLBT,t} + \beta_3 ADFG^{exv}_{HLBT,t-1} + \beta_4 CFEC^{exv}_{HLBT,t-1} \quad (3)$$

In addition to current year ADF&G prices, lagged ADF&G prices, lagged CFEC prices, and lagged COAR Buying prices were all statistically significant predictors of the final COAR Buying ex-vessel price for halibut. Table 6.7 presents the 2023 COAR Buying mean price as well as the 2024 nowcast mean price, % changes from 2023 and the average from 2019-2023, as well as the 95% confidence intervals of the 2024 nowcast estimates.

Table 6.6: Halibut ex-vessel price model

Coefficient	Halibut $COAR^{exv}_{HLBT,t}$
$COAR^{exv}_{HLBT,t-1}$	0.675***
	(6.97)
$COAR^{exv}_{HLBT,t-1}$	-0.375**
	(-3.32)
$ADFG^{exv}_{HLBT,t}$	1.766***
	(20.48)
$ADFG^{exv}_{HLBT,t-1}$	-0.677***
	(-8.06)
R^2	0.999
AIC	5.390
N	17

t statistics in parentheses
* p < 0.05, ** p < 0.01, *** p < 0.001

The 2024 halibut nowcast is approximately equal to its 2023 (1% increase) COAR Buying price but was 12% below the 2019-2023 mean value. Despite ADF&G prices decreasing in 2024, the nowcast model estimates a slight increase in the ex-vessel price to $5.48/lb for halibut with a 95% confidence interval of $5.22-$5.75/lb.

Table 6.7: Halibut Ex-Vessel Price Nowcast Estimates for 2024.

	2023 Mean	2024 Nowcast Mean	% Change 2023-2024	% Change (2019-2023)-2024	2024 Nowcast Lower Bound	2024 Nowcast Upper Bound
Halibut	$5.42	$5.48	1%	-12%	$5.22	$5.75

Model fits and input data are presented in Figure 6.3.

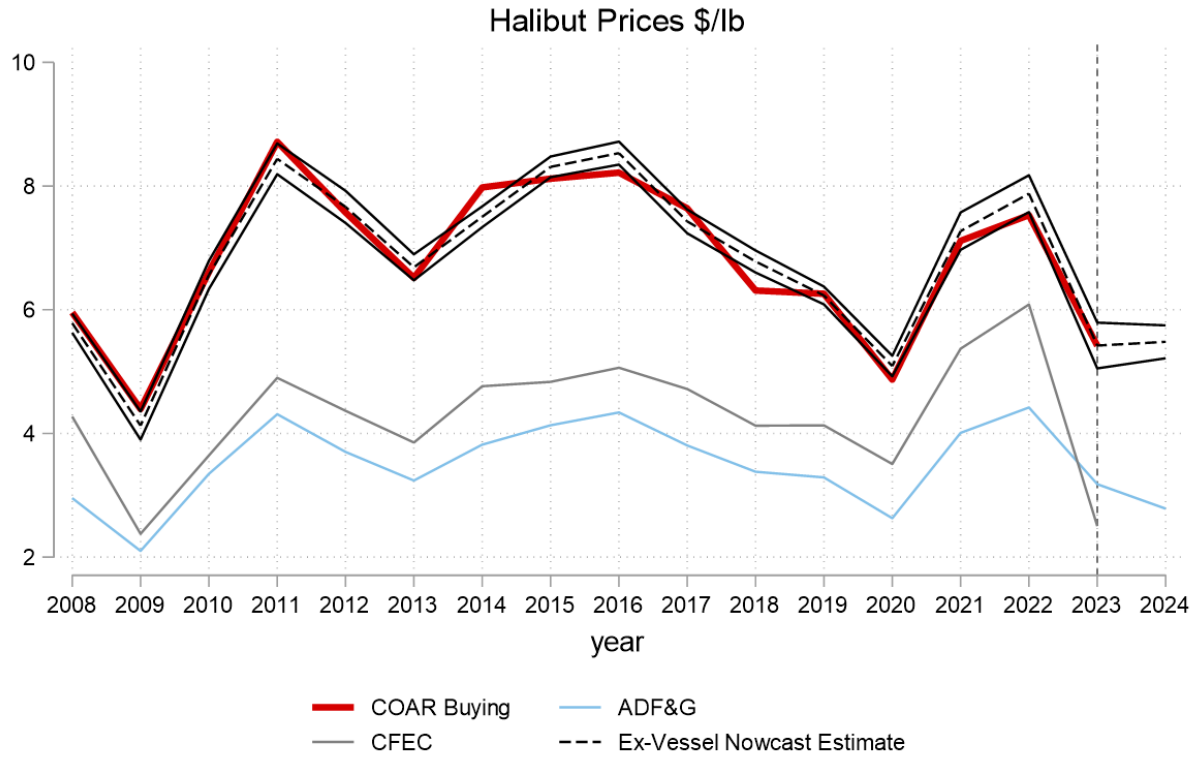


Figure 6.3: Halibut ex-vessel prices and nowcast estimates

6.0.3.4 Pacific Cod

The model estimated for Pacific cod is shown in equation (4), where $COAR^{exv}_{i,t}$ represents the annual COAR Buying (ex-vessel) price for species i in year t, $ADFG^{exv}_{i,t}$ is the ADF&G fish ticket (ex-vessel) price for species i in year t, $COAR^{wls}_{i,t-1}$ is the first wholesale price (reported in COAR Production) for species i in year *t-1*, and *I(Year*=2020) is an indicator or dummy variable equal to one in 2020 and is zero in all other years. Equation (4) is estimated by ordinary least squares regression for the years 1992-2023 using COAR Buying weight purchased as analytic weights and robust (White-corrected) standard errors. Estimated coefficients are shown in Table 6.8.

$$COAR^{exv}_{PCOD,t} = \beta_1 COAR^{exv}_{PCOD,t-1} + \beta_2 ADFG^{exv}_{PCOD,t} + \beta_3 COAR^{wls}_{PCOD,t-1} + \beta_5 I(Year = 2020) \quad (4)$$

Lagged CFEC prices were not significant and were removed from the final regression specification. ADF&G prices, lagged ADF&G prices, and first wholesale prices were highly significant as was the 2020 dummy variable at the 1% level. Table 6.9 presents the 2023 COAR Buying mean price as well as the 2024 nowcast mean price, % changes from 2023 and the average from 2019-2023, as well as the 95% confidence intervals of the 2024 nowcast estimates.

Table 6.8: Pacific cod ex-vessel price model

Coefficient	Pacific cod $COAR^{exv}_{PCOD}$
$COAR^{exv}_{HLBT,t-1}$	0.675***
	(6.97)
$COAR^{exv}_{HLBT,t-1}$	-0.375**
	(-3.32)
$ADFG^{exv}_{HLBT,t}$	1.766***
	(20.48)
$ADFG^{exv}_{HLBT,t-1}$	-0.677***
	(-8.06)
R^2	0.999
AIC	5.390
N	17

t statistics in parentheses
* p < 0.05, ** p < 0.01, *** p < 0.001

The 2024 Pacific cod price nowcast is a decrease from its 2023 COAR Buying price by approximately 20% which is 23% below the 2019-2023 mean value. With reported ADF&G prices declining in 2024, the nowcast model estimates an ex-vessel price of $0.35/lb for Pacific cod with a 95% confidence interval of $0.33-$0.37/lb.

Table 6.9: Pacific Cod Ex-Vessel Price Nowcast Estimates for 2024.

	2023 Mean	2024 Nowcast Mean	% Change 2023-2024	% Change (2019-2023)-2024	2024 Nowcast Lower Bound	2024 Nowcast Upper Bound
Pacific cod	$0.44	$0.35	-20%	-23%	$0.33	$0.37

Model fits and input data are presented in Figure 6.4.

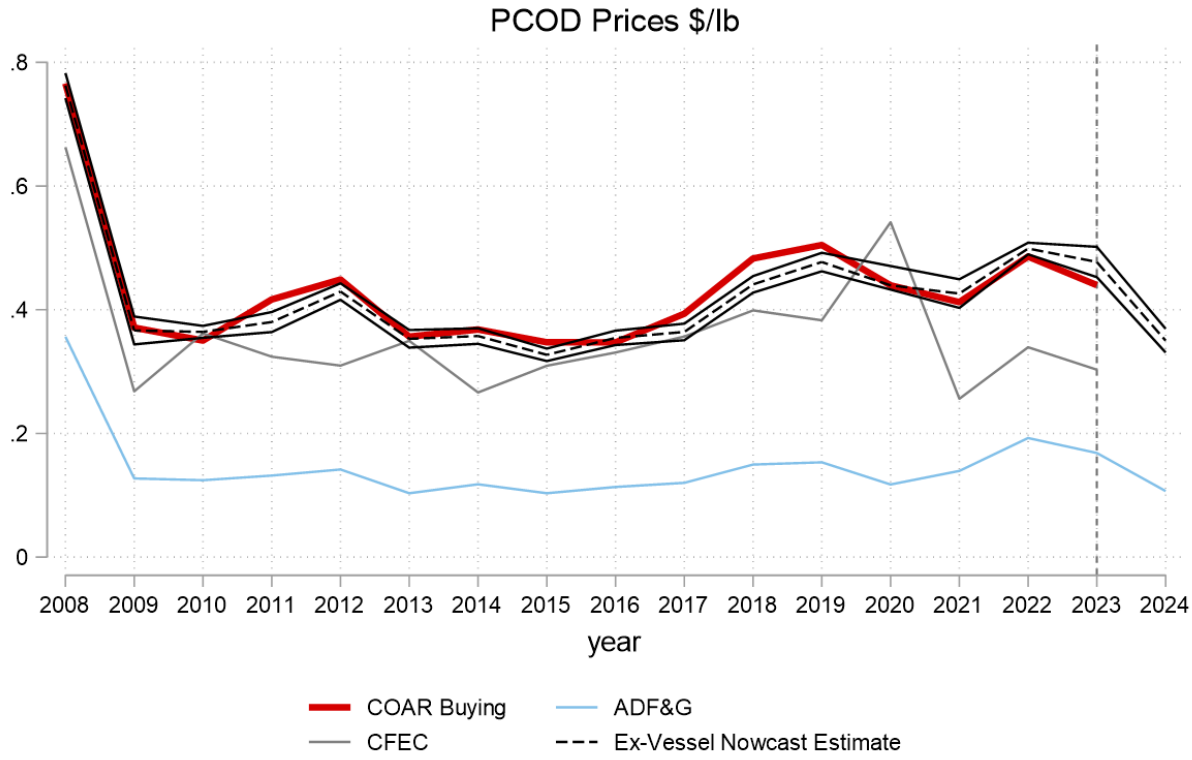


Figure 6.4: Pacific cod ex-vessel prices and nowcast estimates

6.0.3.5 Pollock

The model estimated for pollock is shown in equation (5), where $COAR^{exv}_{i,t}$ represents the annual COAR Buying (ex-vessel) price for species *i* in year *t*, $ADFG^{exv}_{i,t}$ is the ADF&G fish ticket (ex-vessel) price for species *i* in year *t*, $COAR^{wls}_{i,t-1}$ is the first wholesale price (reported in COAR Production) for species *i* in year *t-1*, and *I(Year*=2018,2019) is an indicator or dummy variable equal to one in 2018 and 2019 and is zero in all other years. Equation (5) is estimated by ordinary least squares regression for the years 1992-2023 using COAR Buying weight purchased as analytic weights and robust (White-corrected) standard errors. Estimated coefficients are shown in Table 6.10.

$$COAR^{exv}_{PLCK,t} = \beta_1 COAR^{exv}_{PLCK,t-1} + \beta_2 ADFG^{exv}_{PLCK,t} + \beta_3 COAR^{wls}_{PLCK,t-1} + \beta_4 COAR^{wls}_{PLCK,t-2} + \beta_5 I(Year = 2018, 2019) \quad (5)$$

Lagged CFEC prices were not significant and were excluded from the final regression. ADF&G fish ticket prices, lagged COAR Buying prices, lagged first wholesale prices, and the dummy for 2018-2019 were highly significant at the 1% level while two year lagged first wholesale prices were statistically significant at the 5% level. Table 6.11 presents the 2023 COAR Buying mean price as well as the 2024 nowcast mean price, % changes from 2023 and the average from 2019-2023, as well as the 95% confidence intervals of the 2024 nowcast estimates.

Table 6.10: Pollock ex-vessel price model

Coefficient	Pollock $COAR^{exv}_{PLCK}$
$COAR^{exv}_{PLCK,t-1}$	0.429***
	(4.87)
$ADFG^{exv}_{PLCK,t}$	2.447***
	(10.39)
$COAR^{wls}_{PLCK,t-1}$	-0.0479**
	(-2.94)
$COAR^{wls}_{PLCK,t-2}$	0.0232*
	(2.14)
$I(Year = 2018, 2019)$	0.0173***
	(6.05)
R^2	0.993
AIC	-162.6
N	31

t statistics in parentheses
* p < 0.05, ** p < 0.01, *** p < 0.001

The 2024 pollock price nowcast is a slight decrease from its 2023 COAR Buying price by approximately 3%, which is 13% below the 2019-2023 mean value. With reported ADF&G prices declining in 2024, the nowcast model estimates an ex-vessel price of $0.15/lb for pollock with a 95% confidence interval of $0.14-$0.16/lb.

Table 6.11: Pollock Ex-Vessel Price Nowcast Estimates for 2024.

	2023 Mean	2024 Nowcast Mean	% Change 2023-2024	% Change (2019-2023)-2024	2024 Nowcast Lower Bound	2024 Nowcast Upper Bound
Pollock	$0.16	$0.15	-3%	-13%	$0.14	$0.16

Model fits and input data are presented in Figure 6.5.

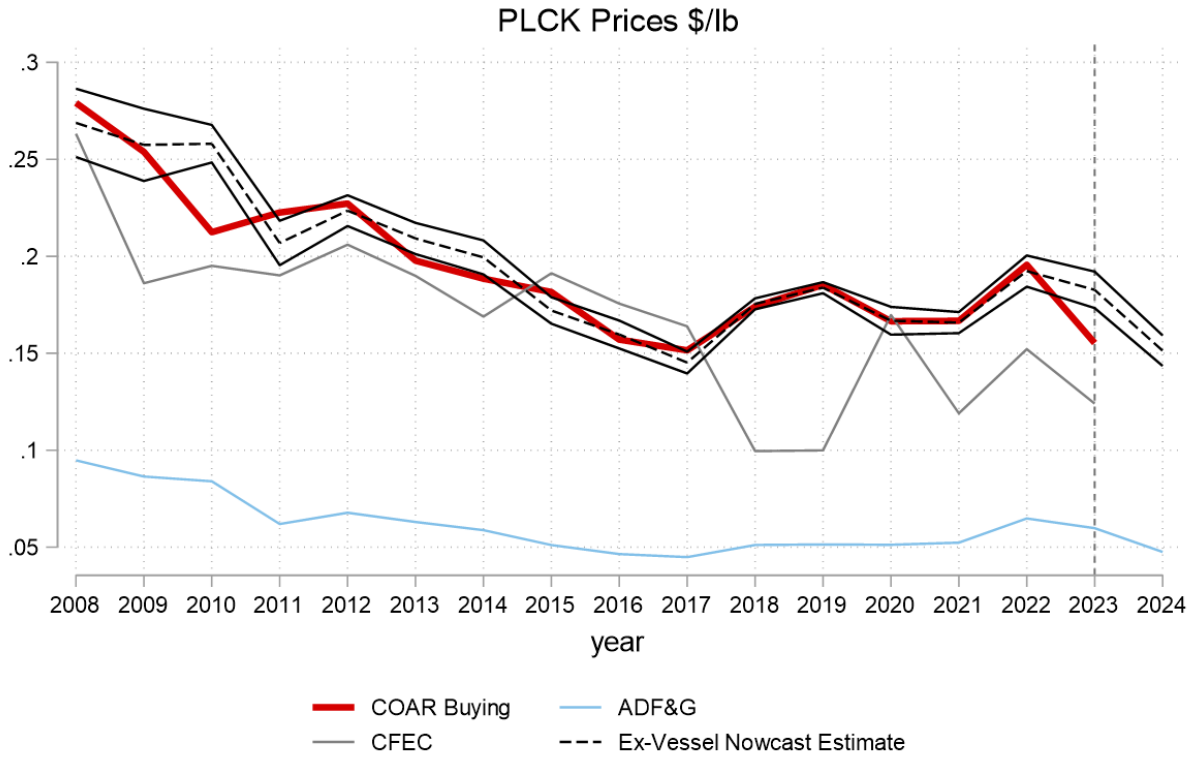


Figure 6.5: Pollock ex-vessel prices and nowcast estimates

6.0.3.6 Rockfish

The model estimated for rockfish is shown in equation (6), where $COAR^{exv}_{i,t}$ represents the annual COAR Buying (ex-vessel) price for species i in year t, $ADFG^{exv}_{i,t}$ is the ADF&G fish ticket (ex-vessel) price for species i in year t, $COAR^{wls}_{i,t-1}$ is the first wholesale price (reported in COAR Production) for species i in year *t-1*, and *I(Year*=2022) is an indicator or dummy variable equal to one in 2022 and is zero in all other years. Equation (6) is estimated by ordinary least squares regression for the years 1997-2023 using COAR Buying weight purchased as analytic weights and robust (White-corrected) standard errors. Estimated coefficients are shown in Table 6.12.

