Fishery Performance and Community Information for 2021 Harvest Specifications

Alaska Fisheries Science Center

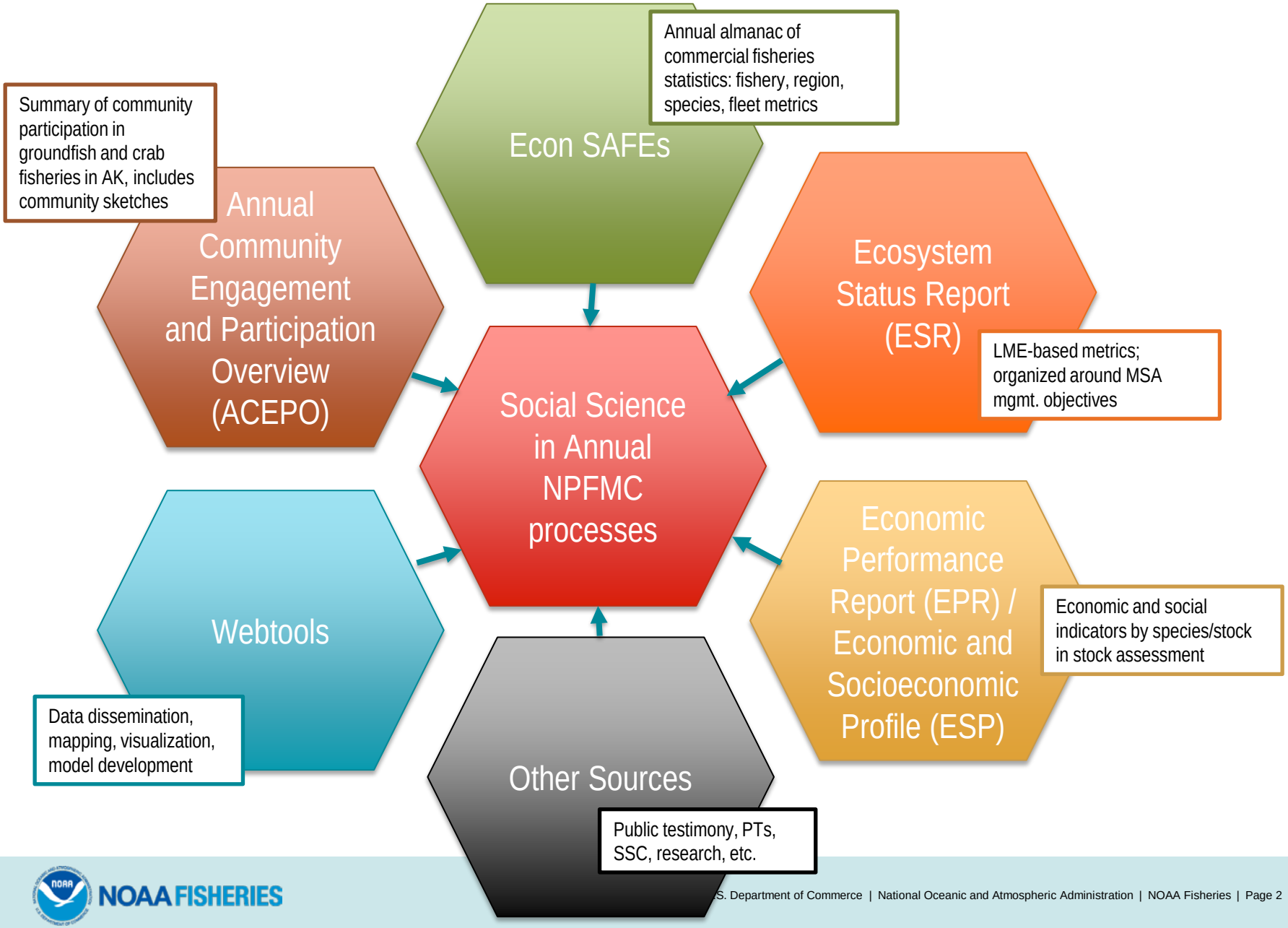
Steve Kasperski*
Alaska Fisheries Science Center

February 3rd, 2021

NPFMC's Scientific and Statistical Committee

* All opinions expressed are my own and do not represent those of the NMFS

AFSC providing social science info into Annual NPFMC processes



Program Contacts: Econ SAFEs and ACEPO

Groundfish

Ben Fissel

Brian Garber-Yonts

Crab

Where to find?:

Groundfish:
https://meetings.npfmc.org/CommentReview/DownloadFile?p=6d9fd1f2-8f84-4035-b235-7c9f8505976b.pdf&fileName=D4%20Groundfish%20Economic%20SAFE.pdf

Crab:
https://meetings.npfmc.org/CommentReview/DownloadFile?p=89ffc203-34b8-4e55-b143-e79fcd21a3cc.pdf&fileName=D4%20Crab%20Economic%20SAFE.pdf

ACEPO to be presented in April

Social science and communities, ACEPO

Sarah Wise

AKFIN and data

Jean Lee

Program Contacts: Ecosystem Status Report (ESR) contributors

Ben Fissel

Landings volume, value, and unit value

School enrollment, subsistence activities

Sarah Wise

Discards

Jean Lee

Melissa Rhodes-Reese

Population trends, unemployment

Where to find?:

Each contribution is LME-specific, and regional reports are eventually housed: https://access.afsc.noaa.gov/REFM/REEM/ecoweb/index.php

EBS: https://archive.fisheries.noaa.gov/afsc/refm/stocks/plan_team/2020/EBSecosys.pdf
GOA: https://archive.fisheries.noaa.gov/afsc/refm/stocks/plan_team/2020/GOAecosys.pdf
AI: https://archive.fisheries.noaa.gov/afsc/refm/stocks/plan_team/2020/AIecosys.pdf

Program Contacts: Economic Performance Reports (EPRs)

