

Annual Community Engagement and Participation Overview:

ACEPO and the human dimensions dashboard



Scientific and Statistical Committee, NPMFC Social Scientist April 05, 2023 Sarah Wise, ESSR - AFSC

Overview

- Exploring the Human Dimension of Fisheries: A dashboard
- ACEPO



NPFMC Top Ten Research Priorities for 2022-2024

- 1. Spatial distribution and movement of crabs relative to life history events and fishing.
- 2. Conduct routine fish, crab, and oceanographic surveys in the Arctic Ocean. 3
- 3. Develop a framework and collect economic information.
- 4. Develop stock-specific ecosystem indicators and incorporate into stock assessments.
- 5. Cooperative research efforts to supplement existing at-sea surveys that provide seasonal, species specific information on upper trophic levels.
- 6. Develop tools for analyzing coastal community vulnerability to fisheries management changes.
- 7. Maturity estimates for Bering Sea and Aleutian Island crab stocks.
- 8. Collection of socio-economic information.
- 9. Gap Analyses on loss of biological samples due to implementation of Electronic Monitoring.
- 10. Norton Sound Red King Crab case study



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NPFMC Top Ten Research Priorities for 2022-2024

| | | Priority level | Title | ID |
|-----|-----------------------------------|--------------------------------|---|------|
| 1. | Spatial distribution and fishing. | Critical Ongoing Monitoring | Monitor subsistence harvest (patterns, norms, quantities) in communities affected | 228 |
| 2. | Conduct routine fish, cr | | by Council actions | |
| | Develop a framework ar | Critical Ongoing Monitoring | Collection of socio-economic information | 611 |
| 4. | Develop stock-specific e | | | |
| | assessments. | Critical Ongoing | Monitor the economic effects from fishery | 226 |
| 5. | Cooperative research ef | Monitoring | policy changes on coastal communities. | |
| | provide seasonal, specie | | | |
| 6. | Develop tools for anal | Urgent | Norton Sound Red King Crab case study | 731 |
| 0. | management changes | Important | Evaluate impacts on Northern Bering Sea | 714 |
| | | important | Communities from Pacific cod and pollock | / 17 |
| 7. | Maturity estimates for I | | shifts northward | |
| 8. | Collection of socio-eco | Important | Examine social and economic interactions | 230 |
| 9. | Gap Analyses on loss of | · | between coastal communities and | |
| | Electronic Monitoring. | | commercial and recreational fisheries | |
| 10. | Norton Sound Red Kin | Important | Develop tools for analyzing coastal community vulnerability to fisheries management changes | 431 |



SSC Comments (2020)

- ✓ Incorporate highly engaged communities outside of Alaska. Emphasize benefits to the Nation, not just Alaska [addressed]
- ✓ Consider disaggregating the fishery tax revenue into subcategories to potentially allow for additional analytic uses of the data. [Expand and refine tax data]
- ✓ Add "Minority (%)" to the "Demographics" section and replace "Native Associations & Corporations" with "Federally Recognized Tribal Entities" [addressed]
- ✓ Add a list of recent AFSC publications on community-based topics to the report. [to be added to Human Dimensions Dashboard]
- ✓ Provide access to data [added to Human Dimensions Dashboard]
- Develop online platform for product [see Human Dimensions Dashboard]

Underway

- ✓ Add information regarding the sustained participation (or lack thereof) of small communities in federally managed fisheries. [ongoing effort]
- □ Add community dependence indices to the report. [discussing best approach]

AKFIN Reports Dashboard \ Human Dimensions Data Explorer

Economic SAFE

Fishing Communities

Other Resources





About the Human Dimensions Data Explorer

The Human Dimensions Data Explorer provides access to data, data visualizations, and other tools for understanding the economic and sociocultural dimensions of Alaska fisheries. These resources have been developed by, in or in collaboration with, the Alaska Fisheries Science Center Economics and Social Science Research Program (ESSRP), which collects and analyzes economic and sociocultural data to support the conversation and management of Alaska marine resources. ESSRP's research foci include seafood



Economic Status Reports (SAFE)

Economic Status Reports are published with the annual Stock Assessment and Fishery Evaluation (SAFE) Reports for federallymanaged groundfish and crab stocks in the North Pacific. The Economic SAFEs provide social and economic context to fisheries managers to support regulatory decision making and the evaluation of management measures such as catch share programs

Economic SAFE

Fishing Communities Other Resources



Annual report on the economic performance of the federally-managed groundfish fisheries in the Gulf of Alaska and the Bering Sea/Aleutian Islands, including statistics on catch; ex-vessel and first-wholesale production and value;



Annual report on the economic performance of the federally-managed king and Tanner crab fisheries of the Bering Sea and Aleutian Islands, including statistics on production and revenue in the harvesting and processing sectors; labor employment, demographics, and income; and quota holdings, leasing, and sales.

Fishing Communities

The Economic and Social Sciences Research Program conducts research on Alaska communities in order to examine the social and economic impacts of federal fishery policies and regulations.

The Magnuson Stevens Fishery Conservation and Management Act (MSA) defines a fishing community as a community which is substantially dependent on or substantially engaged in the harvest or processing of fishery resources to meet social and economic needs, and includes fishing vessel owners, operators, and crew and United States fish processors that are based in such community. As mandated under MSA National Standard 8, these policies and regulations shall take into account the importance of fishery resources to fishing communities in order to (1): Provide for the sustained participation of such communities; and (2) To the extent practicable, minimize adverse economic impacts on such communities.

Executive Order 12898 additionally mandates that each federal agency, to the greatest extent practicable and permitted by law, shall make achieving environmental justice part of its mission by identifying and addressing the disproportionately high and adverse human health or environmental effects of their actions on minority and low-income populations.