$$COAR^{exv}_{ROCK,t} = \beta_1 COAR^{exv}_{ROCK,t-1} + \beta_2 ADFG^{exv}_{ROCK,t} + \beta_3 ADFG^{exv}_{ROCK,t-1} + \beta_4 ADFG^{exv}_{ROCK,t-3} + \beta_5 ADFG^{exv}_{ROCK,t-4} + \beta_6 COAR^{wls}_{ROCK,t-1} + \quad (6)$$

Lagged CFEC prices were not significant and were not retained in the final regression. Lagged COAR Buying prices and lagged first wholesale prices were highly statistically significant as were current year ADF&G prices and lags of one, three, and four years. Table 6.13 presents the 2023 COAR Buying mean price as well as the 2024 nowcast mean price, % changes from 2023 and the average from 2019-2023, as well as the 95% confidence intervals of the 2024 nowcast estimates

Table 6.12: Rockfish ex-vessel price model

Coefficient	Rockfish $COAR^{exv}_{ROCK}$
$COAR^{exv}_{ROCK,t-1}$	0.492***
	(4.41)
$ADFG^{exv}_{ROCK,t}$	0.832***
	(7.03)
$ADFG^{exv}_{ROCK,t-1}$	-0.758***
	(-6.22)
$ADFG^{exv}_{PLCK,t-3}$	-0.697**
	(-3.54)
$ADFG^{exv}_{PLCK,t-4}$	0.769**
	(3.75)
$COAR^{wls}_{PLCK,t-1}$	0.0806**
	(3.59)
R^2	0.994
AIC	-117.0
N	26

t statistics in parentheses
* p < 0.05, ** p < 0.01, *** p < 0.001

The 2024 rockfish nowcast is a decrease from its 2023 COAR Buying price by approximately 7% which is 23% below the 2019-2023 mean value. With reported ADF&G prices decreasing in 2024, the nowcast model estimates an ex-vessel price of $0.13/lb for rockfish with a 95% confidence interval of $0.12-$0.15/lb.

Table 6.13: Rockfish Ex-Vessel Price Nowcast Estimates for 2024.

	2023 Mean	2024 Nowcast Mean	% Change 2023-2024	% Change (2019-2023)-2024	2024 Nowcast Lower Bound	2024 Nowcast Upper Bound
Rockfish	$0.14	$0.13	-7%	-23%	$0.12	$0.15

Model fits and input data are presented in Figure 6.6.

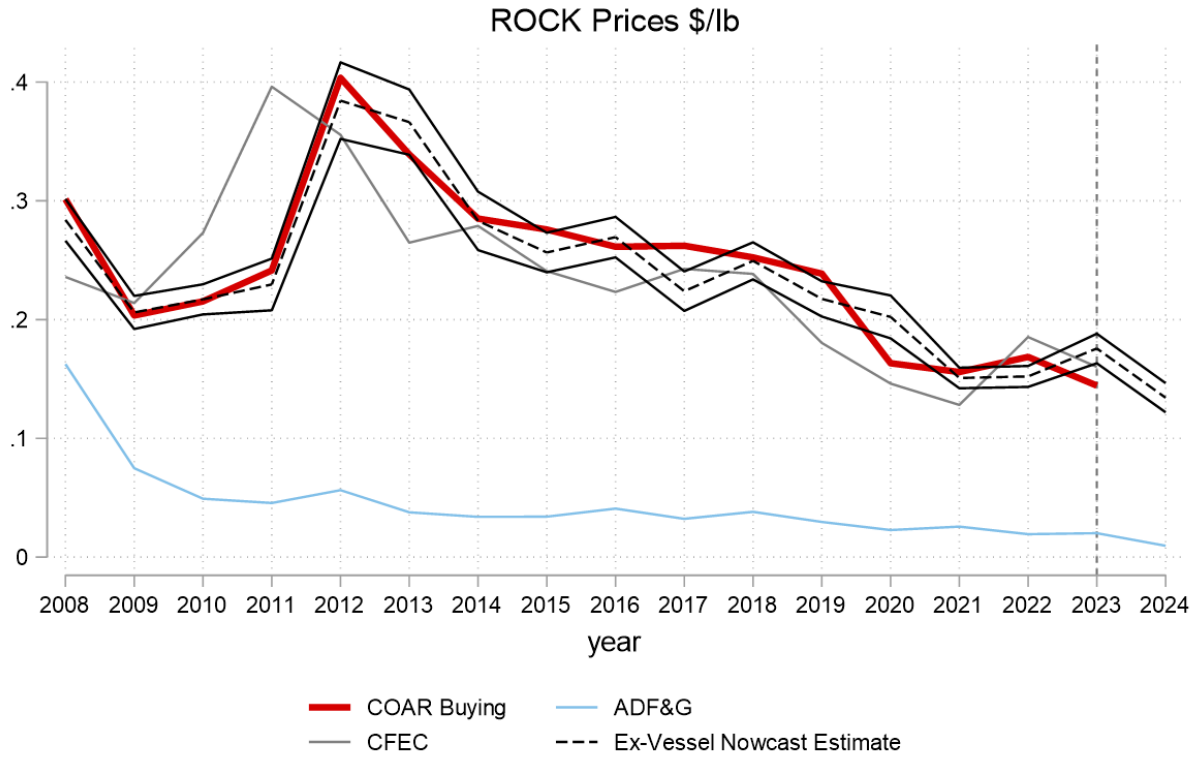


Figure 6.6: Rockfish ex-vessel prices and nowcast estimates

6.0.3.7 Rock Sole

The model estimated for rock sole is shown in equation (7), where $COAR^{exv}_{i,t}$ represents the annual COAR Buying (ex-vessel) price for species i in year t, $ADFG^{exv}_{i,t}$ is the ADF&G fish ticket (ex-vessel) price for species i in year t, $COAR^{wls}_{i,t-1}$ is the first wholesale price (reported in COAR Production) for species i in year *t-1*, and *I(Year*<2011) is an indicator or dummy variable equal to one for years 1992-2010 and is zero in all other years. Equation (7) is estimated by ordinary least squares regression for the years 1992-2023 using COAR Buying weight purchased as analytic weights and robust (White-corrected) standard errors. Estimated coefficients are shown in Table 6.14.

$$COAR^{exv}_{RSOL,t} = \beta_1 COAR^{exv}_{RSOL,t-1} + \beta_2 I(Year < 2011) ADFG^{exv}_{RSOL,t} + \beta_3 I(Year \geq 2011) ADFG^{exv}_{RSOL,t} + \beta_4 I(Year \geq 2011) ADFG^{exv}_{RSOL,t-1} + \beta_5 COAR^{wls}_{RSOL,t-1} + \beta_6 I(Year = 2010) \quad (7)$$

Lagged CFEC prices were not statistically significant and were not retained in the final regression. ADF&G fish ticket prices are bifurcated before and after 2011 as reported prices were very different during these two periods. The lagged ADF&G price with the 2011-2023 indicator variable was not statistically significant but was included in the model to improve fit as measured by AIC and BIC. Lagged first wholesale prices were highly significant as was the 2010 dummy variable at the 1% level. Table 6.15 presents the 2023 COAR Buying mean price as well as the 2024 nowcast mean price, % changes from 2023 and the average from 2019-2023, as well as the 95% confidence intervals of the 2024 nowcast estimates.

Table 6.14: Rock sole ex-vessel price model

Coefficient	Rock sole $COAR^{exv}_{RSOL}$
$COAR^{exv}_{RSOL,t-1}$	0.364**
	(2.96)
$I(Year < 2011) ADFG^{exv}_{RSOL,t}$	1.053***
	(5.23)
$I(Year \geq 2011) ADFG^{exv}_{RSOL,t}$	17.26***
	(7.54)
$I(Year \geq 2011) ADFG^{exv}_{RSOL,t-1}$	-3.398
	(-1.81)
$COAR^{wls}_{RSOL,t-1}$	0.0449**
	(3.45)
$I(Year = 2010)$	0.0998***
	(5.92)
R^2	0.991
AIC	-125.8
N	31

t statistics in parentheses
* p < 0.05, ** p < 0.01, *** p < 0.001

The 2024 rock sole price nowcast is a slight increase from its 2023 COAR Buying price by

approximately 1% but this represents a 27% decline from the 2019-2023 mean value. With reported ADF&G prices roughly flat in 2024, the nowcast model estimates an ex-vessel price of $0.08/lb for rock sole with a 95% confidence interval of $0.06-$0.09/lb.

Table 6.15: Rock Sole Ex-Vessel Price Nowcast Estimates for 2024.

	2023 Mean	2024 Nowcast Mean	% Change 2023-2024	% Change (2019-2023)-2024	2024 Nowcast Lower Bound	2024 Nowcast Upper Bound
Rock sole	$0.08	$0.08	1%	-27%	$0.06	$0.09

Model fits and input data are presented in Figure 6.7.

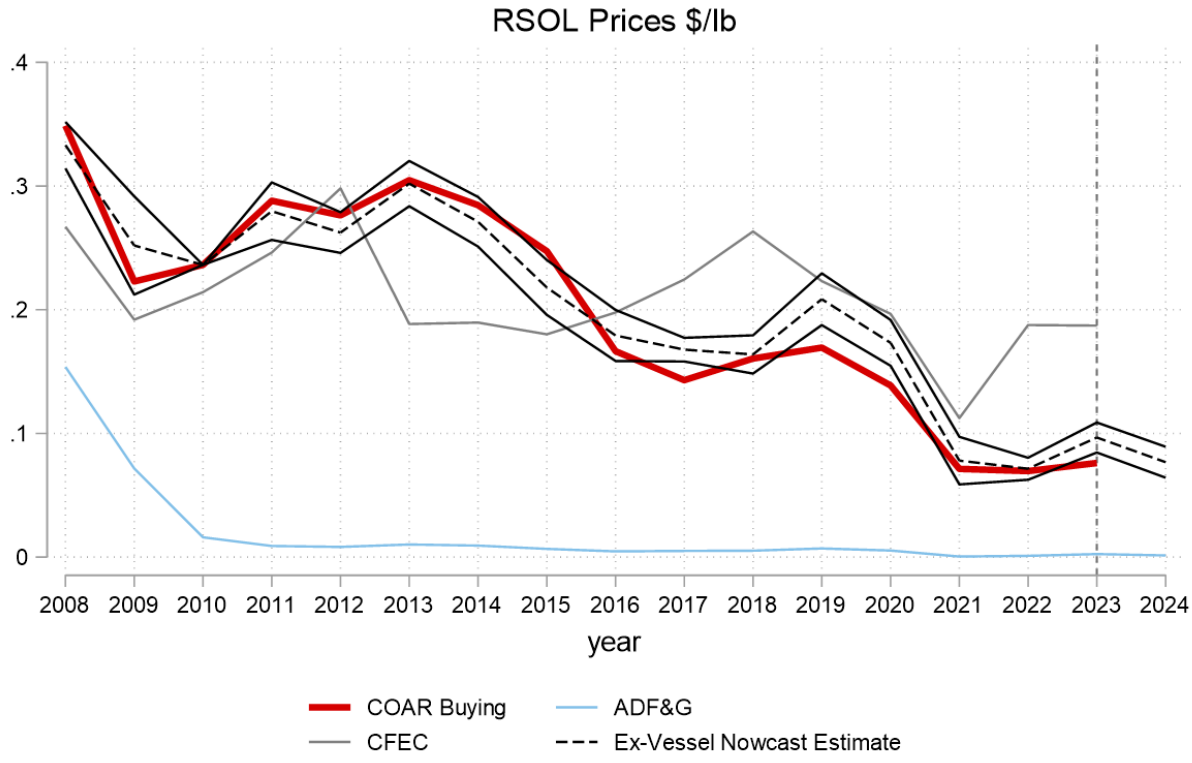


Figure 6.7: Rockfish ex-vessel prices and nowcast estimates

6.0.3.8 Sablefish

The model estimated for sablefish is shown in equation (8), where $COAR^{exv}_{i,t}$ represents the annual COAR Buying (ex-vessel) price for species i in year t and $ADFG^{exv}_{i,t}$ is the ADF&G fish ticket (ex-vessel) price for species i in year t. Equation (8) is estimated by ordinary least squares regression for the years 1992-2023 using COAR Buying weight purchased as analytic weights and robust (White-corrected) standard errors. Estimated coefficients are shown in Table 6.16.

$$COAR^{exv}_{SABL,t} = \beta_1 COAR^{exv}_{SABL,t-1} + \beta_2 ADFG^{exv}_{SABL,t} + \beta_3 ADFG^{exv}_{SABL,t-1} \tag{8}$$

Lagged COAR Buying prices , ADF&G fish ticket prices and lagged ADF&G prices were highly significant at the 1% level and produce very tight, perhaps overly so, confidence intervals for the nowcasted prices. Table 6.17 presents the 2023 COAR Buying mean price as well as the 2024 nowcast mean price, % changes from 2023 and the average from 2019-2023, as well as the 95% confidence intervals of the 2024 nowcast estimates.

Table 6.16: Sablefish ex-vessel price model

Coefficient	Sablefish $COAR^{exv}_{SABL}$
$COAR^{exv}_{SABL,t-1}$	0.879***
	(9.43)
$ADFG^{exv}_{SABL,t}$	2.268***
	(19.44)
$ADFG^{exv}_{SABL,t-1}$	-1.958***
	(-8.27)
R^2	0.997
AIC	20.39
N	32

t statistics in parentheses

* p < 0.05, ** p < 0.01, *** p < 0.001

The 2024 sablefish price nowcast is a decline from its 2023 COAR Buying price by approximately 22% which is 45% below the 2019-2023 mean value. With reported ADF&G prices declining in 2024, the nowcast model estimates an ex-vessel price of $1.84/lb for sablefish with a 95% confidence interval of $1.76-$1.92/lb.

Table 6.17: Sablefish Ex-Vessel Price Nowcast Estimates for 2024.

	2023 Mean	2024 Nowcast Mean	% Change 2023-2024	% Change (2019-2023)-2024	2024 Nowcast Lower Bound	2024 Nowcast Upper Bound
Sablefish	$2.35	$1.84	-22%	-45%	$1.76	$1.92

Model fits and input data are presented in Figure 6.8.

