

# Social and Economic Information to Inform Groundfish TAC-setting

November 22, 2024<sup>1</sup>

Below is a brief description of the existing products that provide economic and social information that is available and relevant to harvest specifications, including the Groundfish Economic Stock Assessment and Fishery Evaluation (Groundfish Econ SAFE), Annual Community Engagement and Participation Overview (ACEPO), Ecosystem and Socioeconomic Profile (ESP) and inseason management reports.<sup>2</sup>

## Economic Status Report for Groundfish Fisheries of the Gulf of Alaska and Bering Sea/Aleutian Islands (Groundfish Economic SAFE)

The [Groundfish Economic Status \(SAFE<sup>3</sup>\) Reports](#) summarizes available economic data about the federal groundfish fisheries in the Gulf of Alaska and the Bering Sea/Aleutian Islands. Published annually as an appendix to the SAFE reports, the Groundfish Economic SAFE provides figures and tables describing various aspects of the economic performance of the fisheries, including:

- catch, discards, and prohibited species catch
- ex-vessel and first-wholesale production, price, and value
- effort (counts of vessels, vessel weeks, and crew weeks)

The preliminary report of the “Economic Status of the Groundfish Fisheries Off Alaska” is compiled for the September meeting of the Groundfish Plan Teams and is presented and reviewed at the November meeting of the Groundfish Plan Teams. A final version of the report has typically been prepared for the February Council meeting. The Econ SAFE was presented to the SSC at the February meeting through 2022, and at the 2023 April meeting, but was not presented in 2024 due to limited SSC agenda time. As the Council is moving away from holding a February meeting, the timing for future reviews will be agreed with the SSC and Council in 2025.

The data contained within this report are the most recent economic data available. As data continue to be finalized and validated, in some cases, numbers in the final draft of this report may change from those presented in the preliminary draft. Effective calendar year 2022, the formal subtitle of this report references the most current year with finalized end-of-year economic data. For example, the report presented during the 2024 plan team meetings is subtitled “Economic Status of the Groundfish Fisheries Off Alaska, 2023” and contains data through 2023.

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<sup>2</sup> There is an economic status report produced for crab fisheries (crab Economic SAFE) and ESPs are produced for some crab stocks, but these are not discussed in detail in this document as it is specific to groundfish TAC-setting.

<sup>3</sup> The Economic Status Report was prepared as an appendix to or in conjunction with the Groundfish Stock Assessment and Fishery Evaluation (SAFE) reports for many years, and as a result has come to be referred as the Econ SAFE.

## Annual Community Engagement and Participation Overview (ACEPO)

The [Annual Community Engagement and Participation Overview](#) presents social and economic information for those communities substantially engaged in the commercial groundfish and crab fisheries of the North Pacific managed under a federal Fishery Management Plan (FMP). Economic and social benefits to fishing communities are tied to economic stability and community wellbeing. ACEPO seeks to provide information on the social and economic benefits of these FMP fisheries. This objective is in line with National Standard 8, which provides for the sustained participation and the minimization of adverse economic impacts for fishing communities.

The ACEPO analysis considers four performance metrics of community fisheries participation to understand the different ways that communities are involved in Alaska fisheries. By examining fishing community participation over time, it is possible to trace sustained participation in specific fisheries, as well as to flag changes in participation for some communities. Continued research can help us better understand some of the drivers of these changes. ACEPO is updated annually when fisheries performance data is available -- usually in line with the December Council meeting. Available data runs to the most recent reported fisheries data year. ACEPO is now designed primarily as an electronic website product that will be housed on the [Human Dimensions Data Explorer](#). This allows for access to the data and easy access to the information. The product is downloadable as a pdf product at any time from this platform. Authors are in the process of formatting a low resolution (easily downloadable) pdf with a link on the landing page which should be completed by the end of November. ACEPO was reviewed by the SSC at the April meeting in 2021 and 2023 but was not reviewed in 2024 due to limited agenda time.

### *Engagement Indices*

Engagement indices reflect communities' engagement in federally-managed groundfish and crab fisheries in the North Pacific, relative to all other communities in a given year. Separate engagement indices are calculated for processing and harvesting, with these dimensions of fisheries involvement represented by the following variables:

#### *Processing engagement*

- Volume of fishery landings in the community
- Revenue associated with fishery landings in the community
- Number of vessels making fishery landings in the community
- Number of buyers or processors in the community receiving landings from the fishery

#### *Harvesting engagement*

- Volume of fishery landings by vessels owned by community residents
- Revenue associated with fishery landings by vessels owned by community residents
- Number of vessels owned by community residents with fishery landings
- Number of vessel owners in community with fishery landings

### *Regional Quotients*

The regional quotient (RQ) measures the share of a particular fishery landed in a specific community, or landed by vessel owners from the community, relative to all other communities. This metric is meant to reflect a community's degree of involvement (as measured by the volume or value of fishery landings) in a given fishery, in both the harvesting and processing sector. The RQ takes into account landings in the at-sea sector (catcher processors and motherships) and at inshore floating processors, and treats this "at-sea" group as a separate community of practice.

Additional sections were added in 2024: Climate vulnerability and adaptation, community-level subsistence information, and “Hot Topics.”