Sablefish (in ESP),
GOA P.cod (in ESP),
BSAI P.cod (in ESP),
GOA Pollock (in ESP),
Atka mackerel,
BSAI Pollock,
GOA flatfish,
BSAI flatfish,
GOA rockfish, &
BSAI rockfish

Ben Fissel

Where to find?:

Included within the text of the stock assessment or as an appendix for each individual assessment. See Nov. PT page for most recent stock assessments:
https://archive.fisheries.noaa.gov/afsc/refm/stocks/plan_team/2020/NovDraftDocs_2020.htm

Program Contacts: ESPs

ESP co-PI, Sablefish, GOA pollock, BSAI and GOA Cod

Ben Fissel

SMBKC, BBRKC

Brian Garber-Yonts

Community contributions

Sarah Wise

Steve Kasperski

Community engagement indices

Where to find? (2020 versions):

- Most are included as an appendix to the stock assessment.
- Sablefish ESP (p. 190): https://archive.fisheries.noaa.gov/afsc/refm/stocks/plan_team/2020/sablefish.pdf
- GOA pollock (p. 104): https://archive.fisheries.noaa.gov/afsc/refm/stocks/plan_team/2020/GOApollock.pdf
- GOA p.cod (p. 144): https://archive.fisheries.noaa.gov/afsc/refm/stocks/plan_team/2020/GOApcod.pdf
- EBS p.cod (p. 266): https://archive.fisheries.noaa.gov/afsc/refm/stocks/plan_team/2020/EBSpcod.pdf
- St. Matthews Blue King Crab (2019 version): https://meetings.npfmc.org/CommentReview/DownloadFile?p=1a46df48-6b5e-4ef7-aa08-5bf16f3d8d1f.docx&fileName=SMBKC_SAFE_2019_AppE-ESP.docx
- BBRKC (p. 172): https://meetings.npfmc.org/CommentReview/DownloadFile?p=06e93325-0336-4947-a2b9-cbf7b5db9bc8.pdf&fileName=C1%202%20BBRKC%20SAFE.pdf

Program Contacts: Web Development

Ben Fissel

Pacific States E-journal of Scientific Visualizations (PSESV) co-editor

MRSAM webtool

Chang Seung

Sarah Wise

Community data web mapping, Snapshots, & Profiles

Where to find?:

ESSR main landing page:

https://www.fisheries.noaa.gov/alaska/socioeconomics/alaska-economic-and-social-sciences-research

Data and ESSR webmaster, PSESV

Jean Lee

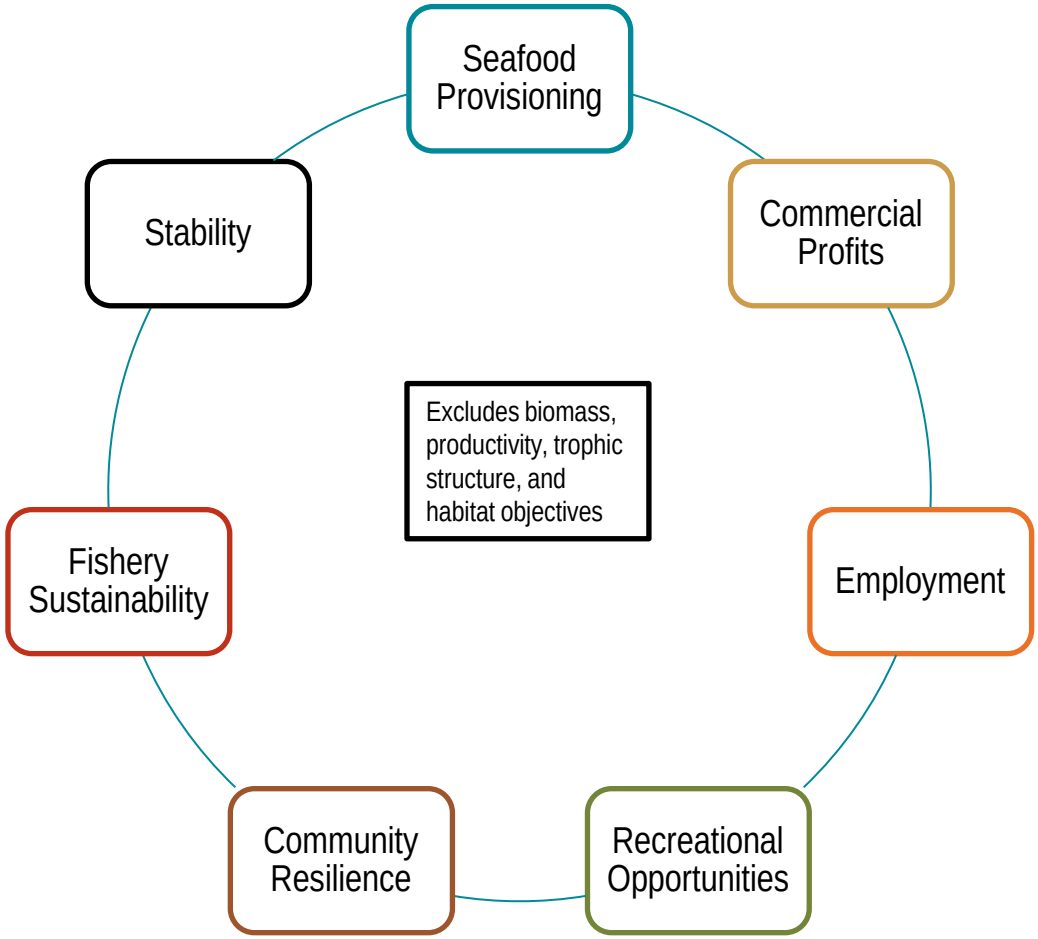
Annual uses of EDR data

Brian Garber-Yonts

- Groundfish SAFE
  - Ch 9: Am 80 Program Summary of Economic Status of the Fishery
    - Enables the calculation of operating returns, and community-level employment impacts
  - Ch 10: Am 91 EDR Summary and Analysis
    - Summary of the vessel master survey and annual fuel usage and costs
  - Ch 11: Gulf Trawl Social and Economic Indicators for the Catcher Vessel Fleet and Processing Sector
    - Harvest sector employment by community and vessel fuel and trawl gear expenditures

- Crab SAFE
  - EDR data is integrated with other fisheries management data to provide a summary of the economic status and performance of the CR fisheries
  - Enables calculation of a harvest sector net earning index by including improved ex-vessel revenue estimates and operating costs as well as information on quota leasing activities.