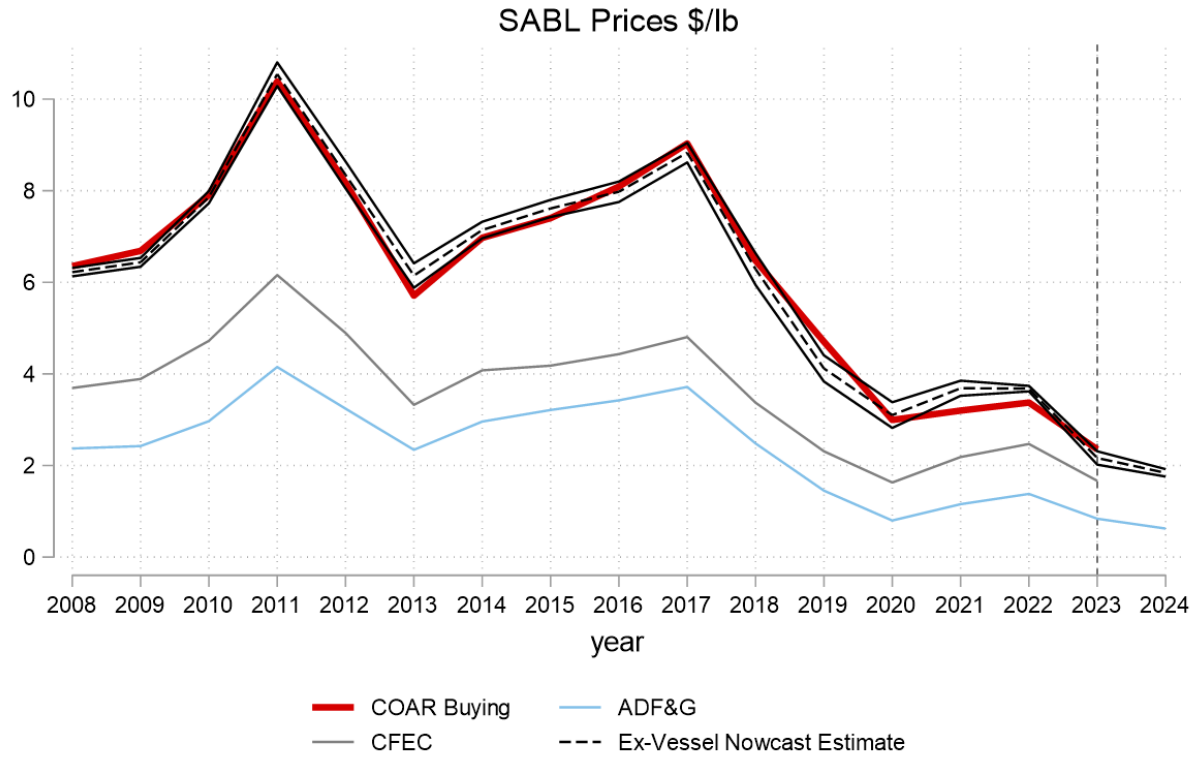


Figure 6.8: Sablefish ex-vessel prices and nowcast estimates

6.0.3.9 Yellowfin Sole

The model estimated for yellowfin sole is shown in equation (9), where $COAR^{exv}_{i,t}$ represents the annual COAR Buying (ex-vessel) price for species i in year t, $ADFG^{exv}_{i,t}$ is the ADF&G fish ticket (ex-vessel) price for species i in year t,$CFEC^{exv}_{i,t-1}$ is the CFEC ex-vessel price for species i in year *t-1*, *I(Year=*1996,1997) is an indicator or dummy variable equal to one in 1996 and 1997 and is zero in all other years, and $I(COAR^{exv}_{i,t} < 0.05)$ is an indicator for the years in which the COAR ex-vessel price is below \$0.05/lb. Equation (9) is estimated by ordinary least squares regression for the years 1992-2023 using COAR Buying weight purchased as analytic weights and robust (White-corrected) standard errors. Estimated coefficients are shown in Table 6.18.

$$COAR^{exv}_{SABL,t} = \beta_1 ADFG^{exv}_{YSOL,t} + \beta_2 CFEC^{exv}_{YSOL,t-1} + \beta_3 I(Year = 1996, 1997) + \beta_3 I(COAR^{exv}_{i,t} < 0.05) + \beta_5 I(Year = 1998) \quad (9)$$

Lagged CFEC prices and current year ADF&G prices were both highly significant at the 1% level as were the two year indicator variables and the indicator for a low yellowfin sole price year. Table 6.19 presents the 2023 COAR Buying mean price as well as the 2024 nowcast mean price, % changes from 2023 and the average from 2019-2023, as well as the 95% confidence intervals of the 2024 nowcast estimates.

Table 6.18: Yellowfin Sole ex-vessel price model

Coefficient	Yellowfin Sole $COAR^{exv}_{YSOL}$
$ADFG^{exv}_{YSOL,t}$	1.949***
	(9.25)
$CFEC^{exv}_{YSOL,t-1}$	0.437***
	(19.68)
$I(Year = 1996, 1997)$	-0.0838***
	(-5.23)
$I(COAR^{exv}_{i,t} < 0.05)$	-0.0697***
	(-10.52)
$I(Year = 1998)$	0.0593***
	(10.87)
R^2	0.973
AIC	-152.0
N	29

t statistics in parentheses
* p < 0.05, ** p < 0.01, *** p < 0.001

The 2024 yellowfin sole ex-vessel price nowcast is a decrease from its 2023 overly optimistic prediction but an increase from the actual 2023 COAR Buying price by approximately 15% but given the ongoing weakness in the flatfish market is still 13% below the 2019-2023 mean value. With reported ADF&G prices decreasing in 2024, the nowcast model estimates an ex-vessel price of \$0.08/lb for yellowfin sole with a 95% confidence interval of \$0.07-\$0.09/lb

Table 6.19: Yellowfin Sole Ex-Vessel Price Nowcast Estimates for 2024.

	2023 Mean	2024 Nowcast Mean	% Change 2023-2024	% Change (2019-2023)-2024	2024 Nowcast Lower Bound	2024 Nowcast Upper Bound
Yellowfin sole	$0.07	$0.07	10%	-13%	$0.07	$0.08

Model fits and input data are presented in Figure 6.9.

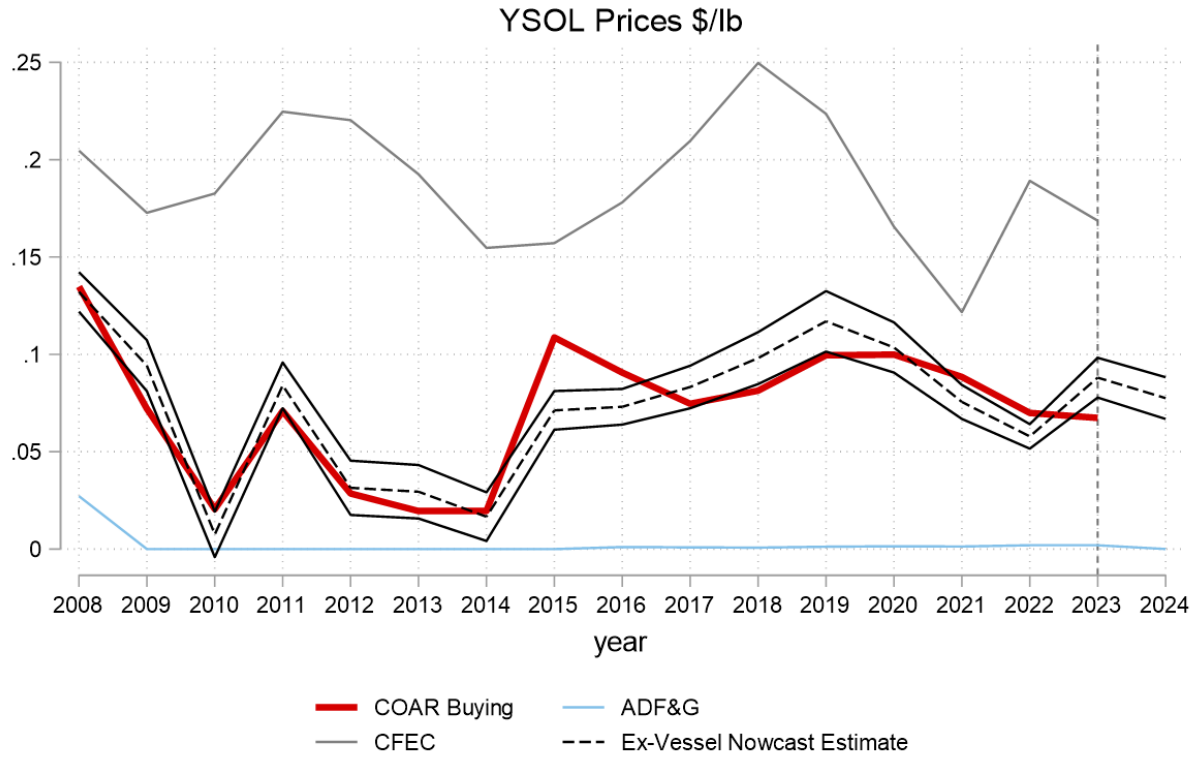


Figure 6.9: Yellowfin sole ex-vessel prices and nowcast estimates

6.0.3.10 Other Groundfish

The model estimated for other groundfish is shown in equation (10), where $COAR^{exv}_{i,t}$ represents the annual COAR Buying (ex-vessel) price for species i in year t, $ADFG^{exv}_{i,t}$ is the ADF&G fish ticket (ex-vessel) price for species i in year t, $CFEC^{exv}_{i,t-1}$ is the CFEC ex-vessel price for species i in year *t-1*. Equation (10) is estimated by ordinary least squares regression for the years 1998-2023 using COAR Buying weight purchased as analytic weights and robust (White-corrected) standard errors. Estimated coefficients are shown in Table 6.20.

$$COAR^{exv}_{OGF,t} = \beta_1 COAR^{exv}_{OGF,t-1} + \beta_2 ADFG^{exv}_{OGF,t} + \beta_3 ADFG^{exv}_{OGF,t-1} + \beta_4 ADFG^{exv}_{OGF,t-2} + \beta_5 ADFG^{exv}_{OGF,t-3} + \beta_6 ADFG^{exv}_{OGF,t-4} + \beta_7 CFEC^{exv}_{OGF,t-1} \quad (10)$$

Lagged CFEC prices were not significant but improved the fit of the model as determined by AIC and BIC and therefore was retained in the final regression. Lagged COAR Buying prices and current year ADF&G fish ticket prices as well as lags of one, two, three, and four years were statistically significant at the 5% level. Table 6.21 presents the 2023 COAR Buying mean price as well as the 2024 nowcast mean price, % changes from 2023 and the average from 2019-2023, as well as the 95% confidence intervals of the 2024 nowcast estimates.

Table 6.20: Yellowfin Sole ex-vessel price model

Coefficient	Yellowfin Sole $COAR^{exv}_{YSOL}$
$COAR^{exv}_{OGF,t-1}$	0.580**
	(3.96)
$ADFG^{exv}_{OGF,t}$	2.992***
	(14.94)
$ADFG^{exv}_{OGF,t-1}$	-2.238***
	(-6.70)
$ADFG^{exv}_{OGF,t-2}$	-0.770*
	(-2.24)
$ADFG^{exv}_{OGF,t-3}$	1.191**
	(3.51)
$ADFG^{exv}_{OGF,t-4}$	1.442**
	(2.96)
$CFEC^{exv}_{OGF,t-1}$	1.112
	(1.71)
R^2	0.987
AIC	-71.77
N	24

t statistics in parentheses
* p < 0.05, ** p < 0.01, *** p < 0.001

The 2024 other groundfish price nowcast is an increase from its 2023 COAR Buying price by 5% which is 27% below the 2019-2023 mean value. Reported ADF&G prices are fairly flat in 2024,

and therefore the nowcast model estimates an ex-vessel price of $0.14/lb for other groundfish with a 95% confidence interval of $0.13-$0.16/lb.

Table 6.21: Other Groundfish Ex-Vessel Price Nowcast Estimates for 2024.

	2023 Mean	2024 Nowcast Mean	% Change 2023-2024	% Change (2019-2023)-2024	2024 Nowcast Lower Bound	2024 Nowcast Upper Bound
Other groundfish	$0.14	$0.14	5%	-27%	$0.13	$0.16

Model fits and input data are presented in Figure 6.10.

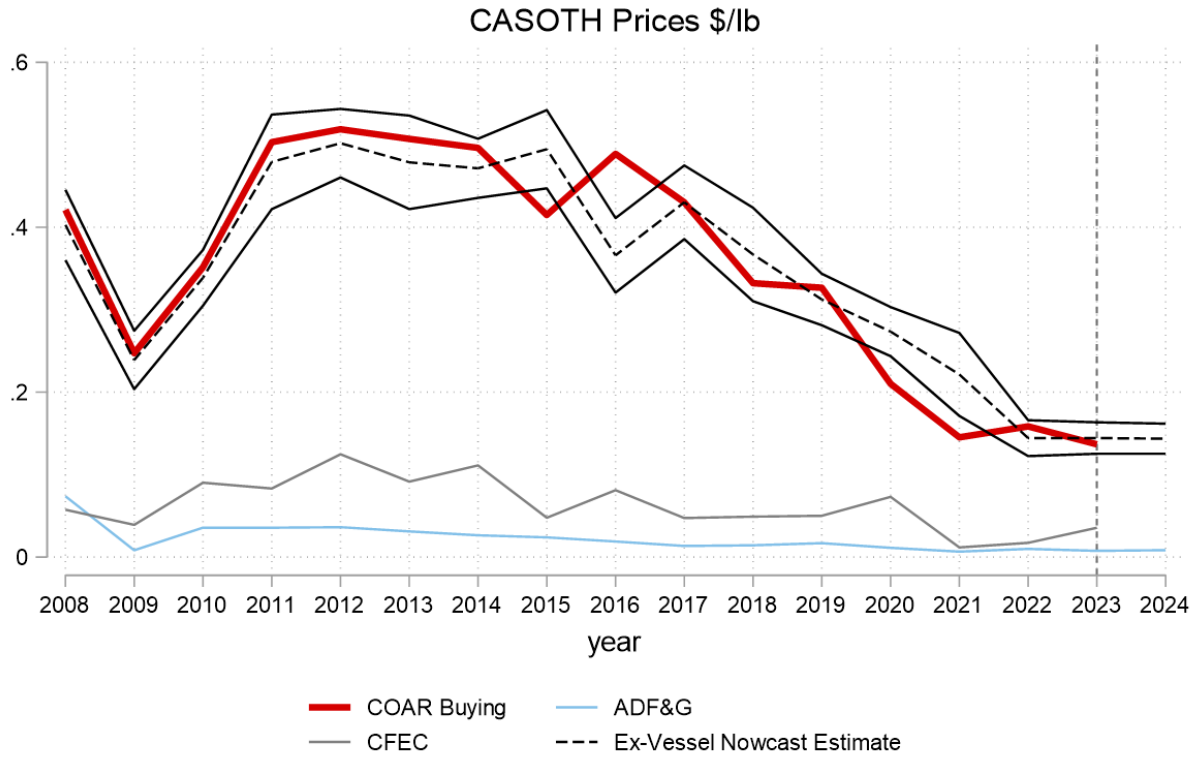


Figure 6.10: Other Groundfish ex-vessel prices and nowcast estimates

6.0.3.11 Other Flatfish

The model estimated for other flatfish is shown in equation (11), where $COAR^{exv}_{i,t}$ represents the annual COAR Buying (ex-vessel) price for species i in year t, $ADFG^{exv}_{i,t}$ is the ADF&G fish ticket (ex-vessel) price for species i in year t, $COAR^{wls}_{i,t-1}$ is the first wholesale price (reported in COAR Production) for species i in year *t-1*. Equation (11) is estimated by ordinary least squares regression for the years 1997-2023 using COAR Buying weight purchased as analytic weights and robust (White-corrected) standard errors. Estimated coefficients are shown in Table 6.22.

$$COAR^{exv}_{OFLT,t} = \beta_1 COAROFLT, t-1^{exv} + \beta_2 I(Year < 2011) ADFG^{exv}_{OFLT,t} + \beta_3 I(Year \geq 2011) ADFG^{exv}_{OFLT,t} \quad (11)$$

Similar to the rock sole model, ADF&G prices were bifurcated before and after 2011 to represent different statistical relationships between the variables during those periods. Lagged COAR Buying prices and current year ADF&G fish ticket prices were highly significant at the 1% level. Table 6.23 presents the 2023 COAR Buying mean price as well as the 2024 nowcast mean price, % changes from 2023 and the average from 2019-2023, as well as the 95% confidence intervals of the 2024 nowcast estimates.

Table 6.22: Other flatfish ex-vessel price model

Coefficient	Other Flatfish $COAR^{exv}_{OFLT}$
$COAROFLT, t-1^{exv}$	0.691***
	(6.66)
$I(Year < 2011) ADFG^{exv}_{OFLT,t}$	1.481**
	(3.03)
$I(Year \geq 2011) ADFG^{exv}_{OFLT,t}$	-6.962**
	(3.31)
R^2	0.985
AIC	-116.4
N	26

t statistics in parentheses
* p < 0.05, ** p < 0.01, *** p < 0.001

The 2024 other flatfish nowcast is a decrease from its 2023 COAR Buying price by approximately 8% which is a further 37% below the 2019-2023 mean value. Reported ADF&G prices in 2024 are nearly equal to those in 2023 and therefore the nowcast model estimates an ex-vessel price of $0.05/lb for other flatfish with a 95% confidence interval of $0.04-$0.06/lb.

Table 6.23: Other Flatfish Ex-Vessel Price Nowcast Estimates for 2024.

	2023 Mean	2024 Nowcast Mean	% Change 2023-2024	% Change (2019-2023)-2024	2024 Nowcast Lower Bound	2024 Nowcast Upper Bound
Other flatfish	$0.06	$0.06	-8%	-37%	$0.05	$0.06

Model fits and input data are presented in Figure 6.11.