In-depth profiles of the 196 Alaska communities most involved in Alaska and North Pacific fisheries, describing the historic, demographic, cultural, and economic context for each community's involvement.



A mapping and graphing tool for exploring communities where catch from the commercial fisheries of the North Pacific is landed.

This application is available to approved users of confidential fisheries data with institutional ArcGIS accounts. Please contact jean.lee@noaa.gov to inquire about



The NOAA Fisheries Community Social Vulnerability Indicators Toolbox provides a suite of social, economic, and climate change indicators for evaluating coastal communities' vulnerability and resilience to disturbances.



🔼 A Way of Life

Featuring oral histories with women setnetters from Bristol Bay, Alaska, this web story explores the linkages between fishing, identity, and place.

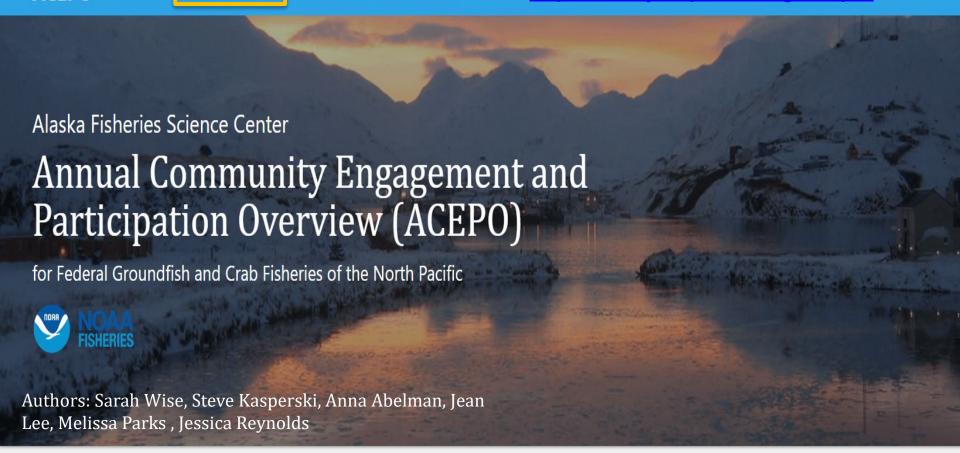


COMING SOON

The Annual Community Engagement and Participation Overview (ACEPO) summarizes harvesting and processing engagement and participation by mmunities in federally-managed groundfish and crab fisheries of the <u>Mat</u>i







An annual report focusing on sustained participation of those fishing communities substantially dependent on or engaged in the North Pacific groundfish and crab fisheries

About ACEPO

Fishing in Alaska contributes to local and State economies, cultural cohesion, and food security within Alaska and beyond. The hundreds of communities in Alaska involved in commercial, recreational, and subsistence fishing contribute to community wellbeing and economic livelihoods, and support meaningful ways of life for Alaskans. The *Annual Community Engagement and Participation Overview (ACEPO)* 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. Guided by the North Pacific Fishery Management Council (NPFMC) management objectives and National Standard 8 (NS-8) of the





An annual report focusing on sustained participation of those fishing communities substantially dependent on or engaged in the North Pacific groundfish and crab fisheries

Authors: Sarah Wise, Steve Kasperski, Anna Abelman, Jean

Lee, Melissa Parks, Jessica Reynolds

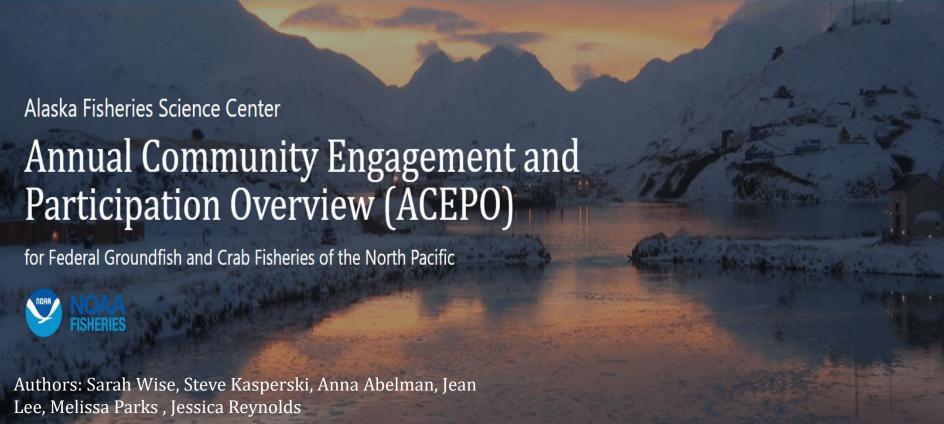
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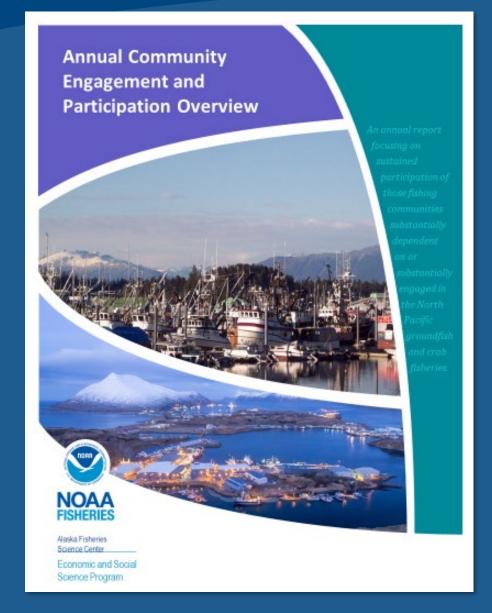
ACEPO

ACEPO is a community level analysis guided by The North Pacific Fishery Management Council (Council) management objectives and MSA National Standard 8 (NS8).