Human Dimensions related objectives in MSA and NPFMC FMPs



Human Dimensions related objectives in MSA and NPFMC FMPs

Many of these objectives are qualitative, competing, and cannot be satisfied simultaneously

ESSR annual reports provide information to the NPFMC and public to *monitor* fishery performance relative to social and economic objectives and NS.

They can be viewed and used similarly to ecosystem health indicators in the ESR

Seafood Provisioning Indicators

- % Utilization (CSPM)
- Aggregate landings (SAFE)
- Catch (SAFE)
- Economic Indicators by eco-region – Landings (ESR)
- FAO global production (SAFE)
- First-wholesale production (SAFE)
- International trade volume and value (SAFE)
- Number of processors (SAFE)
- Quota allocated to Catch Share Program (CSPM)
- Salmon and Halibut Subsistence Trends by eco-region (ESR)
- Vessel characteristics (SAFE)

Commercial Profits Indicators

- Aggregate revenue from Catch Share species (CSPM)
- Average price (SAFE, ESPs)
- Economic Indicators by eco-region – Value and Unit Value (ESR)
- EDR data (SAFE, ESPs)
- Ex-vessel price (SAFE)
- Ex-vessel value (SAFE)
- First-wholesale price (SAFE)
- First-wholesale value (SAFE)
- Gini Coefficient (CSPM)
- Revenue per active vessel (CSPM)
- Total roe per unit pollock catch (ESP)
- SMBKC % of total revenues (ESP)

Employment Indicators

- Crew weeks (SAFE)
- Fishing weeks (SAFE)
- Vessel counts and permits (SAFE, ESP)
- Crew earnings by geography (SAFE)

Recreational Opportunities Indicators

- Saltwater Recreational Fishing by eco-region: Sport Fishing Harvest by functional group (no longer in ESR due to data lags)
- Saltwater Recreational Fishing Participation by eco-region: Number of anglers and fishing days (no longer in ESR due to data lags)

Community Resilience Indicators

- K–12 School Enrollment, Graduation and Dropout rates in Coastal Communities by eco-region (ESR)
- Trends in Human Population by eco-region (ESR)
- Trends in unemployment by eco-region (ESR)
- Community participation and engagement indices for groundfish and crab fisheries (formerly SAFE, now ACEPO)
- Community local quotients for Groundfish and crab fisheries (ACEPO)
- % GOA pollock landings in Kodiak (local quotient or LQ, ESP)
- % of SMBKC landings in St. Paul (local quotient or LQ, ESP)
- Number of active processors (ESP)

Fishery Sustainability Indicators

- Active vessels (CSPM)
- Entities holding share (CSPM)
- Season length index (CSPM)
- Discards and PSC (ESR)

Stability Indicators

- Real Effective Exchange rate index (SAFE Report Card)
- Alaska's effective share of global pollock and cod catch (SAFE Report Card)
- Production Volume/Total catch (SAFE Report Card)
- Ex-vessel share of first-wholesale revenue (SAFE Report Card)
- AK resident share of shoreside ex-vessel value (SAFE Report Card)
- Share of shoreside value to top 5 communities (SAFE Report Card)
- Real first-wholesale value/fishing weeks (~RPUE, SAFE Report Card)

Questions?

stephen.kasperski@noaa.gov

Economic Status of the Groundfish Fisheries off Alaska, 2019

NOAA FISHERIES

Alaska Fisheries Science Center

Ben Fissel
AFSC Economics and Social Sciences Research Program (ESSRP)

Feb. 3, 2020

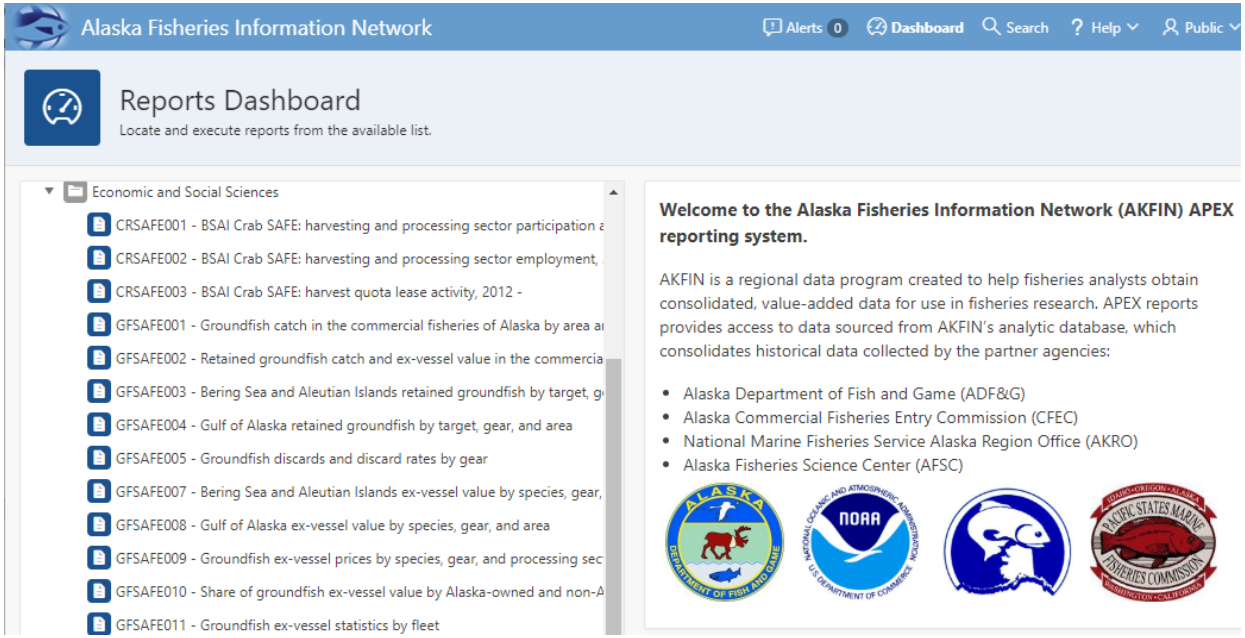
Economic Status Report, 2019: Core Content