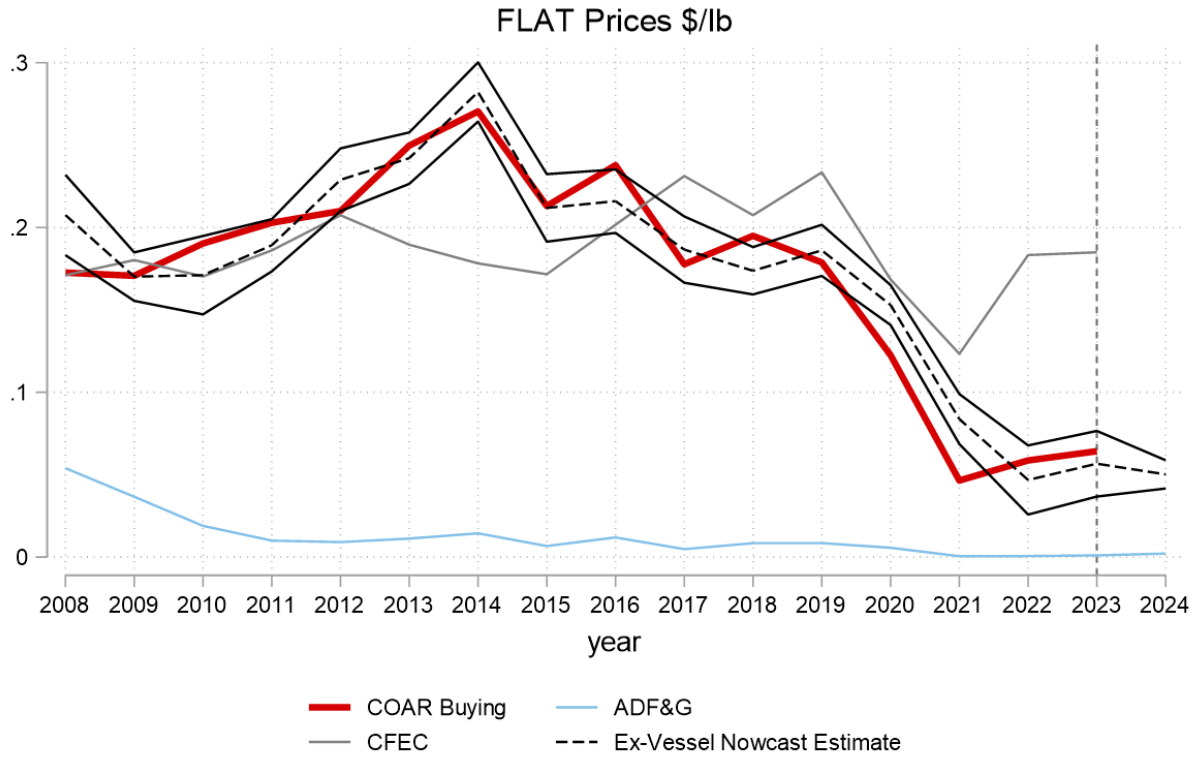


Figure 6.11: Other Flatfish ex-vessel prices and nowcast estimates

Chapter 7

2024 Groundfish First-Wholesale Price Nowcast Estimates

7.0.1 Exectuive Summary

The most recent year for which first-wholesale prices (the first sale of processed products) are available is 2023. These prices are derived from the Alaska Department of Fish and Game's (ADF&G) Commercial Operators Annual Report (COAR). Due to the report's submission deadline and data processing and validation, data from COAR are not available until July of the following year. Thus, at the time of this report's writing (October 2024), the most recent COAR data available was for the previous year, 2023. To provide recent information, current (i.e., 2024) prices are estimated (''nowcast") using related data that is reported at a higher frequency and provides more contemporaneous information on the likely state of prices in 2024. First-wholesale price nowcasts are based on observed and predicted COAR ex-vessel prices (referred to as COAR Buying prices in the previous section), ADF&G fish ticket prices (referred to as "in-season ex-vessel prices" thereafter) through the month of Sept., export prices through the month of Sept. 2024, and reported North Pacific catches through the month of Sept. 2024[1].

The species and products for which price projections are made approximately correspond with the prices in Tables 4.18 and 4.36 of this document. With the notable exception that first-wholesale price estimates are made for all of Alaska, and no distinction is made between at-sea and shoreside prices. This corresponds with the export data which make no distinction between sectors, only the customs district of origin. Select species have unique HTS codes by product type, such as roe and surimi, which allow for more detailed tracking of export prices. Where possible, we match product codes with the international trade data to get representative prices that we use in price projections.

Table 7.1 summarizes the nowcast projections for each species and product type estimated below. The 2023 price are realized (actual) first-wholesale prices. The summary data provided for the current year, 2024, are the expected price (mean) and 90% confidence bounds. Confidence bounds give the estimated probability that the price will fall within the bound. Thus, for the 5% bound, 5% of the simulated prices were less than the given value. Similarly, for the 95% bound, 95% of the simulated prices were less (and 5% were greater). Hence, the region between the 5% and 95% bounds can be interpreted as the 90% confidence bound. Smaller confidence bounds indicate less

[1] ADF&G in-season ex-vessel prices are unadjusted prices and do not account for year-end bonuses.

uncertainty in the projections. In general, price projections (nowcasts) for the current year, 2024, display a modest degree of volatility.

Methods to estimate the first wholesale price model and predict the current year nowcast price are briefly outlined in Section 7.0.2. For each nowcast a more detailed characterization of the forecast distribution is given by the mean and the 80%, 90%, and 95% confidence bounds. Figures plot the first-wholesale nowcast results as well as historical realized wholesale prices.

Table 7.1: Groundfish First-Wholesale Price Nowcast Estimates for 2024.

Species	2023 Mean	2024 Nowcast Mean	% Change 2023-2024	% Change (2019-2023) -2024	2024 Nowcast Lower Bound	2024 Nowcast Upper Bound
Arrow	$0.90	$0.84	-7%	8%	$0.74	$0.96
Atka Mackerel	$1.07	$1.31	22%	15%	$1.04	$1.63
Halibut	$7.77	$7.77	0%	-4%	$7.44	$8.12
Pacific Cod - Fillets	$4.84	$4.32	-11%	-7%	$4.03	$4.62
Pacific Cod - H&G	$1.86	$1.52	-18%	-19%	$1.34	$1.72
Pollock - Fillets	$1.99	$1.77	-11%	-7%	$1.68	$1.86
Pollock - H&G	$0.54	$0.47	-13%	-22%	$0.4	$0.54
Pollock - Roe	$3.07	$3.33	8%	21%	$2.74	$4.01
Pollock - Surimi	$1.40	$1.06	-24%	-30%	$0.86	$1.29
Rocksole - with Roe	$0.85	$0.88	4%	1%	$0.61	$0.94
Rocksole - without Roe	$0.91	$0.76	-16%	-32%	$0.51	$0.72
Rockfish	$0.74	$0.61	-18%	-18%	$0.63	$1.2
Sablefish	$3.53	$3.14	-11%	-34%	$2.89	$3.39
Yellowfin sole	$0.66	$0.70	6%	-3%	$0.62	$0.78

7.0.2 Data and Methodology

First-wholesale prices of major species and product forms are estimated using a two-step procedure. The same basic procedure is used for both ex-vessel and first wholesale nowcasts. The first step uses historical information to estimate a linear relationship of first-wholesale prices that can be used for prediction. The second step predicts first-wholesale prices for 2024 using current year's (as of Oct. 2024) information and predicted nowcast ex-vessel prices (described in greater detail in Section 6).

First-wholesale and ex-vessel prices are collected from COAR Production and Buying reports. For more information on COAR Buying reports, see Section 6. COAR Production reports collect key economic information, such as the species, product, and disposition codes, the net weight, and wholesale value from processors. Due to the submission deadline, and to apply post-season adjustments, COAR Production data is not available until July of the following year. The one-year lag associated with COAR Production data is the primary motivator to nowcast first-wholesale prices for the current year, 2024. We use export price, in-season ex-vessel prices, and landings information, that is available near real-time (equation 7.1) to predict the first-wholesale price. Export prices were obtained from the NMFS Science and Technology FOSS trade database[2]. This database provides export value and volume by Harmonized Trade System (HTS) products

[2]https://www.fisheries.noaa.gov/foss/

to individual countries by month or year. Occasionally, HTS product codes aggregate several fishery species and products into a single code that can be tracked between countries. For most groundfish species below, a unique HTS code can be identified. Additionally, select species have unique HTS codes by product type, such as roe and surimi, which allow for more detailed tracking of export prices. We use the most granular level of product description in our modeling where possible. Export prices through September 2024 were available for the current nowcasts. In-season ex-vessel price data is obtained from ADF&G and is available with a minimal lag (up to one month for minor corrections). In-season ex-vessel price data, however, do not consider post-season adjustments and, for this reason, may be different from COAR ex-vessel prices. The trends between COAR and in-season ex-vessel prices are largely the same for many species. We estimate models with in-season ex-vessel prices for each species and product to determine if considering this variable statistically improves model fit and first-wholesale nowcasts. All monetary values are deflated to 2023 USD using the annual GDP deflator to account for inflation[3].

Current year first-wholesale prices (2024) $COAR^{wls}_{i,t,p}$ for species i and product form p during time period t is estimated using ex-vessel COAR prices, $COAR^{exv}_{i,t}$, in-season ex-vessel prices, $ADFG^{exv}_{i,t}$, export prices, $Export_{i,t,p}$, the total landings (whole weight) measured in pounds between January and September, $WWeight_{i,t}$, and a quadratic time trend, T, shown below:

$$log(COAR^{wls}_{i,t}) = \beta_1 log(COAR^{exv}_{i,t,p}) + \beta_2 log(COAR^{exv}_{i,t-1,p}) + \beta_3 log(ADFG^{exv}_{i,t}) + \beta_4 log(ADFG^{exv}_{i,t-1}) + \beta_5 log(Export_{i,t,p}) + \beta_6 log(Export_{i,t-1,p}) + \beta_7 log(WWeight_{i,t}) + T + T^2 \quad (7.1)$$

Select species and product codes also utilize a year dummy to account for significant increases (or decreases) in market price that are outside of the typical trend. We use an AIC guided model design to determine the final model specification. The AIC guided model design helps determine which variables statistically provide the best fit of the model. Therefore, not all variables in equation 7.1 will be shown for each species and product model as they were not found to statistically improve the overall fit of the model. For many species and product models, the statistical relationships between first-wholesale and ex-vessel COAR prices and first-wholesale and export prices were strong. The relationship tends to be stronger for products where a large share of the production volume is exported and multiple product types were available.

The statistical relationship is highly significant for select species and product codes. For species with many unique product codes or species that fit into a single species code, such as sablefish, the statistical relationship is strong with a R^2 greater than 0.95. Species groups that consider many species codes, such as rockfish, or with unique product forms, such as Arrowtooth flounder, the statistical relationship is weaker with a R^2 as ranging from 0.74 and 0.92. We use the final model based on the AIC selection criterion to predict the 2024 first-wholesale prices.

[3]U.S. Bureau of Economic Analysis, Gross domestic product (implicit price deflator) [A191RD3A086NBEA], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/A191RD3A086NBEA, October 30, 2024.

7.0.3 Nowcast First-Wholesale Produce Estimates for 2024

7.0.3.1 Atka Marcherel H&G

Historically, over 90% of the Alaska caught Atka mackerel is processed as head-and-gut (H&G) products, while the remainder is sold as whole fish. For this reason, we estimate the first wholesale price of Atka mackerel using only H&G product. The estimated coefficients for Atka mackerel are shown in Table 7.2. The statistical fit was extremely strong, with an R^2 of 0.99. The first-wholesale prices of Atka mackerel is jointly determined by the ex-vessel and in-season ex-vessel prices, the Japanese exchange rate, and the time trend. As a majority of Atka mackerel is exported to Japan, the Japanese exchange rate having a significant impact on the first-wholesale price nowcast matchers prior expectations. The inverse relationship between the ex-vessel price and the first-wholesale price, however, was unexpected. Various model specifications were tested with the inverse result remaining consistent. The other terms were not statistically significant but improved the model fit, based on the AIC selection criterion.

Table 7.2: Atka mackerel first-wholesale price model

Description	Estimate
Logged Ex-Vessel Price	-0.21**
	(-5.58)
Logged Lagged Ex-Vessel Price	-0.07
	(-1.47)
Logged ADF&G Fish Ticket Price	0.13**
	(5.15)
Logged Lagged ADF&G Fish Ticket Price	0.13**
	(5.15)
Dummy Term (2014)	0.34*
	(2.99)
Dummy Term (2017)	-0.11
	(-1.21)
Japanese Exchange Rate	0.02**
	(5.29)
I(year - 2014)	-0.11**
	(-4.33)
I((year - 2014)^2)	0.01*
	(-2.67)
R-squared	0.99
AIC	-35.50

t statistics in parentheses
* p < 0.05, ** p < 0.01, *** p < 0.001

Atka mackerel first-wholesale H&G production and price increased 11% in 2023 to $1.07/lb. Current projections for the 2024 Atka mackerel H&G price has a mean of $1.31/lb with 90% confidence bounds of $1.04/lb to $1.63/lb (Table 7.3). These estimates imply that the end-of-year 2024 Atka mackerel first-wholesale price will likely increase. The increase in the nowcast estimate is primarily driven by the increase in the Japanese exchange rate, suggesting that the U.S. dollar is becoming

stronger making U.S. seafood products more expensive, and increases in the in-season ex-vessel price. This does not suggest that total revenues will increase, as changes in the Japanese exchange rate will also affect the demand for Alaskan seafood products, including Atka mackerel.

Table 7.3: Predicted mean and confidence interval for 2024 first wholesale price of Atka mackerel H&G

Year	2.5%	5%	10%	Mean	90%	95%	97.5%
2024	$0.98	$1.04	$1.11	$1.31	$1.54	$1.63	$1.74

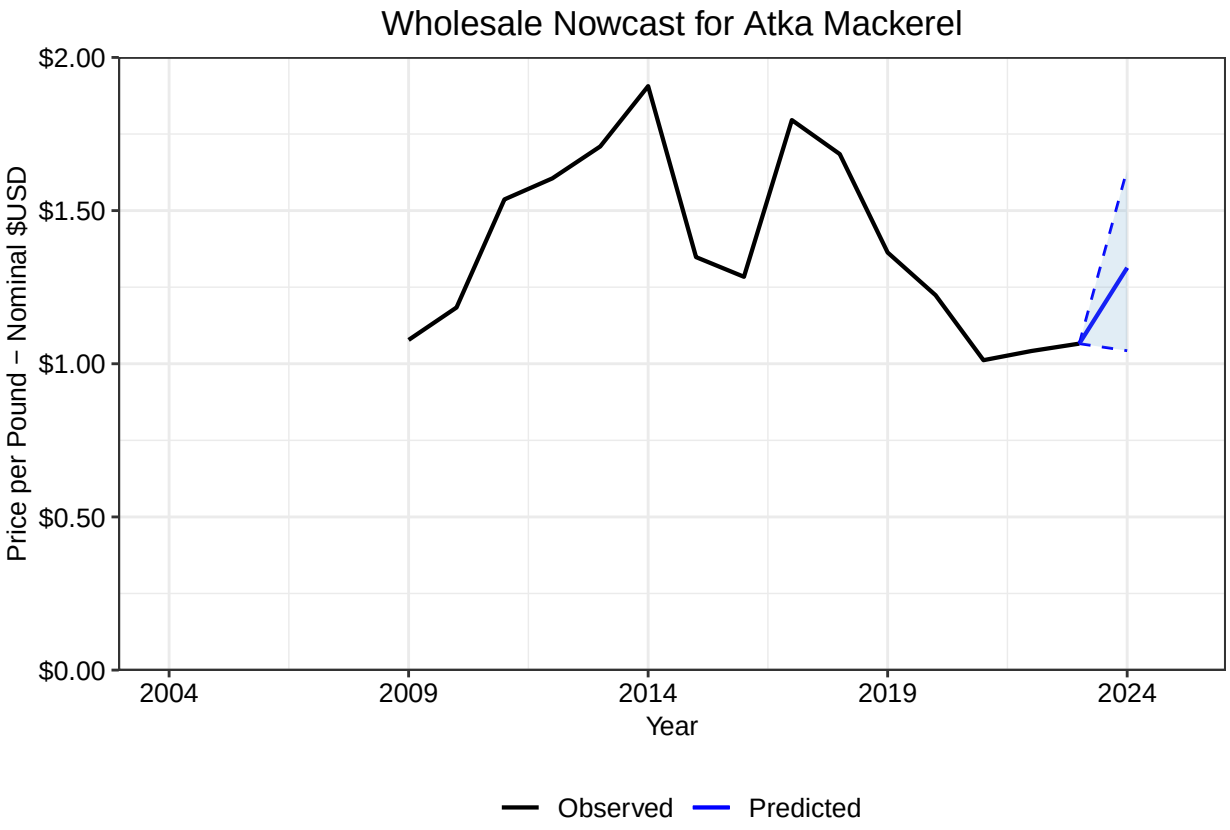


Figure 7.1: Atka mackerel first-wholesale prices and 2024 nowcast estimates. Note: the solid blue line is the mean nowcast value. The blue shaded region indicates the 90% confidence interval.