The Purpose

of ACEPO is to provide annually updated contextual and community-level information on the social and economic benefits of FMP groundfish and crab fisheries.





Data Updated - October 2022



5 Sections







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Commercial Harvesting Engagement

Commercial Processing Engagement

Harvesting Regional Quotient

measures the % measures of all Alaska groundfish harvest attributable to vessels owned by residents of each community.

Processing Regional Quotient

measures the percentage of all Alaska commercial landings within the specific groundfish FMP occurring in each community.

Community Sketches

Deep dive into Highly Engaged communities and their participation in FMP groundfish fisheries.



Alaska Fisheries Science Center Economic and Social Science Program

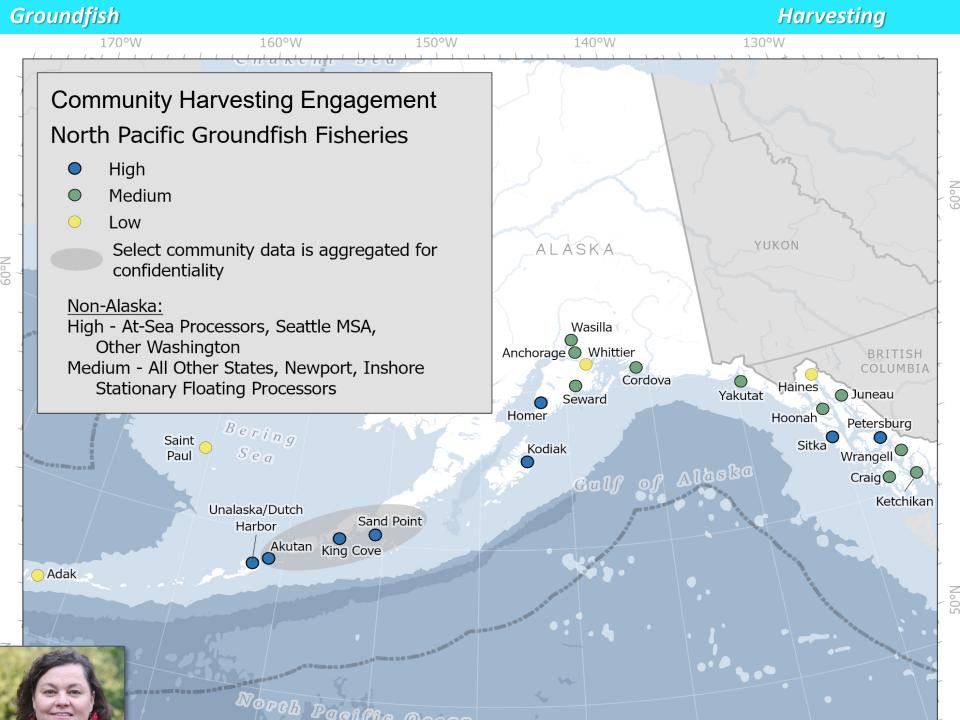


Table 2. Index scores of communities highly engaged in commercial harvest of Groundfish 2008 – 2021.

Year 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 1.44 1.41 1.50 1.53 1.46 1.85 Homer

0% 4

2010

Kodiak

| Kodiak | 2.66 | 2.76 | 2.86 | 3.33 | 3.16 |
|------------------|-------|------|-------------------------------------|------------------------------|--------------|
| Other Washington | 1.37 | 1.30 | 1.23 | 1.12 | 1.08 |
| Petersburg | 1.50 | 1.40 | 1.60 | 1.33 | 1.38 |
| Seattle MSA | 8.78 | 8.65 | 8.56 | 8.48 | 8.51 |
| Sitka | 2.36 | 2.78 | 2.79 | 2.70 | 2.73 |
| Homer Kodiak | Peter | Year | SeatOthe | 2018 tle MSA r Washing | 2020 gton |

Figure 4. Index scores of communities highly engaged in commercial harvesting for at least 1 year from 2008-2021. Dotted lines indicate the previous 5 year period (2016-2020).

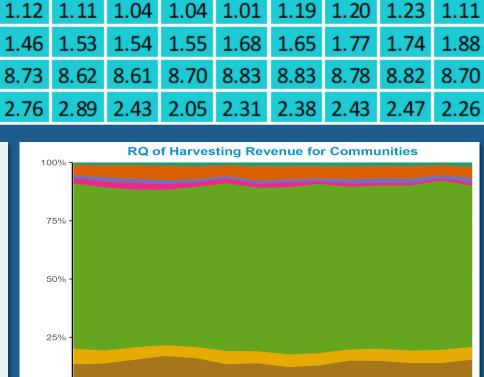


Figure 5. Processing regional quotient of landings revenue for communities highly engaged in commercial harvesting for all years from 2008-2021.

2014

Year

Seattle MSA

Other Washington

2016

2018

2020

Other Communities

2012

Sitka

Petersburg

Groundfish

Table 4: Index scores of communities highly engaged in commercial processing of Groundfish 2008 – 2021.

| | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|-----------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Akutan | 1.09 | 1.22 | 1.17 | 1.24 | 1.19 | 1.16 | 1.30 | 1.29 | 1.24 | 1.44 | 1.46 | 1.51 | 1.42 | 1.67 |
| At-Sea Processor | 9.32 | 9.25 | 9.35 | 9.20 | 9.22 | 9.30 | 9.07 | 9.17 | 9.18 | 9.22 | 9.14 | 9.17 | 9.18 | 9.02 |
| Unalaska/Dutch Harbor | 2.38 | 2.42 | 2.04 | 2.44 | 2.40 | 2.29 | 2.69 | 2.42 | 2.39 | 2.13 | 2.48 | 2.42 | 2.49 | 2.58 |
| Kodiak | 1.71 | 1.79 | 1.94 | 2.03 | 2.05 | 1.86 | 2.17 | 2.14 | 2.10 | 1.89 | 1.67 | 1.67 | 1.64 | 1.82 |