- Executive Summary: 2019 highlights
  - Report Card Metrics
- Overview of the Economic Data Tables
- Economic Data Tables
  - All Alaska summary Tables (1-9)
  - BSAI data Tables (10-25)
  - GOA data Tables (26-41)
  - Halibut data Tables (H1-H10).

  Tables primarily cover: Retained catch, ex-vessel value and prices, first-wholesale production and prices, vessel counts, and fishing and crew weeks.

AKFIN APEX reporting system

- Platform for accessing Econ SAFE data
- https://reports.psmfc.org/akfin



- Data can also be viewed graphically at https://psesv.psmfc.org/PSESV2.html

Economic Status Report, 2019:

- Economic Performance Indices
- 2020 In-season harvest and revenue estimates
- Wholesale and ex-vessel price projections
- Market Profiles
- Amendment 80 Economic Data Report (revised)
- Gulf Trawl Economic Data Report
- Amendment 91 Economic Data Report

The sections covering Catch Share Performance Metrics and Community Participation have been moved outside this report.

New, revised or planned content in RED

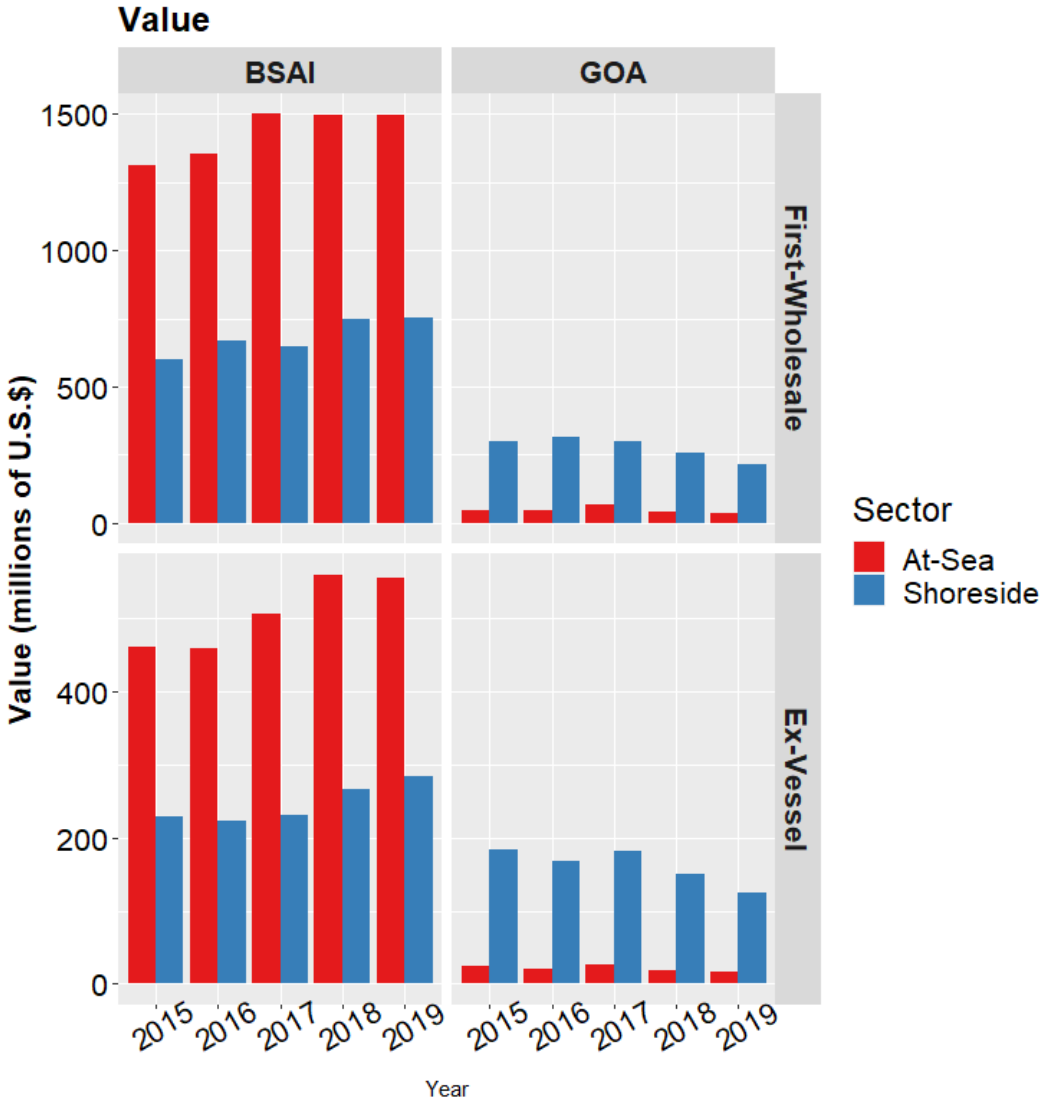
Alaska's Groundfish Fisheries in 2019

Total catch: 2.18 million t
(decreased 2%)

Aggregate ex-vessel value
stable/increasing in BSAI
decreased in GOA.