7.0.3.2 Pacific Cod H&G

Pacific cod is primarily processed in two distinct product types: H&G and fillets. Fillets typically demand a higher first wholesale price than H&G product forms. Fillets and H&G have a unique market structure that constitutes estimating the first-wholesale price for each product type. The estimated coefficients for Pacific cod H&G are shown in Table 7.4. The model fit was extremely strong, similar to other Pacific cod product forms, with an R^2 of 0.99. The first-wholesale price of Pacific cod H&G is jointly determined by the COAR ex-vessel, in-season ex-vessel, and export prices and the total landings. The other terms were not statistically significant but improved the model fit, based on the AIC selection criterion.

Table 7.4: Pacific cod H&G first-wholesale price model

Description	Estimate
Logged Ex-Vessel Price	0.16
	(0.65)
Logged Lagged Ex-Vessel Price	-0.94**
	(-3.66)
Logged ADF&G Fish Ticket Price	0.30
	(1.57)
Logged Lagged ADF&G Fish Ticket Price	0.63*
	(3.04)
Logged Export Price	0.92*
	(2.81)
Logged Whole Weight (in lbs.)	0.06**
	(4.16)
Dummy Term (2022)	0.13
	(1.79)
I(year - 2014)	0.04***
	(7.42)
I((year - 2014)^2)	0.01
	(-1.58)
R-squared	0.99
AIC	-50.70

t statistics in parentheses
* p < 0.05, ** p < 0.01, *** p < 0.001

The first-wholesale production of Pacific cod H&G remained stable in 2023 and the average price per-pound decreased by 14% to $1.86/lb. The current projections for 2024 first-wholesale cod H&G have a mean of $1.52/lb with 90% confidence bounds of $1.34/lb to $1.72/lb (Table 7.5). These estimates indicate that a decrease in the 2024 cod H&G price is likely. The estimate of a first-wholesale price decrease is consistent with the trend in the 2024 Pacific cod H&G export prices and the predicted COAR ex-vessel price.

Table 7.5: Predicted mean and confidence interval for 2024 first wholesale price of Pacific cod H&G

Year	2.5%	5%	10%	Mean	90%	95%	97.5%
2024	$1.30	$1.34	$1.38	$1.52	$1.67	$1.72	$1.77

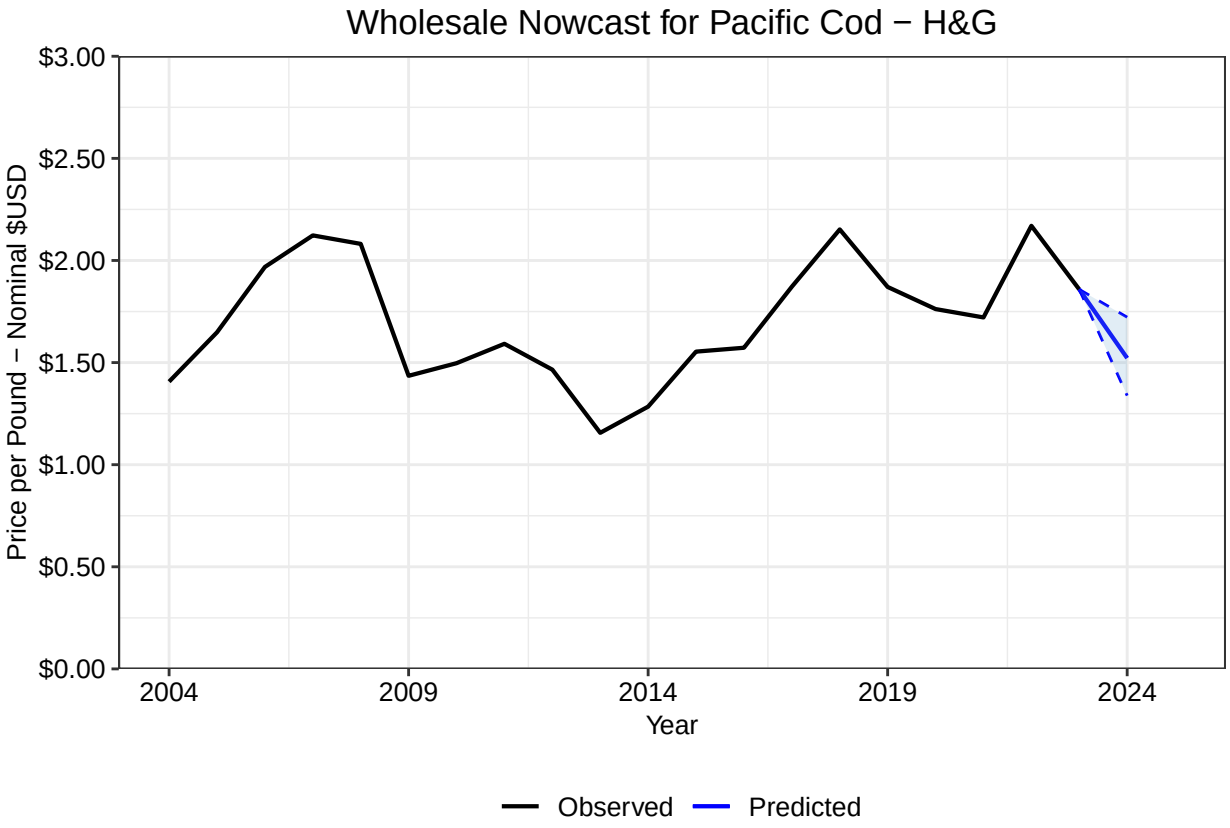


Figure 7.2: Pacific cod H&G first-wholesale prices and 2024 nowcast estimates. Note: the solid blue line is the mean nowcast value. The blue shaded region indicates the 90% confidence interval.

7.0.3.3 Pacific Cod Fillets

Pacific cod is mainly processed into the H&G product form, though fillets constitute a significant portion of the output, particularly for shoreside processors. The estimated coefficients for Pacific cod fillets are shown in Table 7.6. The model fit was extremely strong, with an R^2 of 0.99. The first-wholesale price of Pacific cod fillets is primarily determined by the in-season ex-vessel price, quantity of landings, and the time trend. The COAR ex-vessel and export price terms did improve the fit based on the AIC selection criterion, but were not statistically significant.

Table 7.6: Pacific cod fillets first-wholesale price model

Description	Estimate
Logged Ex-Vessel Price	-0.04
	(-0.19)
Logged ADF&G Fish Ticket Price	0.39*
	(2.32)
Logged Export Price	0.57
	(1.83)
Logged Lagged Export Price	0.42
	(1.39)
Logged Whole Weight (in lbs.)	0.08***
	(6.32)
I(year - 2014)	0.04***
	(9.04)
R-squared	0.99
AIC	-45.90

t statistics in parentheses
* p < 0.05, ** p < 0.01, *** p < 0.001

Production of Pacific cod fillets decreased 16% in 2023 as prices increased by 4% to $4.84/lb. The current projections for 2024 first-wholesale cod fillets have mean of $4.32/lb with 90% confidence bounds of $4.03/lb to $4.62/lb (Table 7.7). These estimates indicate that a decrease in the 2024 cod fillet price is likely. The estimate of a first-wholesale price decrease is consistent with the decrease price in the 2024 Pacific cod H&G export prices and the in-season ex-vessel price.

Table 7.7: Predicted mean and confidence interval for 2024 first wholesale price of Pacific cod fillets

Year	2.5%	5%	10%	Mean	90%	95%	97.5%
2024	$3.97	$4.03	$4.10	$4.32	$4.55	$4.62	$4.69

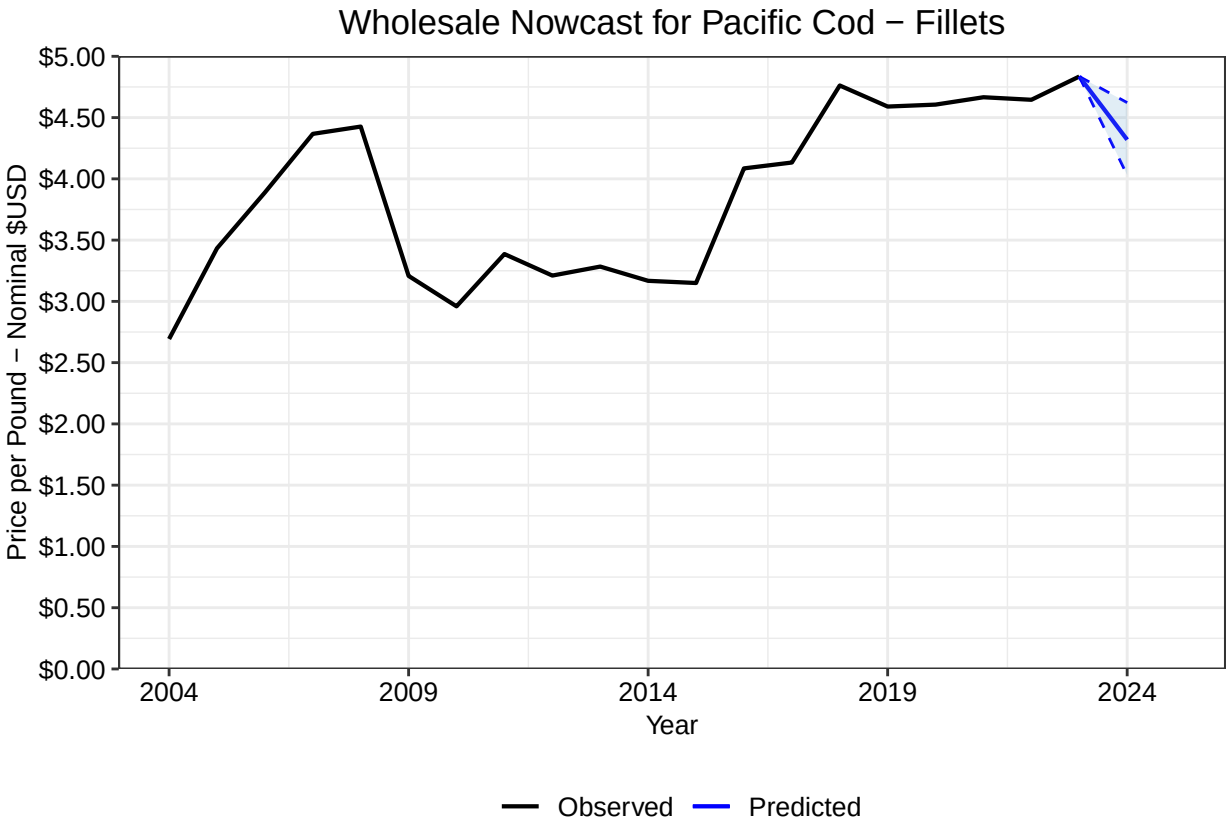


Figure 7.3: Pacific cod fillets first-wholesale prices and 2024 nowcast estimates. Note: the solid blue line is the mean nowcast value. The blue shaded region indicates the 90% confidence interval.

7.0.3.4 Alaskan Pollock H&G

In the North Pacific FMP groundfish fisheries 67% of the wholesale value came from Alaska pollock in 2024. The primary products produced from pollock are fillets, H&G, roe, and surimi. We begin with the lower price H&G to be consistent with other species, then proceed with fillets, roe, and surimi. The estimated coefficients for Alaskan pollock H&G are shown in Table 7.8. The model fit was strong, with an R^2 of 0.95. The first-wholesale price of Alaskan pollock H&G is primarily determined by the ex-vessel price and the time trend.

Table 7.8: Pollock H&G first-wholesale price model

Description	Estimate
Logged Ex-Vessel Price	0.33***
	(8.67)
Logged Export Price	0.45**
	(3.81)
I((year - 2014)^2)	0.00**
	(-3.21)
R-squared	0.95
AIC	-28.10

t statistics in parentheses
* p < 0.05, ** p < 0.01, *** p < 0.001

Pollock H&G production increased 13% in 2023 and prices decreased 15% to $0.54/lb. The projected first-wholesale pollock H&G price in 2024 has a mean of $0.47/lb with 90% confidence bounds of $0.40/lb to $0.54/lb (Table 7.9). These estimates imply that prices in 2024 will likely decrease. This is primarily driven by a decline in the ex-vessel price nowcast.

Table 7.9: Predicted mean and confidence interval for 2024 first wholesale price of Pollock H&G

Year	2.5%	5%	10%	Mean	90%	95%	97.5%
2024	$0.39	$0.40	$0.42	$0.47	$0.52	$0.54	$0.56

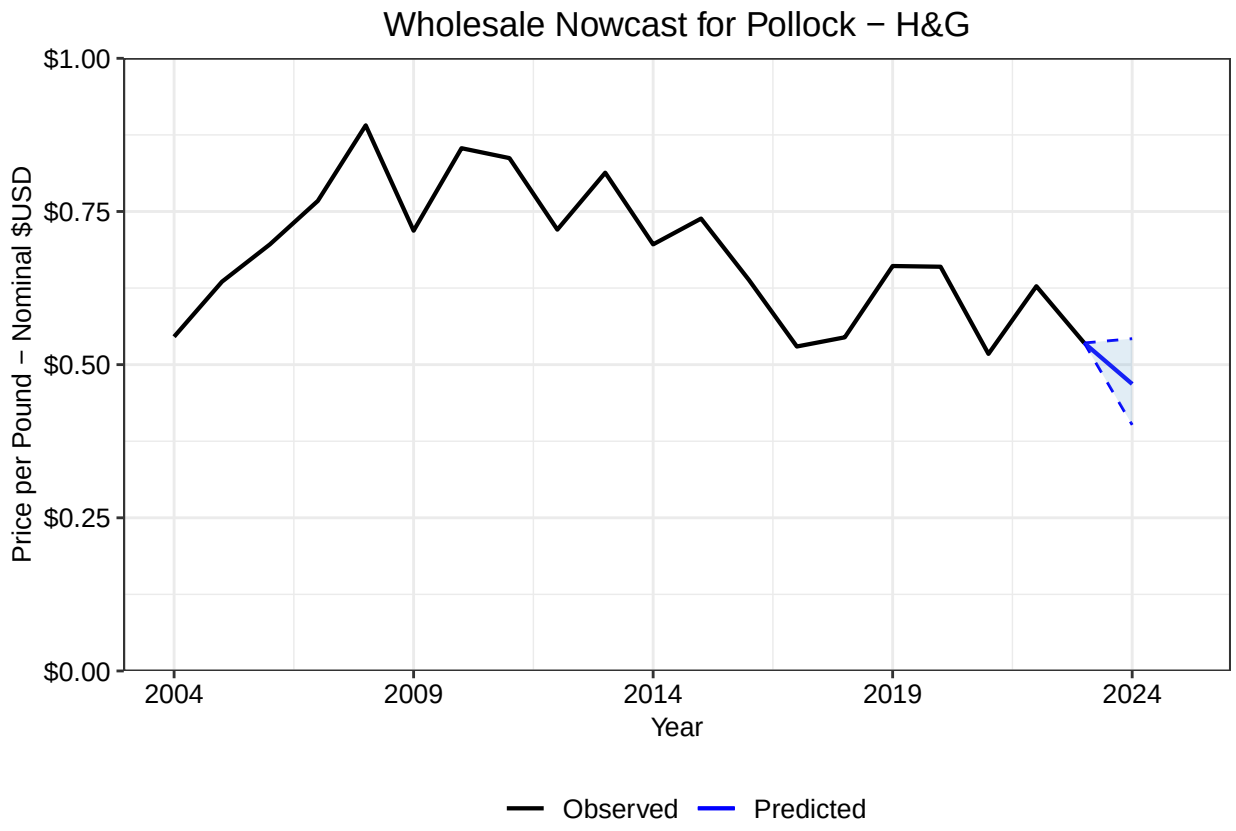


Figure 7.4: Pollock H&G first-wholesale prices and 2024 nowcast estimates. Note: the solid blue line is the mean nowcast value. The blue shaded region indicates the 90% confidence interval.

7.0.3.5 Alaskan Pollock Fillets

The estimated coefficients for Alaskan pollock fillets are shown in Table 7.10. The model fit was very strong, with an R^2 of 0.99. The first-wholesale price of Alaskan pollock fillets is primarily determined by the export price. The in-season ex-vessel price and time trend did improve the fit based on the AIC selection criterion, but were not statistically significant.

Table 7.10: Alaskan pollock fillets first-wholesale price model

Description	Estimate
Logged Ex-Vessel Price	-0.04
	(-1.05)
Logged Export Price	1.09***
	(8.09)
Dummy Term (2009)	0.49***
	(7.29)
I(year - 2014)	0.01
	(1.37)
R-squared	0.99
AIC	-48.40

t statistics in parentheses
* p < 0.05, ** p < 0.01, *** p < 0.001

Pollock fillet production increased 4% in 2023 and prices decreased 7% to $1.99/lb. The projected first-wholesale pollock fillets price in 2024 has a mean of $1.77/lb with 90% confidence bounds of $1.68/lb to $1.86/lb (Table 7.11). These estimates imply that prices in 2024 will likely decline. This is primarily driven by a decline in the 2024 export price of pollock fillets despite a relatively stable ex-vessel price nowcast.