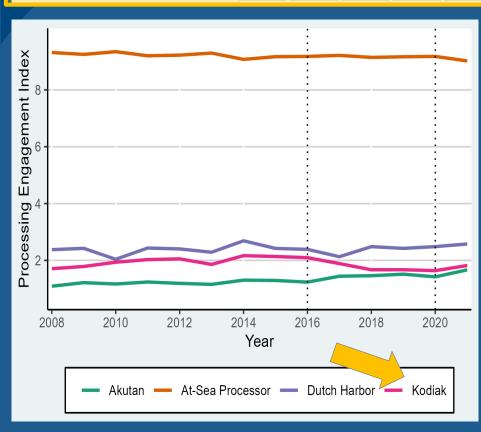
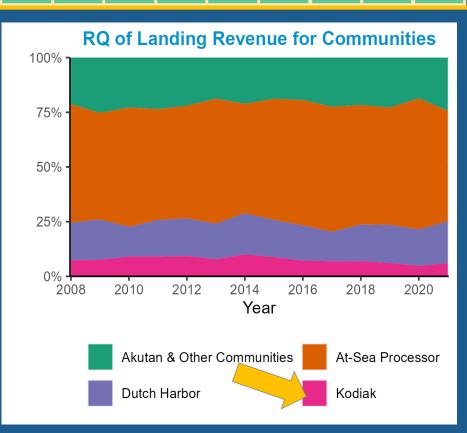


Figure 7. Index scores of communities highly engaged in commercial processing for at least 1 year from 2008-2021. Dotted lines indicate the previous 5 year period (2016-2020).



Processing

Figure 8. Processing regional quotient of landings revenue for communities highly engaged in commercial processing for all years from 2008-2021.

Crab Harvesting

Table 7. Index scores of communities highly engaged in commercial harvest of Crab for at least 1 year 2000 – 2019.

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|-------------|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|------|------|------|------|------|------|------|
| Anchorage | -0.03 | 0.03 | 0.04 | 0.03 | 0.04 | 0.13 | 0 17 | 0.78 | 0.86 | 0.64 | 0.97 | 0.85 | 0.96 | 1 17 | 1 2 1 | 1 24 | 0.69 | 0.62 | 0.68 | 0.63 | 0.63 | 0.92 |
| Kodiak | 1.40 | 1.30 | 1.15 | 0.94 | 1.01 | 0.86 | 0.94 | 0.94 | 1.12 | 1.09 | 0.81 | 0.81 | 0.87 | 0.80 | 0.77 | 0.72 | 0.66 | 0.65 | 0.54 | 0.57 | 0.69 | 0.66 |
| Seattle MSA | 5.89 | 5.92 | 5.95 | 5.98 | 5.96 | 6.01 | 5.97 | 5.88 | 5.86 | 5.90 | 5.86 | 5.87 | 5.83 | 5.76 | 5.74 | 5.76 | 5.87 | 5.86 | 5.91 | 5.93 | 6.00 | 5.95 |

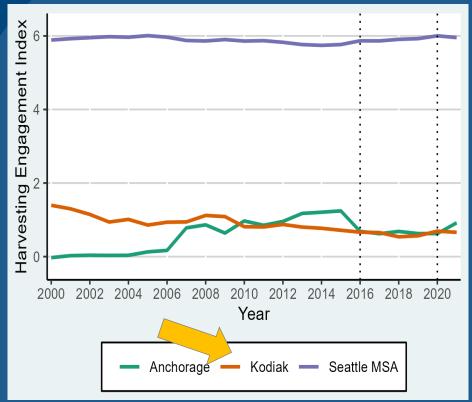


Figure 12. Index scores of communities highly engaged in commercial crab harvesting for at least 1 year from 2000-2021. Dotted lines indicate the previous 5 year period (2016-2020).

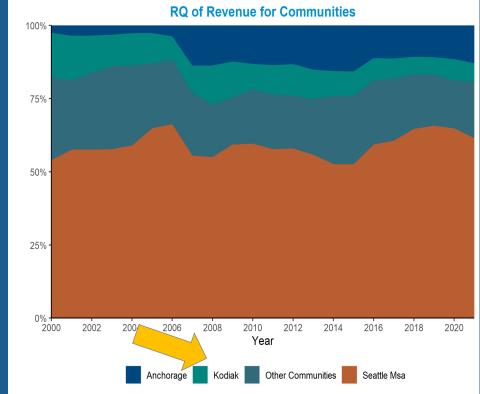


Figure 13. Harvesting regional quotient of revenue for communities highly engaged in commercial harvesting for any year from 2000-2021.

Crab Processing

Table 9. Index scores of communities highly engaged in processing of Crab 2008 – 2021.