Wholesale value:
$2.50 billion (down 3%)

Ex-vessel value:
$980.8 million (down 3%)



Percent change adjusted for inflation.

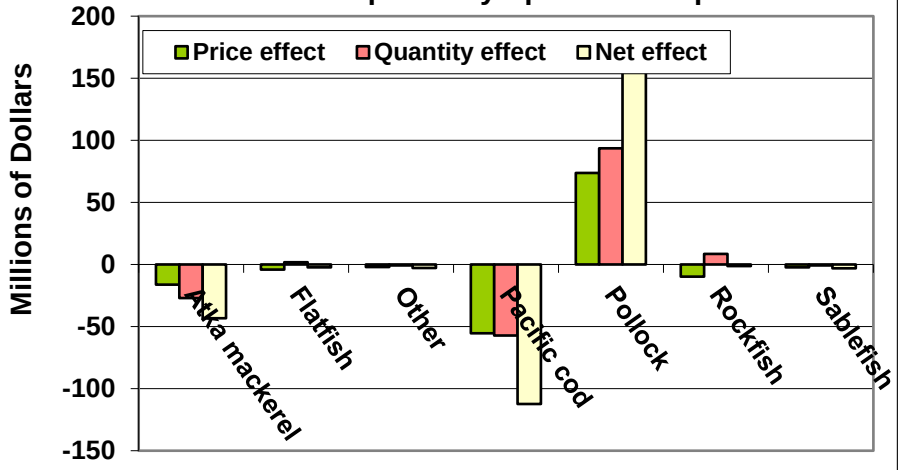
Values in figure nominal (not adjusted for inflation)

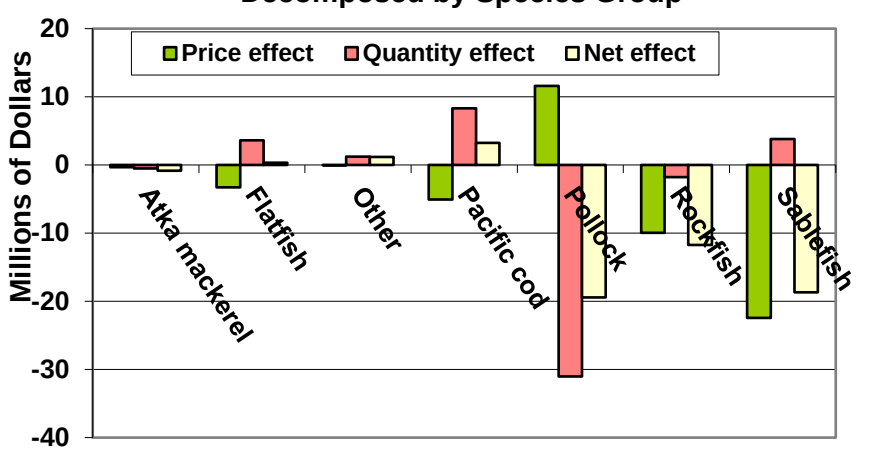
Wholesale Revenue Decompositions 2018-2019