Table 7.11: Predicted mean and confidence interval for 2024 first wholesale price of Pollock Fillets

Year	2.5%	5%	10%	Mean	90%	95%	97.5%
2024	$1.66	$1.68	$1.70	$1.77	$1.84	$1.86	$1.88

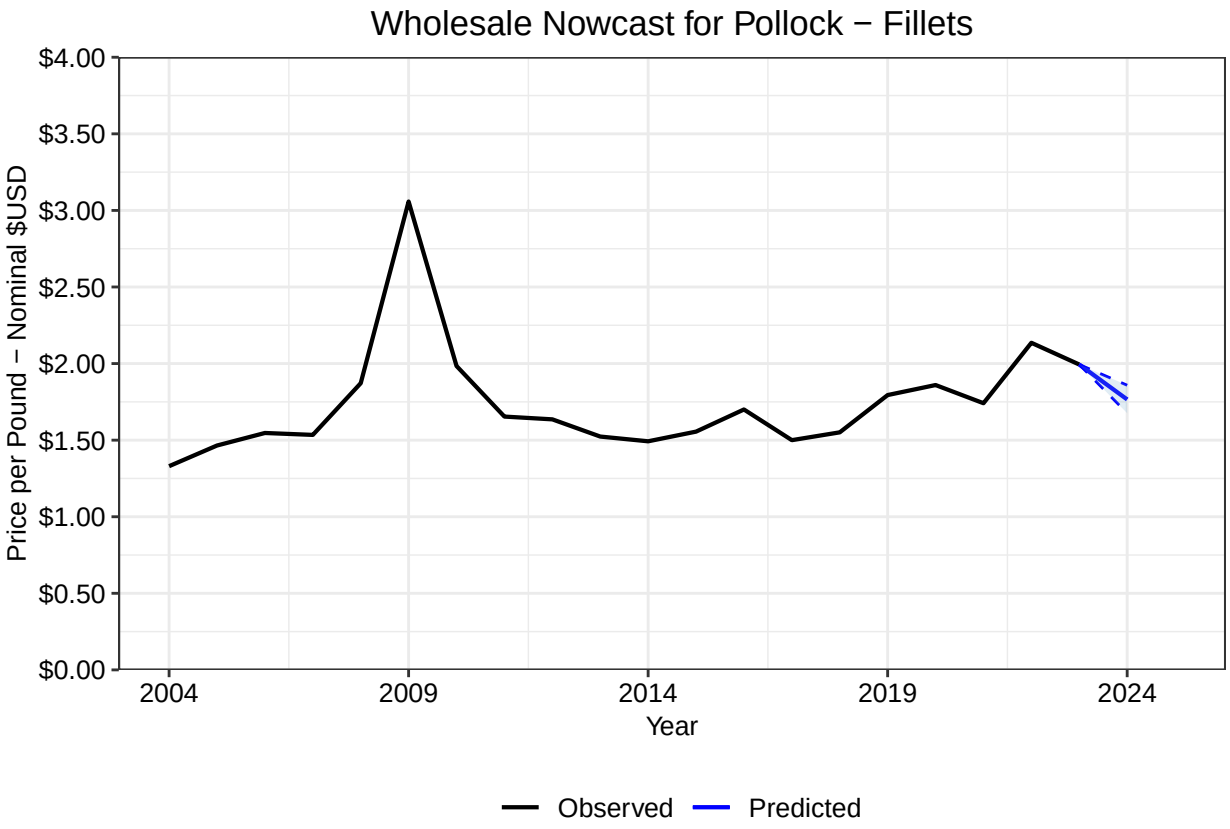


Figure 7.5: Alaskan pollock fillets first-wholesale prices and 2024 nowcast estimates. Note: the solid blue line is the mean nowcast value. The blue shaded region indicates the 90% confidence interval.

7.0.3.6 Alaskan Pollock Roe

The estimated coefficients for the first-wholesale Alaskan pollock roe model are shown in Table 7.12. The model fit was extremely strong, with an R^2 of 0.99. The first-wholesale price of Alaskan pollock roe is primarily determined by the ex-vessel, in-season ex-vessel, and export prices and a time trend.

Table 7.12: Alaskan pollock roe first-wholesale price model

Description	Estimate
Logged Ex-Vessel Price	0.73*
	(2.63)
Logged Lagged ADF&G Fish Ticket Price	-0.45*
	(-2.53)
Logged Export Price	0.86***
	(8.91)
I((year - 2014)^2)	0.01**
	(3.78)
R-squared	0.99
AIC	-14.00

t statistics in parentheses
* p < 0.05, ** p < 0.01, *** p < 0.001

Pollock roe production increased 4% in 2023 but prices decreased 1% to $3.07/lb. The projected first-wholesale price of pollock roe for 2024 has a mean of $3.33/lb with 90% confidence bounds of $2.74/lb to $4.01/lb (Table 7.13). These estimates imply that roe prices for 2024 may increase but with an almost equal likelihood of decreasing as increasing. The average export price of roe has increased by 6% through Sept. 2024 which may indicate an increase in the first wholesale price in 2024.

Table 7.13: Predicted mean and confidence interval for 2024 first wholesale price of Alaskan pollock roe

Year	2.5%	5%	10%	Mean	90%	95%	97.5%
2024	$2.63	$2.74	$2.87	$3.33	$3.83	$4.01	$4.18

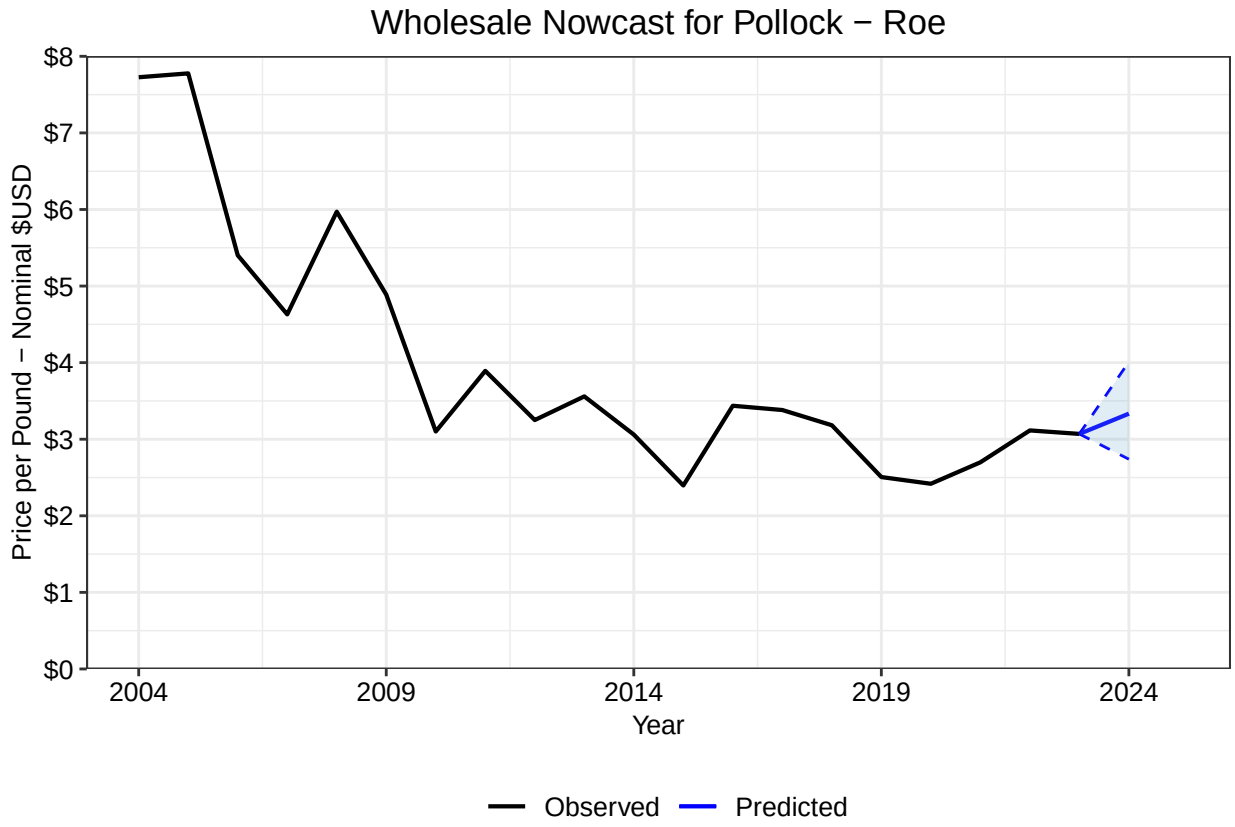


Figure 7.6: Alaskan pollock roe first-wholesale prices and 2024 nowcast estimates. Note: the solid blue line is the mean nowcast value. The blue shaded region indicates the 90% confidence interval.

7.0.3.7 Alaskan Pollock Surimi

The estimated coefficients for the first-wholesale Alaskan pollock surimi model is shown in Table 7.14. The model fit was strong, although less than other Alaskan pollock product forms, with an R^2 of 0.96. The ex-vessel and in-season ex-vessel prices and time trend of surimi are the primary drivers of the first wholesale price. The export price did improve the model fit, but was not statistically significant.

Table 7.14: Alaskan pollock Surimi first-wholesale price model

Description	Estimate
Logged Ex-Vessel Price	0.11
	(0.33)
Logged Lagged Ex-Vessel Price	-0.71**
	(-3.14)
Logged ADF&G Fish Ticket Price	1.19**
	(3.15)
Logged Lagged Export Price	0.48
	(1.49)
Logged Whole Weight (in lbs.)	0.11**
	(3.33)
I(year - 2014)	0.04**
	(3.82)
I((year - 2014)^2)	0.01*
	(-2.56)
R-squared	0.96
AIC	-25.70

t statistics in parentheses
* p < 0.05, ** p < 0.01, *** p < 0.001

The production of pollock surimi increased 5% in 2023 and the first-wholesale price decreased by 6% to $1.40/lb. The first-wholesale price prediction of surimi in 2024 has a mean of $1.06/lb with 90% confidence bounds of $0.86/lb to $1.29/lb (Table 7.15) These estimates imply a significant decline in prices in 2024 is likely. Surimi export prices tend to provide a reasonably good prediction of the state of surimi prices. Preliminary 2024 export prices (-7%) coupled with a reduction in ex-vessel price nowcast and in-season ex-vessel prices, may explain the significant predicted decrease by the end of the current year.

Table 7.15: Predicted mean and confidence interval for 2024 first wholesale price of Alaskan pollock surimi

Year	2.5%	5%	10%	Mean	90%	95%	97.5%
2024	$0.82	$0.86	$0.90	$1.06	$1.23	$1.29	$1.35

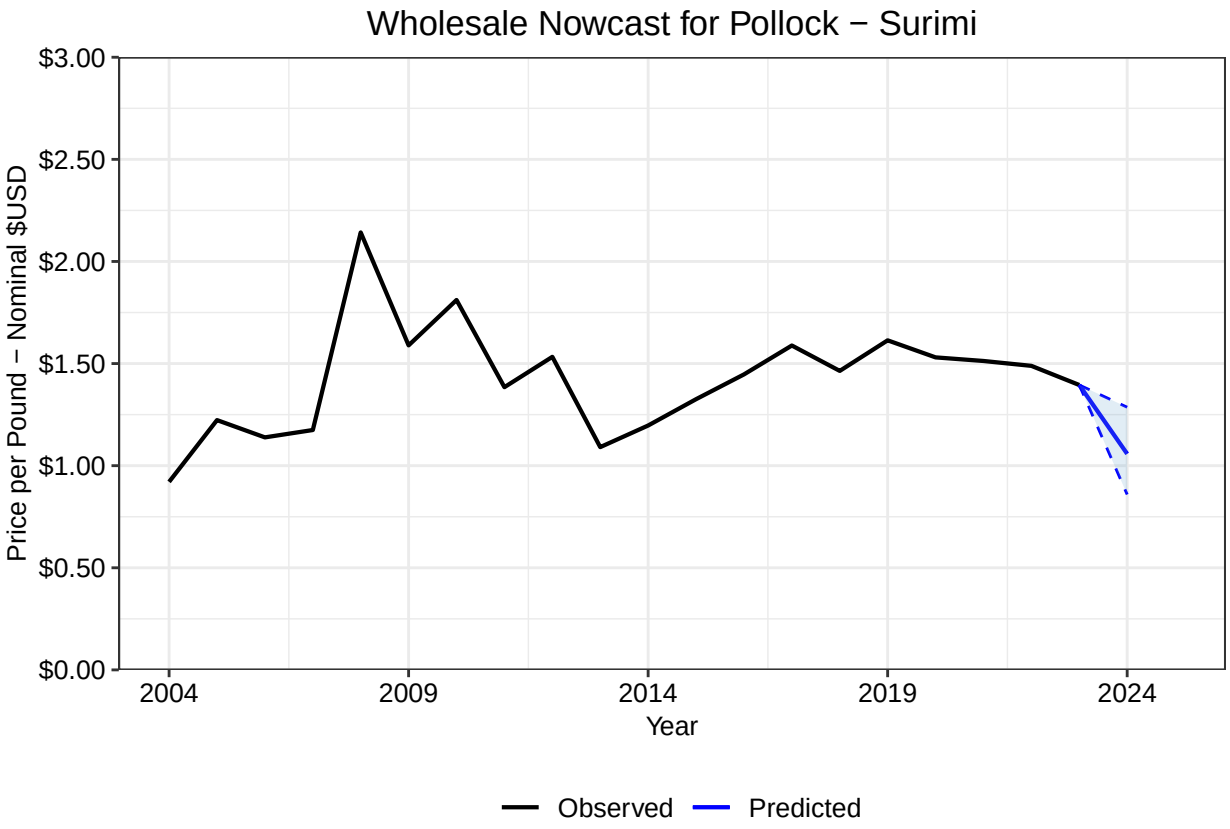


Figure 7.7: Alaskan pollock surimi first-wholesale prices and 2024 nowcast estimates. Note: the solid blue line is the mean nowcast value. The blue shaded region indicates the 90% confidence interval.

7.0.3.8 Sablefish H&G

Sablefish is mostly produced into the head-and-gut product form at the first-wholesale level, typically comprising greater than 90% of the value from sablefish products. The estimated coefficients for sablefish H&G are shown in Table 7.16. The model fit was extremely strong, with an R^2 of 0.99. The ex-vessel price had a significant impact in predicting the first wholesale price. The other terms were not statistically significant but improved the model fit based on the AIC selection criterion.

Table 7.16: Sablefish H&G first-wholesale price model

Description	Estimate
Logged Ex-Vessel Price	0.83***
	(12.70)
Logged Lagged ADF&G Fish Ticket Price	-0.11
	(-1.96)
Logged Export Price	0.16
	(1.81)
Logged Lagged Export Price	0.15
	(1.52)
I(year - 2014)	0.01
	(1.77)
I((year - 2014)^2)	0.01
	(1.53)
R-squared	0.99
AIC	-51.90

t statistics in parentheses
* p < 0.05, ** p < 0.01, *** p < 0.001

Sablefish H&G production in 2023 decreased 13% and the realized price decreased 25% to $3.53/lb. This year's first-wholesale price nowcast for 2024 has a mean of $3.14/lb with 90% confidence bounds of $2.89/lb to $3.39/lb (Table 7.17). These estimates imply that a price decrease in 2024 is likely as supported by the downward trend in in-season and nowcast ex-vessel prices through September.