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|-----------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|------|
| Akutan | 0.79 | 0.53 | 0.54 | 0.57 | 0.71 | 0.62 | 1.08 | 1.11 | 1.36 | 0.86 | 1.11 | 1.66 | 1.96 | 1.71 | 1.90 | 2.51 | 2.13 | 2.06 | 2.06 | 1.93 | 1.89 | 0.83 |
| At-Sea Processor | 3.70 | 3.26 | 3.24 | 3.15 | 3.51 | 2.77 | 2.55 | 3.11 | 0.98 | 2.41 | 2.59 | 2.16 | 1.81 | 1.24 | 1.10 | 1.12 | 0.13 | 0.08 | 0.06 | 0.14 | 0.42 | 0.18 |
| Unalaska/Dutch Harbor | 4.28 | 4.56 | 4.52 | 4.72 | 4.51 | 4.92 | 4.77 | 4.75 | 4.54 | 4.21 | 4.17 | 4.01 | 3.88 | 4.02 | 4.13 | 4.13 | 4.38 | 4.51 | 4.40 | 4.25 | 4.47 | 4.40 |
| King Cove | 0.60 | 0.45 | 0.59 | 0.74 | 0.67 | 1.03 | 1.11 | 0.60 | 0.82 | 0.79 | 0.91 | 0.65 | 0.62 | 0.69 | 0.72 | 0.85 | 1.07 | 0.79 | 0.73 | 0.70 | 0.65 | 0.97 |
| Nome | 0.61 | 0.89 | 0.86 | 0.81 | 0.44 | 0.57 | 0.53 | 0.95 | 0.64 | 0.66 | 0.90 | 0.78 | 0.85 | 1.17 | 1.35 | 1.10 | 0.79 | 1.16 | 1.45 | 0.64 | -0.21 | 0.08 |
| Saint Paul | 0.82 | 1.27 | 1.39 | 0.98 | 0.93 | 1.15 | 1.53 | 0.04 | 3.14 | 3.01 | 2.60 | 3.09 | 3.29 | 3.40 | 3.17 | 2.78 | 3.04 | 2.81 | 2.90 | 3.47 | 3.33 | 3.85 |

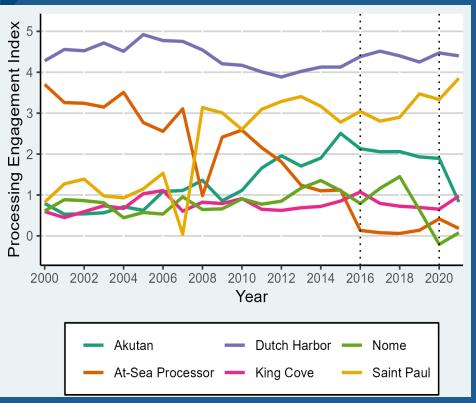


Figure 16. Index scores of communities highly engaged in commercial crab processing for at least one year from 2000-2021. Dotted lines indicate the previous 5 year period (2016-2020).

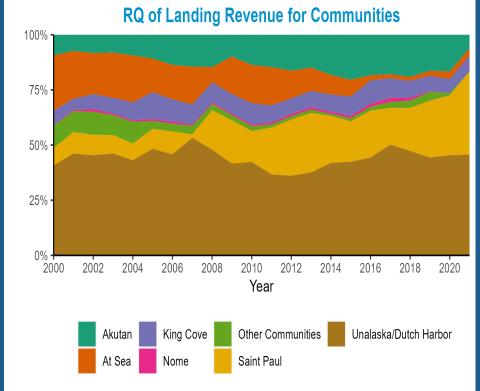


Figure 17. Processing regional quotient of landing revenue for communities highly engaged in commercial crab processing for one year from 2000-2021

Harvesting & Processing

Table 5. Number of years by processing and harvesting engagement level for all commercial fisheries. Alaska communities not listed had low processing and harvesting engagement in all years (2008-2021). Shading indicates High engagement (blue).

| | | Harvestin | g Engagemen\ | | | Processin | g Engagemen | |
|---------------------------------------|-----|-----------|--------------|------|-----|-----------|-------------|------|
| Community | Low | Medium | Medium-High | High | Low | Medium | Medium-High | High |
| Adak | 14 | 0 | 0 | 0 | 11 | 3 | 0 | C |
| Akutan | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| All Other States | 0 | 12 | 2 | 0 | 14 | 0 | 0 | C |
| Anchorage | 0 | 13 | 1 | 0 | 14 | 0 | 0 | C |
| At-Sea Processor | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| Cordova | 4 | 10 | 0 | 0 | 0 | 14 | 0 | C |
| Craig | 0 | 14 | 0 | 0 | 4 | 10 | 0 | C |
| Dutch Harbor | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| Haines | 11 | 3 | 0 | 0 | 14 | 0 | 0 | C |
| Homer | 0 | 0 | 0 | 14 | 0 | 0 | 14 | C |
| Hoonah | 14 | 0 | 0 | 0 | 9 | 5 | 0 | C |
| Inshore Stationary Floating Processor | 14 | 0 | 0 | 0 | 7 | 7 | 0 | C |
| Juneau | 0 | 0 | 14 | 0 | 0 | 14 | 0 | C |
| Ketchikan | 0 | 14 | 0 | 0 | 4 | 10 | 0 | C |
| King Cove | 13 | 1 | 0 | 0 | 0 | 14 | 0 | C |
| Kodiak | 0 | 0 | 0 | 14 | 0 | 0 | 0 | 14 |
| Newport | 0 | 14 | 0 | 0 | 14 | 0 | 0 | C |
| Other Oregon | 0 | 12 | 2 | 0 | 14 | 0 | 0 | C |
| Other Washington | 0 | 0 | 0 | 14 | 14 | 0 | 0 | C |
| Petersburg | 0 | 0 | 0 | 14 | 0 | 10 | 4 | C |
| Saint Paul | 13 | 1 | 0 | 0 | 14 | 0 | 0 | C |
| Sand Point | 0 | 14 | 0 | 0 | 0 | 14 | 0 | C |
| Seattle MSA | 0 | 0 | 0 | 14 | 14 | 0 | 0 | C |
| Seward | 12 | 2 | 0 | 0 | 0 | 6 | 8 | C |
| Sitka | 0 | 0 | 0 | 14 | 0 | 0 | 14 | C |
| Wasilla | 4 | 10 | 0 | 0 | 14 | 0 | 0 | C |
| Whittier | 14 | 0 | 0 | 0 | 12 | 2 | 0 | C |
| Wrangell | 7 | 7 | 0 | 0 | 10 | 4 | 0 | C |
| Yakutat | 14 | 0 | 0 | 0 | 0 | 14 | 0 | C |

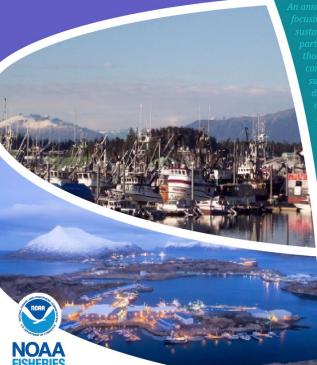




5 Sections







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Commercial Harvesting Engagement

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measures the % measures of all Alaska groundfish harvest attributable to vessels owned by residents of each community.