Bering Sea & Aleutian Islands

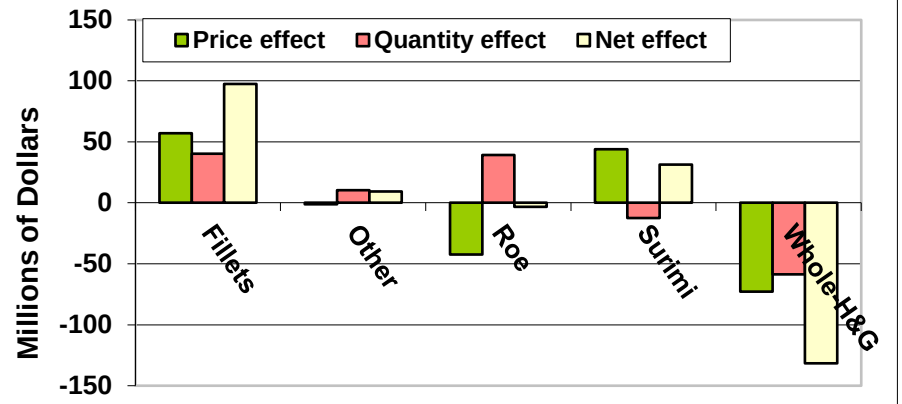
Gulf of Alaska

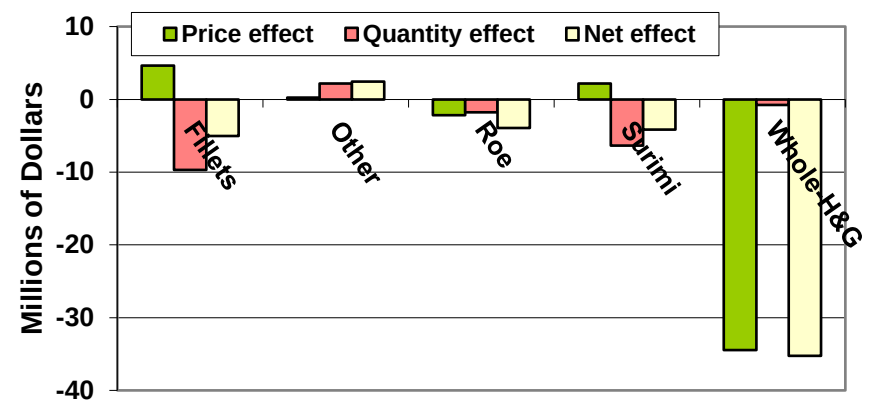
Species





Product





In-season ex-vessel pricing methods

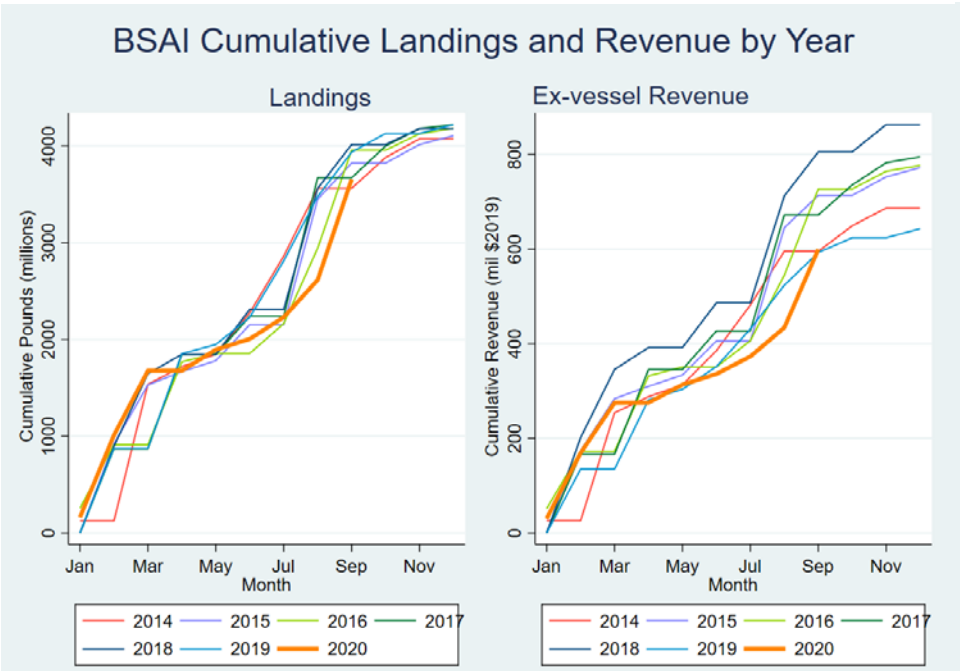
- Estimates “nowcasts” of 2020 monthly ex-vessel revenues and landings for Alaska groundfish and halibut fisheries through Sept.
- Modeled with monthly finalized data from catch accounting (cas) and unadjusted data from e-landings (ellr) between 2014-2019

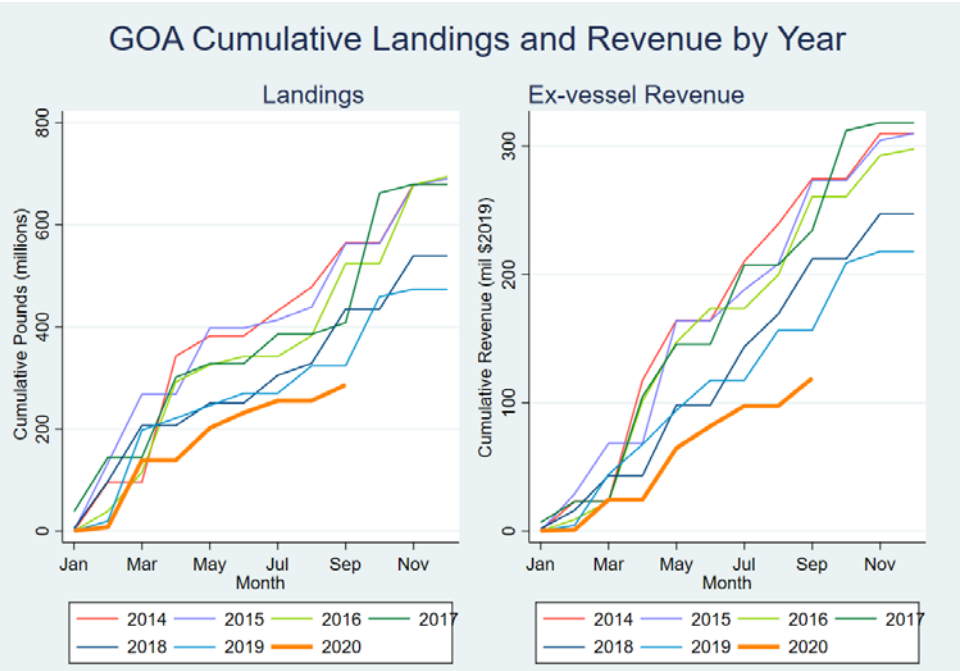
$$p_t^{cas} = \beta p_t^{ellr} + D + \varepsilon_t$$

- Where *D* is a set of dummies accounting for species, region, gear and harvest sector. Model selection was evaluated using AIC and BIC.
- Results in the section are displayed graphically with accompanying discussion.

In-season Ex-Vessel Harvest and Revenue Estimates for 2020

- BSAI YoY harvest volumes through Sept. fell by approximately 11% in 2020 compared with 2019 and ex-vessel revenues are expected to be down 4% from 2019.
- GOA YoY harvest volumes through Sept. fell 27% in 2020 and ex-vessel revenues are expected to be down 32% from last year.