Table 7.17: Predicted mean and confidence interval for 2024 first wholesale price of sablefish H&G

Year	2.5%	5%	10%	Mean	90%	95%	97.5%
2024	$2.84	$2.89	$2.95	$3.14	$3.33	$3.39	$3.45

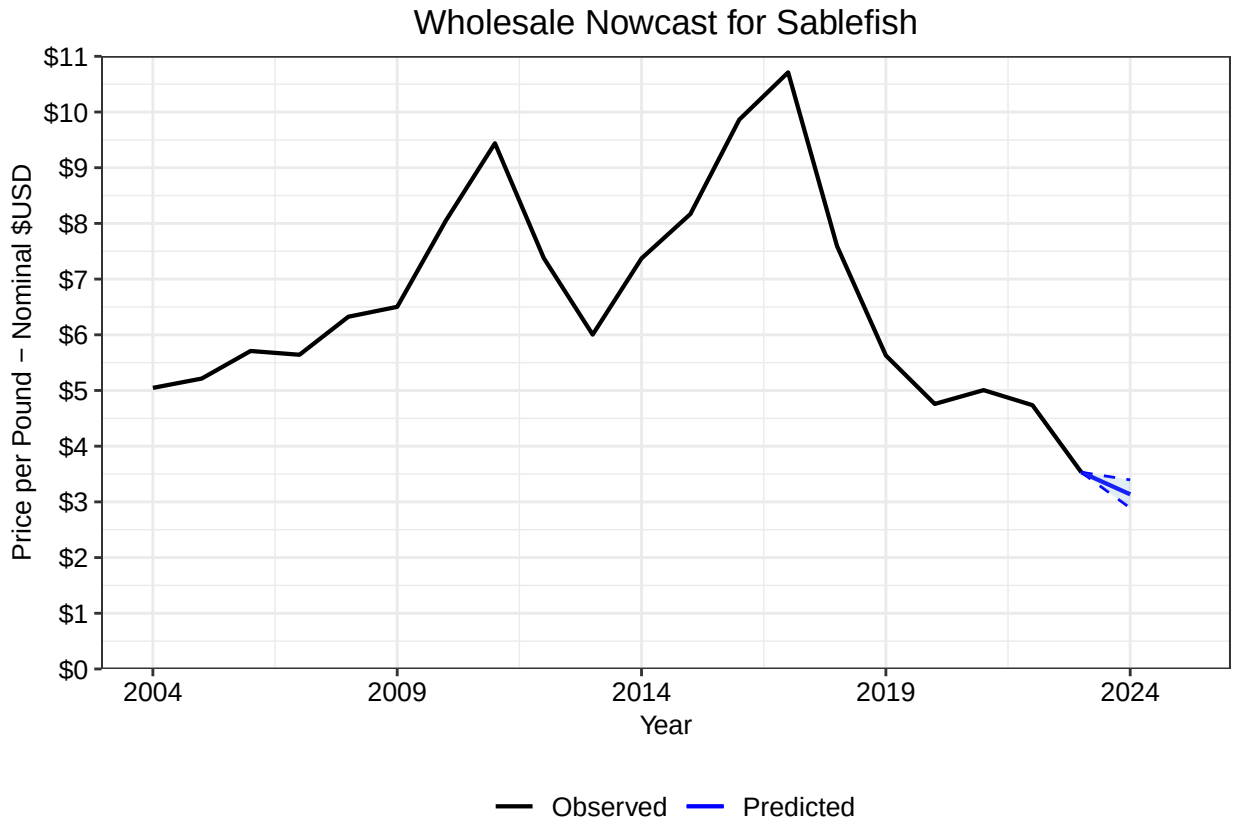


Figure 7.8: Sablefish H&G first-wholesale prices and 2024 nowcast estimates. Note: the solid blue line is the mean nowcast value. The blue shaded region indicates the 90% confidence interval.

7.0.3.9 Flatfish

The two largest flatfish species in terms of market value and volume are yellowfin and rock sole in the BSAI. Arrowtooth flounder is the predominant species caught in the GOA and in also caught in substantial quantities in the BSAI. The market shares for other flatfish fisheries are comparatively smaller. Flatfish are primarily processed into the head-and-gut product form. The majority of rock sole, however, is processed into two product forms; H&G with roe, a higher priced product with slightly different price dynamics, and H&G without roe.

7.0.3.10 Yellowfin sole H&G

Yellowfin sole is mostly produced into the head-and-gut product form at the first-wholesale level. The estimated coefficients for yellowfin sole H&G are shown in Table 7.17. The model fit was strong, with an R^2 of 0.89. The ex-vessel price and time trend had a significant impact in predicting the first wholesale price.

Table 7.18: Yellowfin sole H&G first-wholesale price model

Description	Estimate
Logged Ex-Vessel Price	0.14***
	(11.62)
I(year - 2014)	0.00
	(-0.03)
R-squared	0.89
AIC	-16.10

t statistics in parentheses
* p < 0.05, ** p < 0.01, *** p < 0.001

Yellowfin sole first-wholesale H&G production decreased 28% in 2023 and the first-wholesale price decreased 3% to $0.66/lb. This year's projection for 2024 yellowfin sole H&G prices estimate a mean of $0.70/lb with 90% confidence bounds of $0.62/lb to $0.78/lb (Table 7.18). These estimates imply that a price increase in 2024 is likely with less than an 15% probability of first-wholesale price declining. This is primarily due to an increase in the nowcast ex-vessel prices in 2024.

Table 7.19: Predicted mean and confidence interval for 2024 first wholesale price of yellowfin sole H&G

Year	2.5%	5%	10%	Mean	90%	95%	97.5%
2024	$0.60	$0.62	$0.64	$0.70	$0.76	$0.78	$0.80

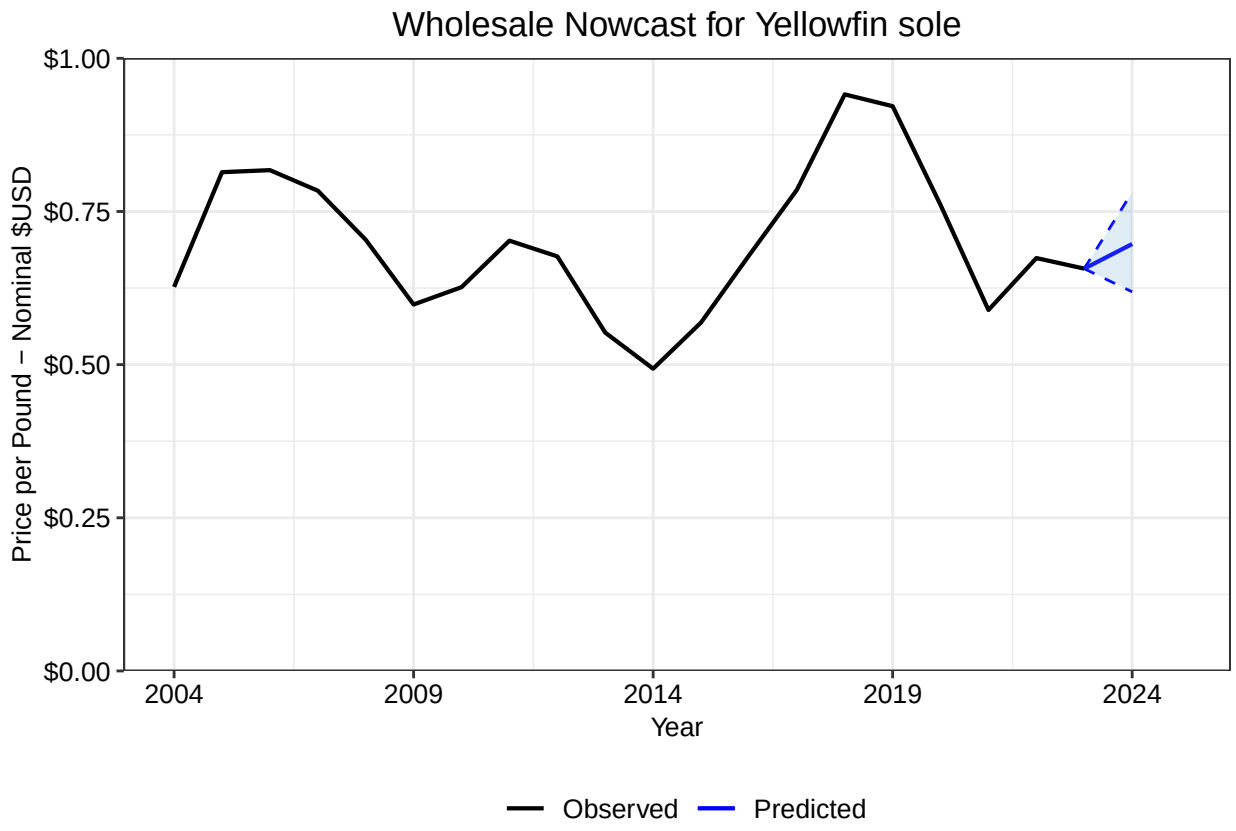


Figure 7.9: Yellowfin sole H&G first-wholesale prices and 2024 nowcast estimates. Note: the solid blue line is the mean nowcast value. The blue shaded region indicates the 90% confidence interval.

7.0.3.11 Rock sole H&G with Roe

The estimated coefficients for rock sole H&G with roe are shown in Table 7.18. The model fit was not very strong with an R^2 of 0.74. Ex-vessel and export prices and total landings had a significant impact in predicting the first-wholesale price of rock sole H&G with roe. The other terms were not statistically significant but improved the model fit based on the AIC selection criterion.

Table 7.20: Rock sole H&G with roe first-wholesale price model

Description	Estimate
Logged Lagged Ex-Vessel Price	-0.33*
	(-2.13)
Logged Lagged ADF&G Fish Ticket Price	0.08
	(1.86)
Logged Export Price	2.21**
	(3.89)
Logged Whole Weight (in lbs.)	0.03**
	(3.21)
R-squared	0.74
AIC	-5.40

t statistics in parentheses
* p < 0.05, ** p < 0.01, *** p < 0.001

The first-wholesale production of rock sole H&G with roe decreased 56% in 2023 and the price increased 33% to $0.91/lb. This year's projection for the 2024 rock sole H&G with roe price has a mean of $0.76/lb with 90% confidence bounds of $0.61/lb to $0.94/lb (Table 7.19) indicating that prices are likely to decrease in 2024. This is primarily associated with declines in the 2024 export price and total landings. The wide confidence interval is due to the low model fit and high levels of noise in the predictions.

Table 7.21: Predicted mean and confidence interval for 2024 first wholesale price of rock sole H&G with roe

Year	2.5%	5%	10%	Mean	90%	95%	97.5%
2024	$0.59	$0.61	$0.65	$0.76	$0.89	$0.94	$0.98

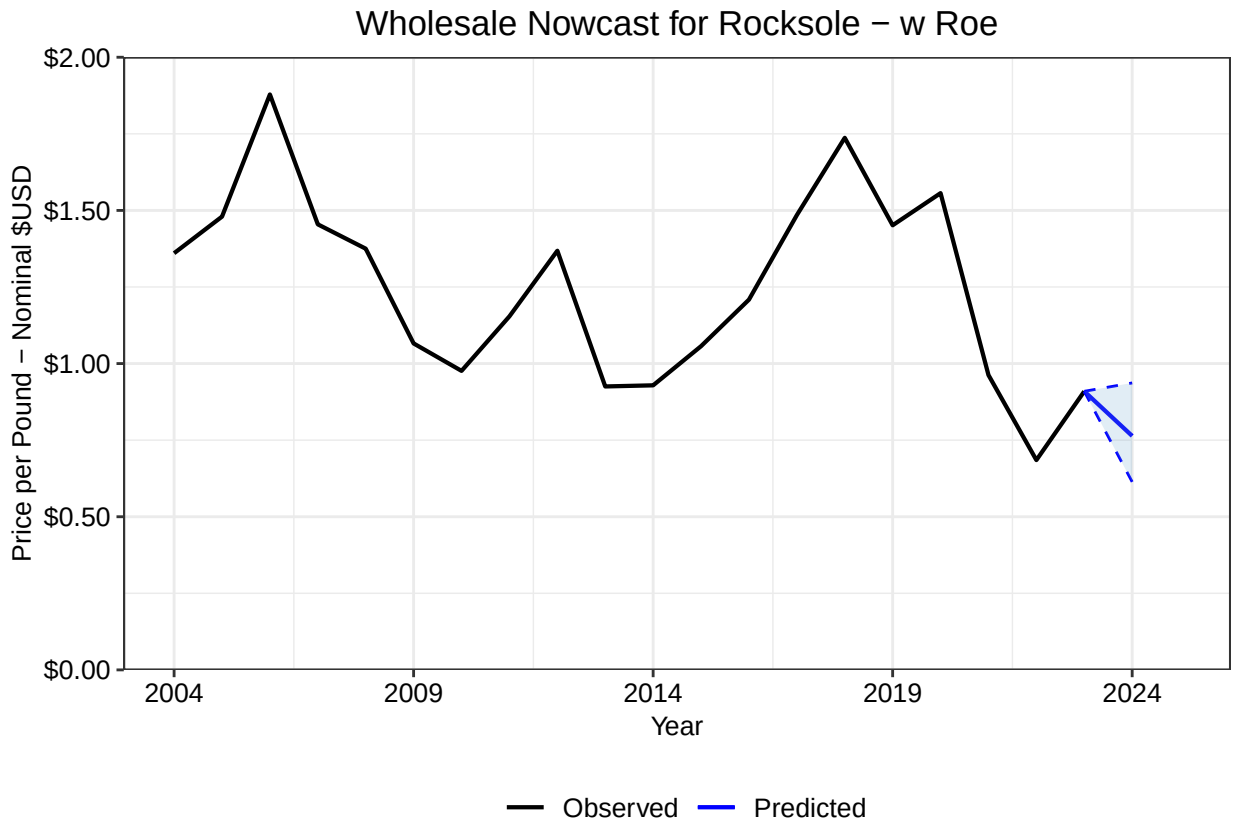


Figure 7.10: Rock sole H&G with roe first-wholesale prices and 2024 nowcast estimates. Note: the solid blue line is the mean nowcast value. The blue shaded region indicates the 90% confidence interval.

7.0.3.12 Rock sole H&G without Roe

The estimated coefficients for rock sole H&G without roe are shown in Table 7.20. The model fit was stronger than rock sole H&G with roe, with an R^2 of 0.87. The ex-vessel and export prices and whole weight had a significant impact in predicting the first wholesale price.

Table 7.22: Rock sole H&G without roe first-wholesale price model

Description	Estimate
Logged Ex-Vessel Price	0.26
	(1.90)
Logged Lagged Ex-Vessel Price	-0.46**
	(-3.04)
Logged Export Price	1.13*
	(2.44)
Logged Whole Weight (in lbs.)	-0.02**
	(-3.22)
R-squared	0.87
AIC	-13.40

t statistics in parentheses
* p < 0.05, ** p < 0.01, *** p < 0.001

The first-wholesale production of rock sole H&G (without roe) more than doubled in 2023, increasing by 132% and the price increased by 12% to \$0.74/lb. This year's projections estimate the 2024 rock sole H&G (without roe) price will likely decrease with a mean of \$0.61/lb with 90% confidence bounds of \$0.51/lb to \$0.72/lb (Table 7.21). This is supported by a decrease in the 2024 export price.

Table 7.23: Predicted mean and confidence interval for 2024 first wholesale price of rock sole H&G without roe

Year	2.5%	5%	10%	Mean	90%	95%	97.5%
2024	\$0.49	\$0.51	\$0.53	\$0.61	\$0.69	\$0.72	\$0.75

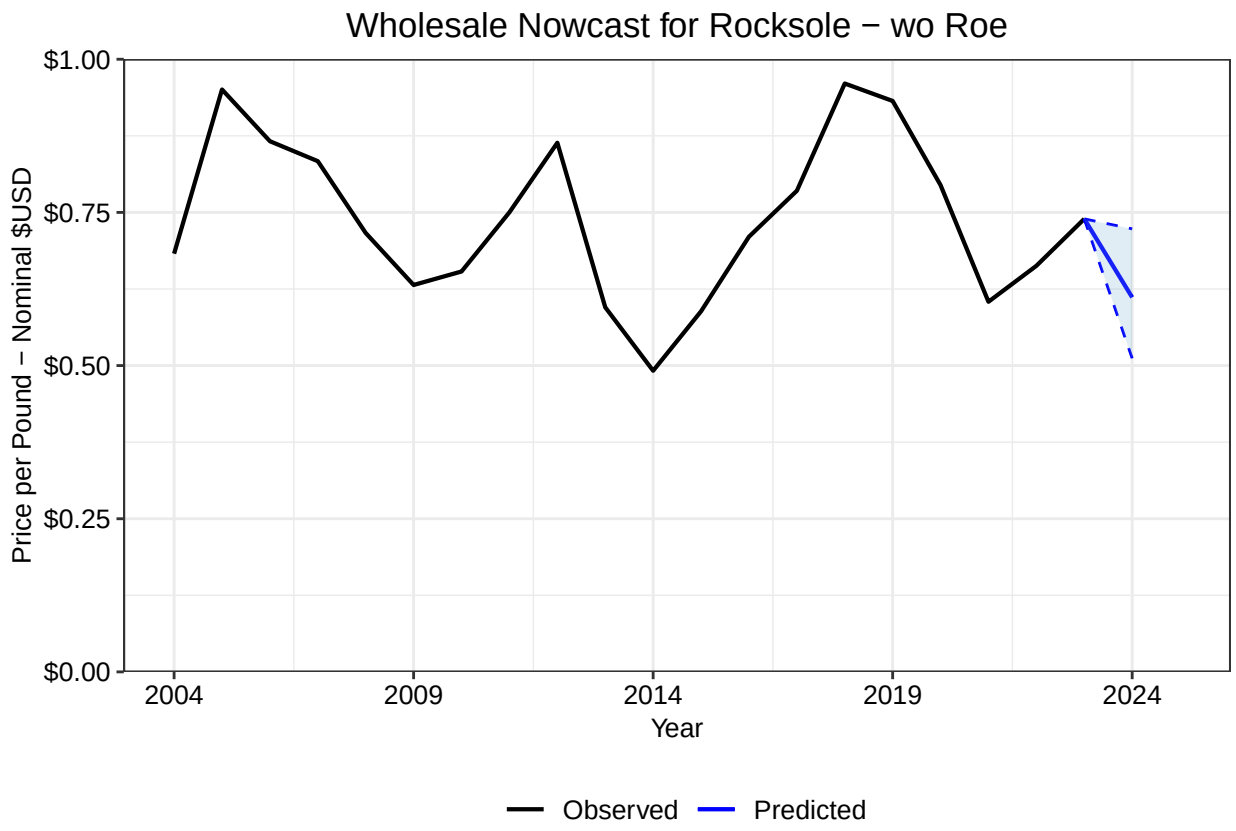


Figure 7.11: Rock sole H&G without roe first-wholesale prices and 2024 nowcast estimates. Note: the solid blue line is the mean nowcast value. The blue shaded region indicates the 90% confidence interval.