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Community Sketches

Deep dive into Highly Engaged communities and their participation in FMP groundfish fisheries.



Alaska Fisheries Science Center Economic and Social Science Program

Community Sketches





Alaska Fisheries Science Center nomic and Social Sciences Research Program

Community Sketch

KODIAK ISLAND BOROUGH

| | Der | mographics (se | elf-identified, C | ensus 2020) | | |
|----------------------------|-----------------------------|---------------------------|--|-------------|---|-------------------------------------|
| Population | Gender population (%) | Population Over 18 (%) | Median household income (\$) | White (%) | American Indian or Alaska Native (%) | Black or African American (%) |
| 13,101 | 46.2% female 53.8% male | 76.1% | \$79,173 | 48% | 12.8% | 1.4% |
| Below poverty level (%) | Housing units | Population Over 65 (%) | High school graduate or higher (%) | Asian (%) | Native Hawaiian or Pacific blander (%) | Hispanic or Latino (%) |
| 7.5% | 5,848 | 13.2% | 89.6% | 23.6% | 0.8% | 8.7% |



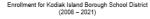
Area Description and History

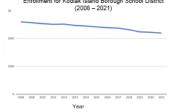
The Kodiak Island Borough (KIB) consists of a series of islands (the Kodiak Archipelago) approximately 25 miles across the Shelikof Straight from the Katmai Coast and 90 miles southwest of the Kenai Peninsula. The area has been inhabited for the past 8,000 years by the Alutiiq peoples who traditionally harvested fish, marine invertebrates, and marine mammals on the Island. A majority of the Alaska Native population living in the Kodiak archipelago today are Alutiiq. Their language is Alutiiq, which is one of the "Esk-Aleut" languages and is closely related to Central Yup'ik. A Russians established a fur trading settlement at Chiniak Bay in the late 1700s. In 1882 a fish cannery opened in Karluk spit, sparking further commercial development. Today, KIB communities are highly reliant on both commercial and subsistence fishing harvesting of natural resources, including fishing. The majority of commercial vessels and seafood processing plants are on the central road system on Kodiak Island, the largest island in the archipelago. Kodiak's commercial fishing port is Alaska's largest port in volume of seafood landed, and the third largest in the United States. There are seven island communities in KIB, including Akhiok, Port Lions, Larsen Bay, Old Harbor, Karluk and Quzinkie. Native Associations active in the area include the Natives of Kodiak, Inc., Koniag, Inc., and the Kodiak Area Native Association. KIB is located in Federal Statistical and Reporting Area 630 (under NMFS), Pacific Halibut Fishery Regulatory Area 3A (under IPHC), and Central Gulf of Alaska Sablefish Regulatory Area (under NMFS).

Infrastructure & Transportation

The Kodiak archipelago is accessible by air and sea, however accessibility varies drastically among communities. The Kodiak road system has two airports, which have several daily flights. Air taxi services provide flights to five remote villages; however weather conditions often restrict travel. City-owned seaplane bases at Trident Basin and Lilly Lake accommodate floatplane traffic. The state ferry operates three to four times a week between Kodiak and Homer, and in the summer months. includes other ports as far west as Dutch Harbor. The Port of Kodiak has two boat harbors with 600 boat slips, with three deep-draft piers that accommodate ferries, cruise ships, container ships, military vessels, commercial fishing vessels, and research vessels. There are approximately 140 miles of state roads on the east of Kodiak island; however some island communities have limited access to medical services and residents travel to Kodiak City or Anchorage for treatment. Declining school enrollment is a concern for some KIB communities. Total KIB district K-12 school enrollment has decreased by 15.5% since 2008. Larsen Bay School closed in 2018, and Karluk school closed in 2019 due to low enrollment.

While Kodiak Island is highly engaged in commercial fishing, many residents in the smaller island communities have trouble accessing necessary services, such as medical services or schools. These aspects also have consequences for community adaptive capacity, discussed in the following





Area Description & History

Regional Vessel Quotient ownership

Groundfish Harvesting

Crab Harvesting

Groundfish **Permits** Processing

Tax Revenue

Subsistence

Crab **Processing** Infrastructur

School Enrollment

Current **Economy**

Transportati

Adaptive Capacity

Climate Change Vulnerability



Community Sketches

Community well-being & resilience

Climate effects& vulnerability

Fisheries Performance & Sustained Participation







AKFIN Reports Dashboard



Economic SAFE

Fishing Communities

Other Resources





About the Human Dimensions Data Explorer

The Human Dimensions Data Explorer provides access to data, data visualizations, and other tools for understanding the economic and sociocultural dimensions of Alaska fisheries. These resources have been developed by, in or in collaboration with, the Alaska Fisheries Science Center Economics and Social Science Research Program (ESSRP), which collects and analyzes economic and sociocultural data to support the conversation and management of Alaska marine resources. ESSRP's research foci include seafood



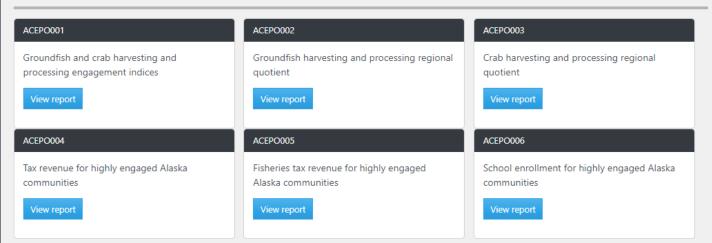
ACEPO About Explore Groundfish Explore Crab Community Sketches ▼ Access the Data

Available Data

Data produced as part of ACEPO are available to users through the AKFIN Reports portal.