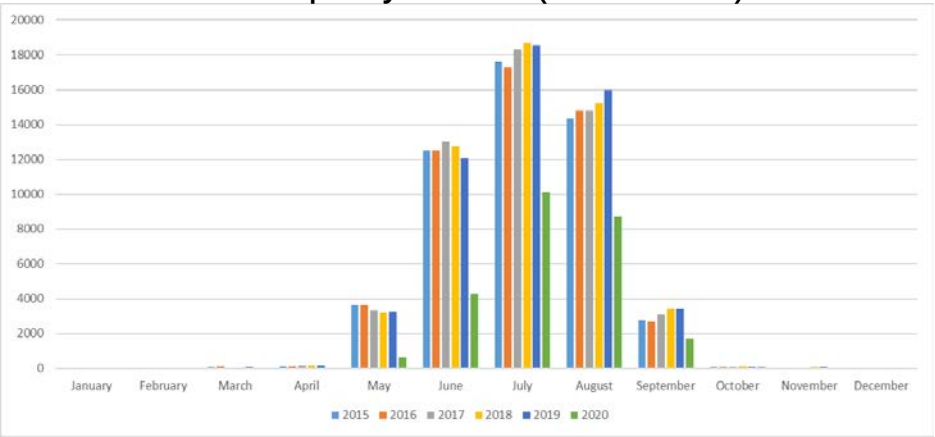


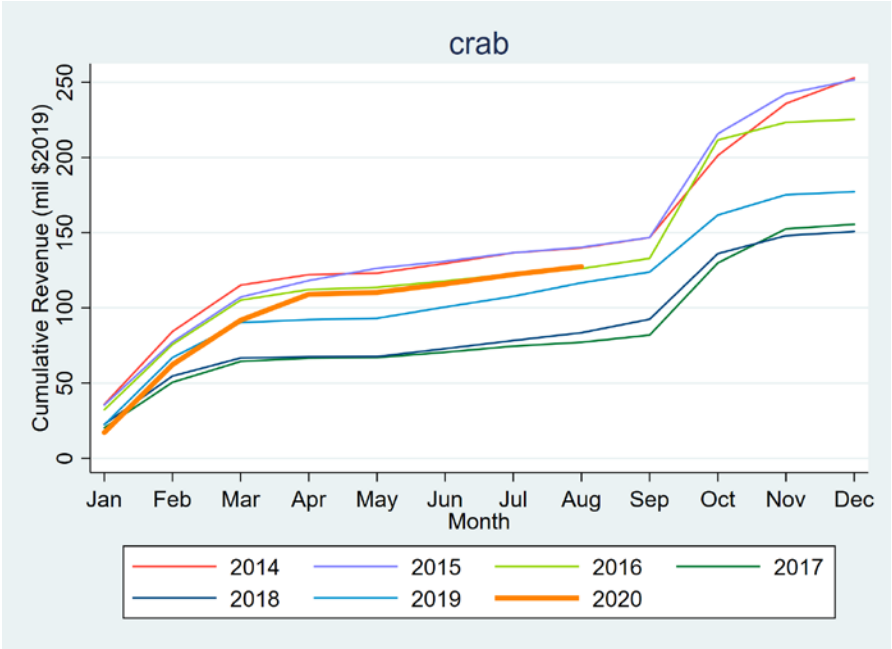


Crab and Charter Halibut Impacts in 2020

For all crab species in Alaska, revenues are up 9% through August of 2020 relative to the same period in 2019 and 17% compared with the 2015-2019 period.

Charter trips by month (2015-2020)





Despite relaxed restrictions effective June 15, reports from the field suggest that charter fishing was still well below normal levels. An Oct industry poll (n=156) suggested about 17% (26 businesses) closed for the season with over half of the businesses that were opened for at least part of the season reporting a decline in bookings of over 50% compared to the previous year.

Responding to COVID-19

- ESSRP is providing S&T and leadership information on the progress of catch and production as well as other COVID-19 related impacts to markets.

- The Economic Groundfish SAFE has a new section that provides in-season harvest and revenue estimates relative to a 2019 and 2014-2019 baselines.

- National working group is analyzing trade impacts since COVID-19 and reporting to NMFS S&T.

- Ocean Strategies, LLC is conducted a COVID-19 impact survey on West Coast and Alaska fishers, which **closed Nov 25th**

BSAI non-Pollock Trawl CP (Amendment 80) Program: Summary of the economic status of the fishery.

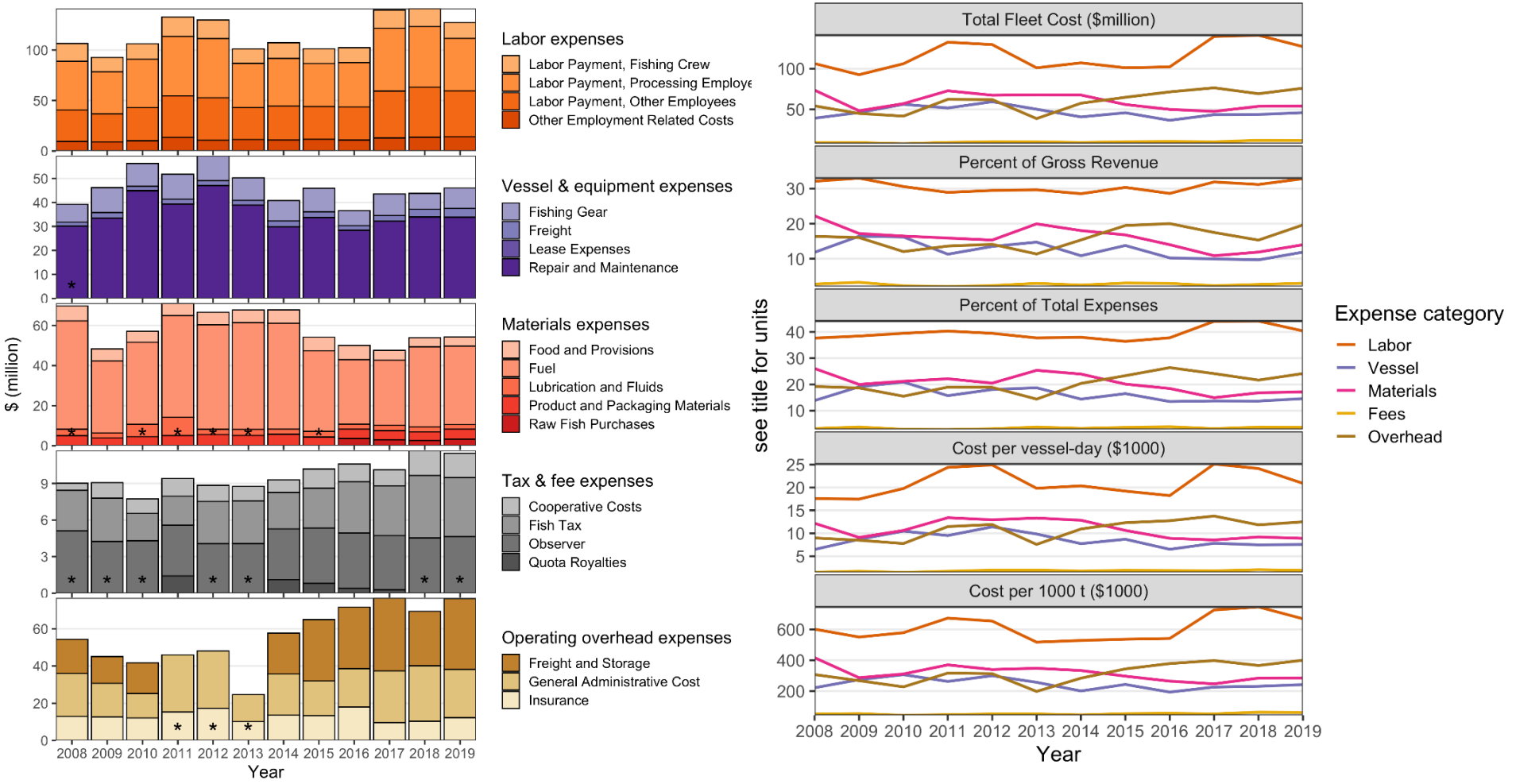
Integrates Amendment 80 EDR & other fishery management data.