7.0.3.13 Arrowtooth Flounder H&G

The estimated coefficients for Arrowtooth flounder H&G are shown in Table 7.22. The model fit of the first-wholesale prices was moderate, with an R^2 of 0.84. The primary driver of first wholesale prices of Arrowtooth flounder H&G is the ex-vessel price, being highly significant, and the time trend.

Table 7.24: Arrowtooth flounder H&G first-wholesale price model

Description	Estimate
Logged Ex-Vessel Price	0.13***
	(8.79)
Dummy Term (2017)	0.51**
	(3.17)
I(year - 2014)	0.02*
	(2.43)
R-squared	0.84
AIC	-11.90

t statistics in parentheses
* p < 0.05, ** p < 0.01, *** p < 0.001

The first-wholesale production of Arrowtooth H&G decreased 5% in 2023 and the price increased 10% to $0.90/lb. This year's nowcast for the 2024 Arrowtooth H&G first-wholesale price has a mean of $0.84/lb with 90% confidence bounds of $0.74/lb to $0.96/lb (Table 7.23). These estimates indicate that prices will decrease with a small (~15%) potential for a marginal price increase falling within the projected range.

Table 7.25: Predicted mean and confidence interval for 2024 first wholesale price of Arrowtooth flounder H&G

Year	2.5%	5%	10%	Mean	90%	95%	97.5%
2024	$0.72	$0.74	$0.76	$0.84	$0.93	$0.96	$0.99

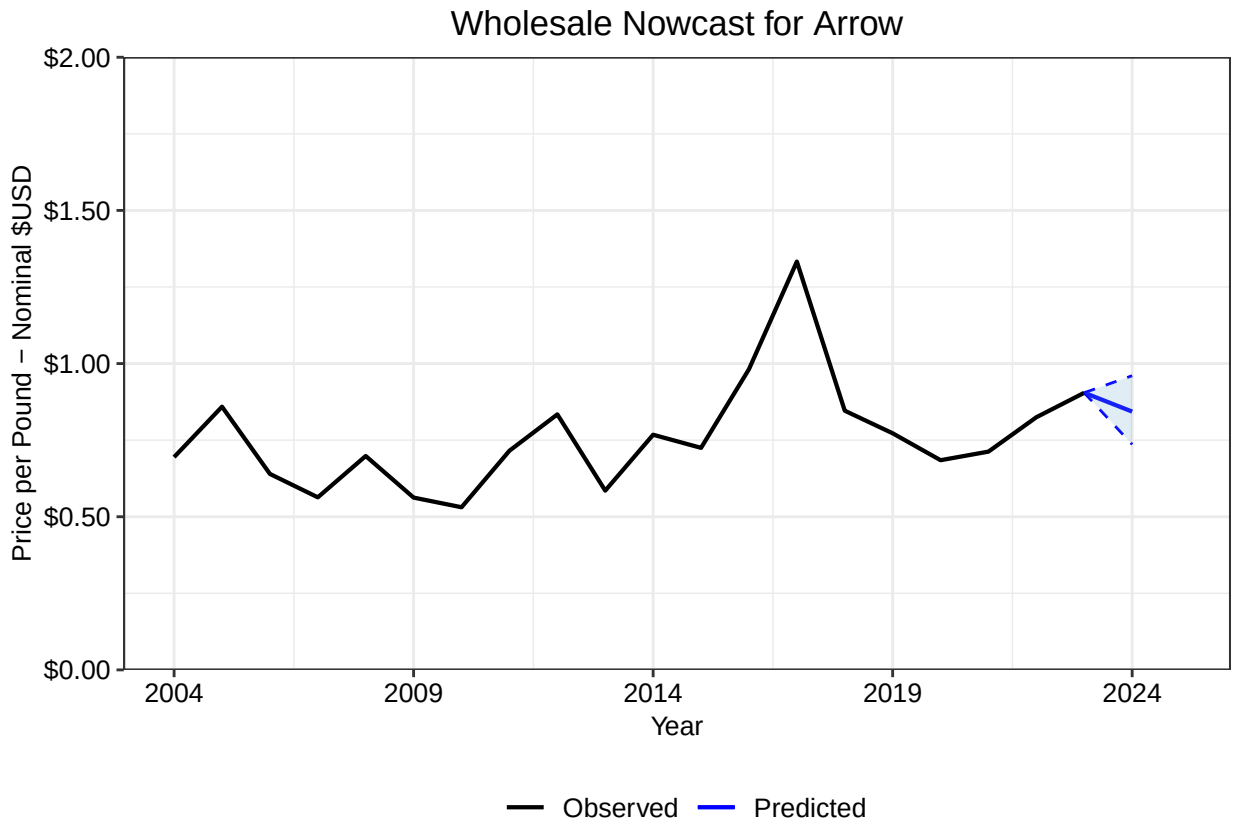


Figure 7.12: Arrowtooth flounder H&G first-wholesale prices and 2024 nowcast estimates. Note: the solid blue line is the mean nowcast value. The blue shaded region indicates the 90% confidence interval.

7.0.3.14 Pacific Halibut H&G

The estimated coefficients for Pacific halibut are shown in Table 7.24. The model fit of the first wholesale prices was extremely strong, with an R^2 of 0.99. The primary driver of first wholesale prices of Pacific halibut is the ex-vessel price, being highly significant, total landings, and the time trend.

Table 7.26: Pacific halibut H&G first-wholesale price model

Description	Estimate
Logged Ex-Vessel Price	0.75***
	(12.76)
Logged Whole Weight (in lbs.)	0.03***
	(5.37)
I(year - 2014)	0.02***
	(10.10)
R-squared	0.99
AIC	-53.90

t statistics in parentheses
* p < 0.05, ** p < 0.01, *** p < 0.001

The first-wholesale production of Pacific halibut H&G decreased 31% in 2023 and the price decreased 16% to $7.77/lb. This year's nowcast for the 2024 Pacific halibut H&G first wholesale price has a mean of $7.77/lb with 90% confidence bounds of $7.44/lb to $8.12/lb (Table 7.25). These estimates indicate that prices will likely remain stable with almost equal probability of increasing as decreasing. This is supported by a stable ex-vessel nowcast.

Table 7.27: Predicted mean and confidence interval for 2024 first wholesale price of Pacific halibut H&G

Year	2.5%	5%	10%	Mean	90%	95%	97.5%
2024	$7.37	$7.44	$7.51	$7.77	$8.03	$8.12	$8.19

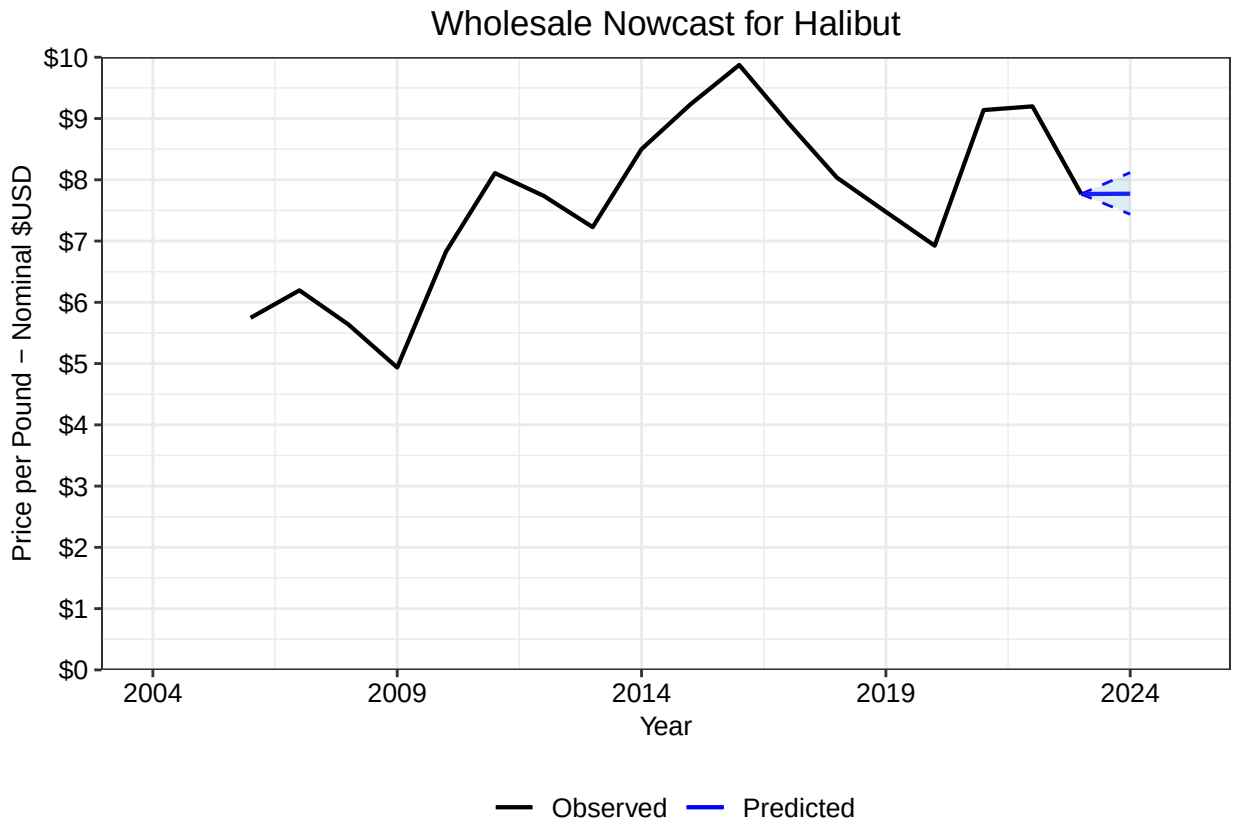


Figure 7.13: Pacific halibut H&G first-wholesale prices and 2024 nowcast estimates. Note: the solid blue line is the mean nowcast value. The blue shaded region indicates the 90% confidence interval.

7.0.3.15 Rockfish H&G

Rockfish fisheries have historically been aggregated into a species complex in this report. Species within the complex include northern rockfish, Pacific Ocean perch, rougheye rockfish, shortraker rockfish, dusky rockfish and thornyhead rockfish. The only rockfish species defined in the export data is Pacific Ocean perch (POP) which is used to nowcast current first-wholesale prices for the aggregate rockfish complex. The estimated coefficients for the rockfish fisheries are shown in Table 7.26. The model fit of the first wholesale prices was moderate, with an R^2 of 0.84. The relatively weaker fit compared to other groundfish species is primarily due to the aggregation of many rockfish species and export prices that only consider a single species of this aggregation. The primary driver of first wholesale prices of rockfish is the ex-vessel price and the time trend. All other terms improve the model fit, but are not statistically significant. The lack of significance in other terms may be associated with the aggregation of all rockfish species.

Table 7.28: Rockfish H&G first-wholesale price model

Description	Estimate
Logged Ex-Vessel Price	0.30
	(1.18)
Logged Lagged Ex-Vessel Price	-0.67*
	(-2.96)
Logged ADF&G Fish Ticket Price	-0.21
	(-1.37)
Logged Export Price	0.34
	(1.40)
Logged Whole Weight (in lbs.)	-0.05
	(-1.51)
I(year - 2014)	-0.06*
	(-2.68)
I((year - 2014)^2)	0.01
	(-1.49)
R-squared	0.84
AIC	-15.40

t statistics in parentheses
* p < 0.05, ** p < 0.01, *** p < 0.001

The first-wholesale production of rockfish H&G remained stable, increasing by 1% in 2023, and the price decreased 7% to $0.85/lb. This year's nowcast for the 2024 rockfish H&G first wholesale price has a mean of $0.88/lb with 90% confidence bounds of $0.63/lb to $1.20/lb (Table 7.27). These estimates indicate that there is an approximate equal chance of the first-wholesale price increasing as decreasing.

Table 7.29: Predicted mean and confidence interval for 2024 first wholesale price of Rockfish H&G

Year	2.5%	5%	10%	Mean	90%	95%	97.5%
2024	$0.59	$0.63	$0.68	$0.88	$1.11	$1.20	$1.28

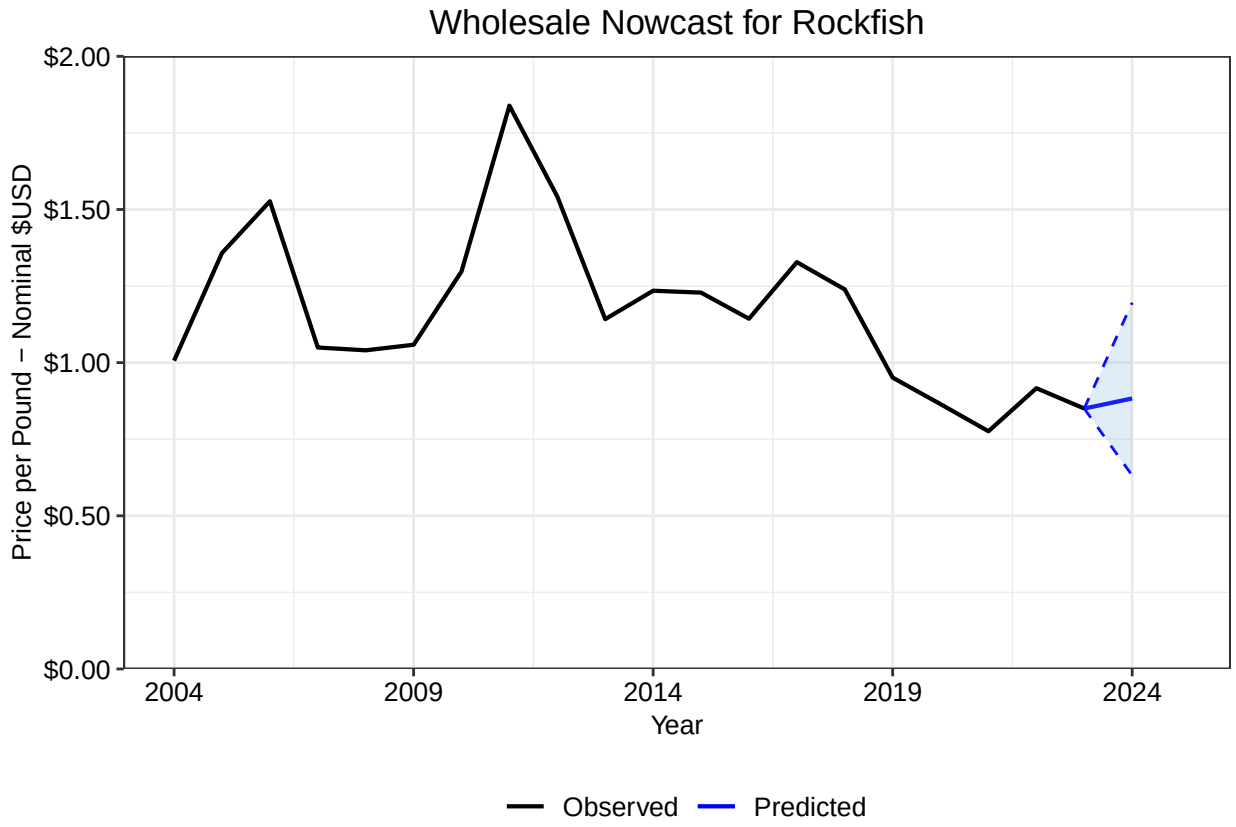


Figure 7.14: Rockfish H&G first-wholesale prices and 2024 nowcast estimates. Note: the solid blue line is the mean nowcast value. The blue shaded region indicates the 90% confidence interval.