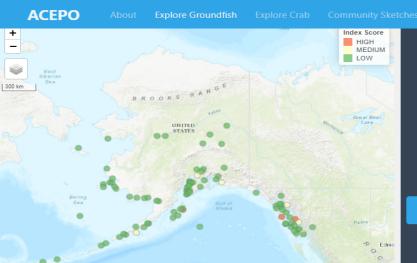
Public reports provide data that meet aggregation standards for reporting of non-confidential data. Confidential reports require a log-in and are available to users authorized through NOAA Fisheries and the State of Alaska to view confidential fisheries data.

Public Reports









Leaflet | Tiles @ Esri — Esri, DeLorme, NAVTEQ, TomTom, Intermap, IPC, USGS, FAO, NPS, NRCAN, GeoBase, Kadaster NL, Ordnance Survey, Esri Japan,

Community Participation in North Pacific Groundfish Fisheries

Commercial fisheries in the North Pacific have transformed over time with changing technology, labor, market demand, and legislation. The earliest commercial fishing efforts by U.S. vessels in waters off the coast of Alaska emerged in the 1860s, primarily targeting Pacific cod. With the development of diesel engines, commercial fisheries for Pacific halibut and groundfish expanded north to the Gulf of Alaska (GOA) and into the Bering Sea (BS) region by the 1920s. By the mid-1900s, fisheries had developed for a variety of groundfish species. Groundfish fisheries changed dramatically in the wake of World War II as Alaskan commercial fisheries expanded and industrialized. From the end of World War II to the start of Exclusive Economic Zone management under the Magnuson-Stevens Act, North Pacific harvests increased substantially. The greatest increase was in the groundfish and crab sectors in the Bering Sea Aleutian Islands (BSAI) and GOA. Groundfish harvest grew to exceed 2 million metric tons per year in the early 1970s. Technological developments and changes in marketing continued to increase harvests, leading to some concern of overexploitation, particularly by foreign fleets. The 1945 Truman Proclamation stressed the U.S.'s right to manage and conserve living marine resources in these areas and to require foreign compliance. This claim was not effectively exercised until the Magnuson Stevens Act (MSA) was implemented in 1977. The MSA has been amended over the years, most substantially in 1996 with the Sustainable Fisheries Act, and in 2006 with the Reauthorization Act. The Sustaining America's Fisheries for the Future Act is currently being considered in Congress.

Harvesting Communities Processing Ommunities



Harvesting Participation

Select community:

Homer Kodiak Other Washington
Petersburg Seattle MSA Sitka

METI, Esri China (Hong Kong), and the GIS User Community

| Community | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Homer | 1.18 | 1.32 | 1.44 | 1.41 | 1.5 | 1.53 | 1.46 | 1.64 | 1.74 | 1.83 | 1.85 | 1.8 | 1.69 | 2.1 |
| Kodiak | 2.66 | 2.76 | 2.86 | 3.33 | 3.16 | 2.45 | 2.65 | 3.01 | 3.02 | 2.27 | 2.01 | 2.12 | 2 | 2.23 |
| Other Washington | 1.37 | 1.3 | 1.23 | 1.12 | 1.08 | 1.12 | 1.11 | 1.04 | 1.04 | 1.01 | 1.19 | 1.2 | 1.23 | 1.11 |
| Petersburg | 1.5 | 1.4 | 1.6 | 1.33 | 1.38 | 1.46 | 1.53 | 1.54 | 1.55 | 1.68 | 1.65 | 1.77 | 1.74 | 1.88 |
| Seattle MSA | 8.78 | 8.65 | 8.56 | 8.48 | 8.51 | 8.73 | 8.62 | 8.61 | 8.7 | 8.83 | 8.83 | 8.78 | 8.82 | 8.7 |
| Sitka | 2.36 | 2.78 | 2.79 | 2.7 | 2.73 | 2.76 | 2.89 | 2.43 | 2.05 | 2.31 | 2.38 | 2.43 | 2.47 | 2.26 |