## Ecosystem and Socioeconomic Profiles (ESPs)

The Ecosystem and Socioeconomic Profile (ESP) is a methodology and reporting framework that facilitates the integration of ecosystem and socioeconomic factors within the stock assessment process. Important ecosystem and socioeconomic indicators are identified and analyzed at the stock level and a synthesis of the results of the indicator analysis is reported to communicate drivers of stock dynamics in a focused, succinct, and meaningful format (Shotwell et al., 2023, [DOI](#)). ESPs are currently located as an appendix in the stock assessment chapter ([groundfish](#), [crab](#)) in the annual SAFE report and are presented and reviewed by the groundfish plan teams and the SSC in conjunction with the stock assessment. A short (1-2 slides) summary of the ESP presentation is typically included in the Plan Team report to the SSC and Council (e.g., [October 2024 crab](#), [December 2023 groundfish](#)), although the information content within those slides has not been consistent as it is somewhat dependent on the Plan Team discussion. The location and access of the ESP reports following the annual cycle has not been consistent from year to year once the SAFE reports are transferred to the archive. In the next year, an annual technical memorandum (TMs) of all the ESP reports (both crab and groundfish combined) produced for that year will be created to allow more streamlined and consistent access of the ESPs moving forward. Links to these annual TMs will be made available on the Alaska ESP website that will be available live in the next few months.

Currently, the following socioeconomic indicators are the types of data included in the crab and groundfish ESPs:

- Catch per unit effort by season and gear type
- Effort as number of vessels or number of potlifts
- Incidental catch by fishery, gear, or specific region
- Roe per-unit-catch
- Fish condition (based on length/weight residual) from fishery samples by stock and size
- Center of gravity (empirical but could be model-based) of the fishery
- Catch distance from shore of the fishery
- Total landings by fleet, gear and size of fish
- Ex-vessel value by fleet, area, and gear
- Ex-vessel price per pound by fleet, area, and size
- Ex-vessel revenue per unit effort
- TAC utilization, expressed as a percent, by fleet and area
- Processors active in fishery
- Processing employment
- Regional quotient for small (combined for confidentiality) and large communities

A subset of these options were originally selected by a group of subject matter experts along with the stock assessment lead author to be included in the ESP when the ESP was first created. The scope of these indicators are being reviewed and expanded upon, starting with the sablefish ESP, in response to a [Council motion](#) from December 2023. A [report](#) was prepared regarding new socioeconomic indicators for the sablefish ESP and was presented to the Groundfish Plan Team at the [September meeting](#) and the SSC at the [October 2024 meeting](#). Once reviewed and if appropriate, new indicators will be included in other stock ESPs in the future, as feasible.

Fully developed ESPs currently exist for four groundfish stocks (Sablefish, Gulf of Alaska (GOA) Pollock, Eastern Bering Sea (EBS) Pacific Cod, GOA Pacific Cod) and three crab stocks (St Matthew Blue King Crab, Bristol Bay Red King Crab, Bering Sea Snow Crab). Two more ESPs (Bering Sea

Tanner Crab and GOA Arrowtooth Flounder) were also created in 2024 using the [ESP mini process](#) (i.e. creating an initial ESP report card using readily available stock specific data from the ecosystem status report, survey reports, literature, and personal communication). ESPs for these stocks were selected as priorities based on a combination of Alaska Fishery Science Center (AFSC) research priorities detailed in the annual guidance memorandums and recommendations from the crab and groundfish Plan Teams (CPT and GPT, respectively) and the SSC over time. Following the initialization of the sablefish ESP, there have been fifteen additional ESP recommendations through the stock assessment review process. A list of these stocks is included here along with links to the minutes where the recommendation occurred:

- GOA Integrated Ecosystem Research Project focal species: Pacific cod, walleye pollock, arrowtooth flounder, and Pacific ocean perch (GPT [September 2016](#))
- Data-limited stock, other rockfish as an option (GPT [September 2016](#))
- Crab stock based on crab Plan Team recommendation (GPT [September 2016](#))
- Norton Sound red king crab (specifically on community engagement) (SSC [February 2018](#))
- St. Matthew blue king crab (SSC [June 2019](#))
- All three Pacific cod species, EBS, Aleutian Islands, and GOA (SSC [December 2019](#), reconfirmed at GPT [November 2024](#))
- Aleutian Islands Atka mackerel (GPT [November 2019](#), SSC [December 2019](#), reconfirmed at GPT [November 2024](#))
- Bristol Bay red king crab (CPT [January 2020](#), SSC [February 2020](#))
- Aleutian Islands golden king crab, suggestion or ESP mini (SSC [February 2020](#), SSC [June 2024](#))
- BS Snow crab (SSC [October 2020](#))
- EBS pollock (GPT [September 2021](#))
- BS Tanner crab or ESP mini (CPT [January 2024](#), CPT [May 2024](#))

## NMFS Alaska Region Inseason Management Reports

The Inseason Management Branch of NOAA AKRO Sustainable Fisheries monitors the catch rates of groundfish and prohibited species according to the annual catch limits and allocations by gear, sector, and seasonal apportionments, and also opens and closes fisheries. They provide up to date reports on bycatch and catch by target, gear, sector and week for groundfish stocks in the GOA and BSAI to the Council at each meeting, and annually at the December meeting staff provide an indepth overview of catch by fishery. [Previous annual reports can be found here](#); the 2024 version will be posted to the Council eAgenda under the B2 NMFS Management Report.

The annual reports provide the following information:

- Total catch year-to-date by target fishery and gear sector, including seasonal distribution and maps of spatial distribution
- Catch as a proportion of TAC, by fishery/gear/sector allocations
- Catch comparisons with previous years, sector reallocations within the year
- Disposition of catch, by species (retained and discarded)
- Bycatch accrued towards prohibited species catch (PSC) limits, year-to-date and comparison with previous years, and maps of spatial distribution