Processing Participation

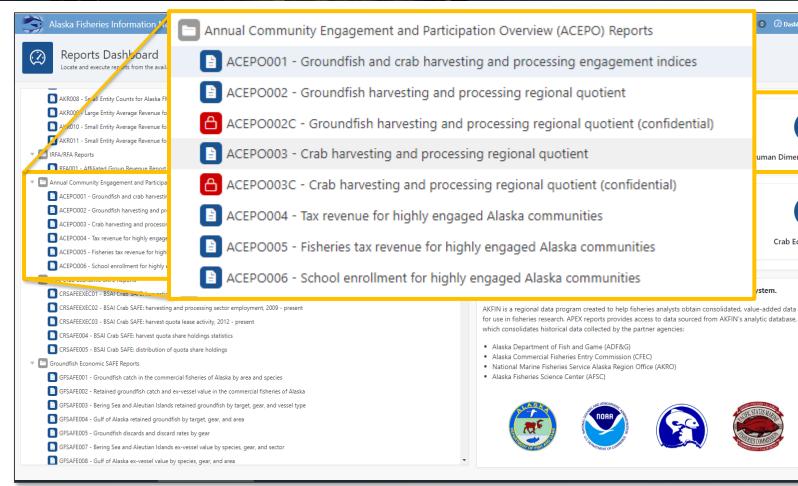


Alaska Fisheries Science Center

Human Dimensions of Fisheries Data Explorer







O ② Dashboard Q Search ? Help V Q Public V

uman Dimensions Data Explorer

Crab Economic SAFE

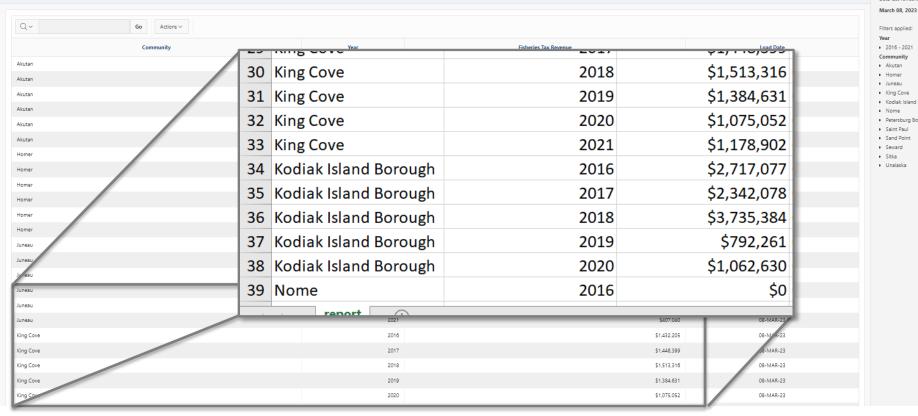
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ated, value-added data
FIN's analytic database.



ACEPO005 - ACEPO: Fisheries tax revenue for highly engaged Alaska communities

Fisheries tax revenues for Alaska communities highly engaged in federally-managed groundfish or crab fisheries of the North Pacific. These data are sourced from the Alaska Department of Revenue Shared Tax reports and are compiled by the Alaska Fisheries Science Center for the Annual Community Engagement and Participation Overview (ACEPO).

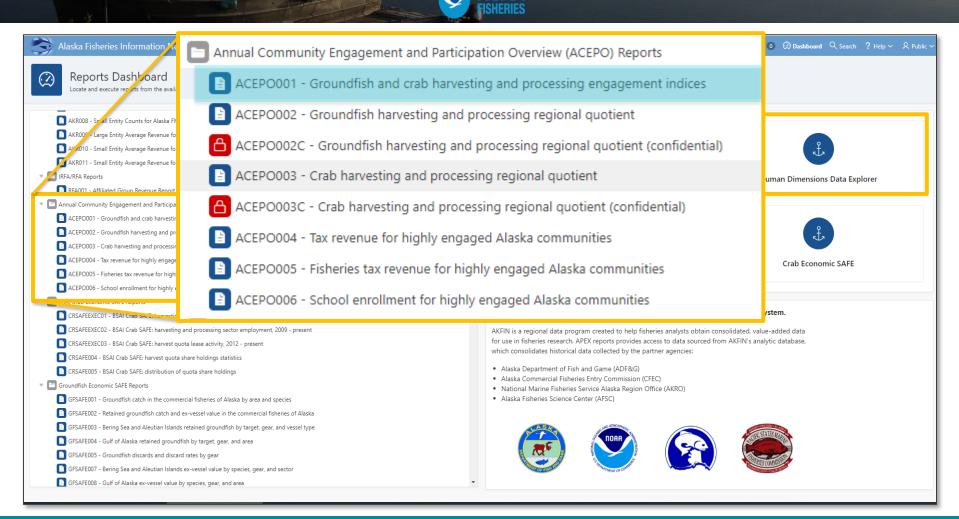






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Human Dimensions of Fisheries Data Explorer









ACEPO001 - ACEPO: Groundfish and crab harvesting and processing engagement indices

Community harvesting and processing engagement indices for federally-managed groundfish and crab fisheries of the North Pacific. These data are produced annually by the Alaska Fisheries for the Annual Community Engagement and Participation Overview (ACEPO). Indices are available for groundfish from 2008 and forward and for crab from 2000 and forward.

| Qv | | G | Actions ∨ | | | |
|------------|-----------|------|------------------------|------------------------|------------------------|------------------------|
| Fishery | Community | Year | Harvesting Index Value | Harvesting Index Score | Processing Index Value | Processing Index Score |
| BSAI Crab | Anchorage | 2016 | +0.6867 | MEDIUM | -0.3647 | LOW |
| BSAI Crab | Anchorage | 2017 | +0.6228 | MEDIUM | -0.3744 | LOW |
| BSAI Crab | Anchorage | 2018 | +0.6849 | MEDIUM | -0.3650 | LOW |
| BSAI Crab | Anchorage | 2019 | +0.6270 | MEDIUM | -0.3597 | LOW |
| BSAI Crab | Anchorage | 2020 | +0.6262 | MEDIUM | -0.3422 | LOW |
| BSAI Crab | Anchorage | 2021 | +0.9185 | MEDIUM | -0.3033 | LOW |
| Groundfish | Anchorage | 2016 | +0.4442 | MEDIUM | -0.1900 | LOW |
| Groundfish | Anchorage | 2017 | +0.3867 | MEDIUM | -0.1971 | LOW |
| Groundfish | Anchorage | 2018 | +0.3533 | MEDIUM | -0.2456 | LOW |
| Groundfish | Anchorage | 2019 | +0.3826 | MEDIUM | -0.2444 | LOW |
| Groundfish | Anchorage | 2020 | +0.3942 | MEDIUM | -0.2415 | LOW |
| Groundfish | Anchorage | 2021 | +0.3939 | MEDIUM | -0.1999 | LOW |

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Coming soon

And others...



Timeline and future steps

The Purpose

of ACEPO is to provide annually updated contextual and community-level information on the social and economic benefits of FMP groundfish and crab fisheries.

Questions?

- Plan to continue coordinating and streamlining social and economic fisheries information to inform decision-making.
- Plan to provide annual updates.
- Could expand to include additional information and/or communities.
- Could present to Council bodies as requested OR concurrently with the Econ SAFE.