- C/P fleet physical characteristics & productive capacity
- Fishing effort and fuel consumption
- Income, operating costs, and capital expenditures
- Crew and processing employee employment and wages

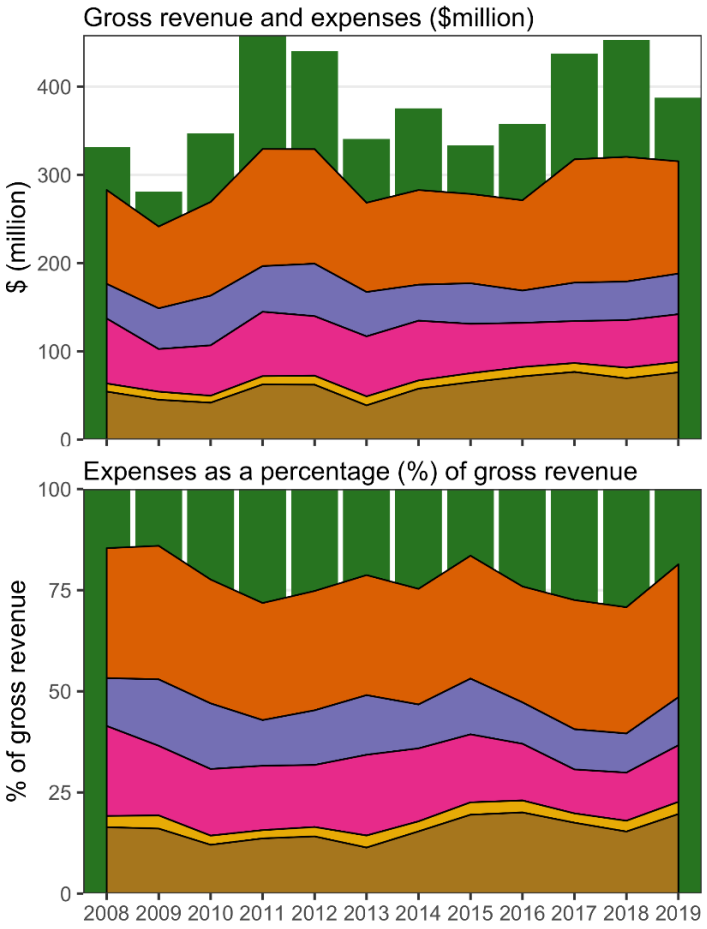
Updates/new content for current edition

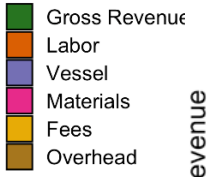
- Graphical displays of key statistical summaries
- Comprehensive synthesis of operating costs
- Analysis of financial performance indices
- Community-level crew employment/wages
- Uses data from the A80 EDR to provide a more comprehensive picture of A80 productivity

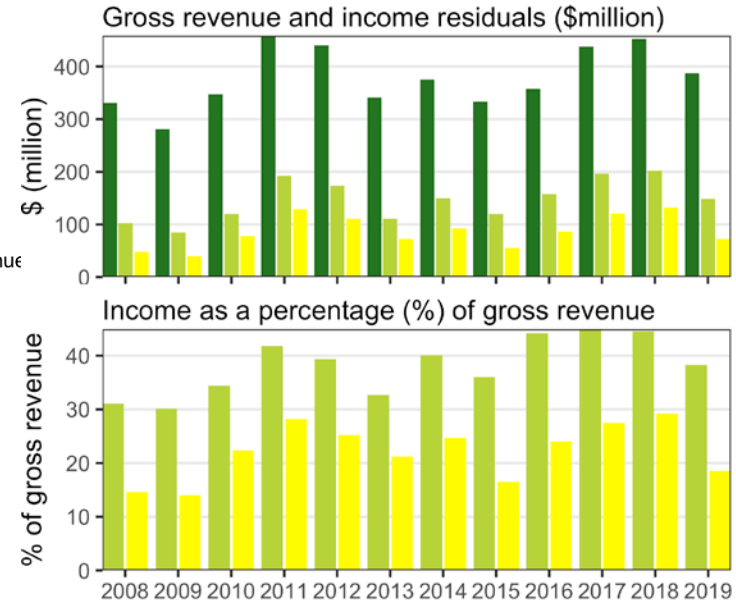
Catcher/Processor Operating Cost Summary & Indices

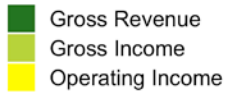


Catcher/processor Net Operating Income Summary









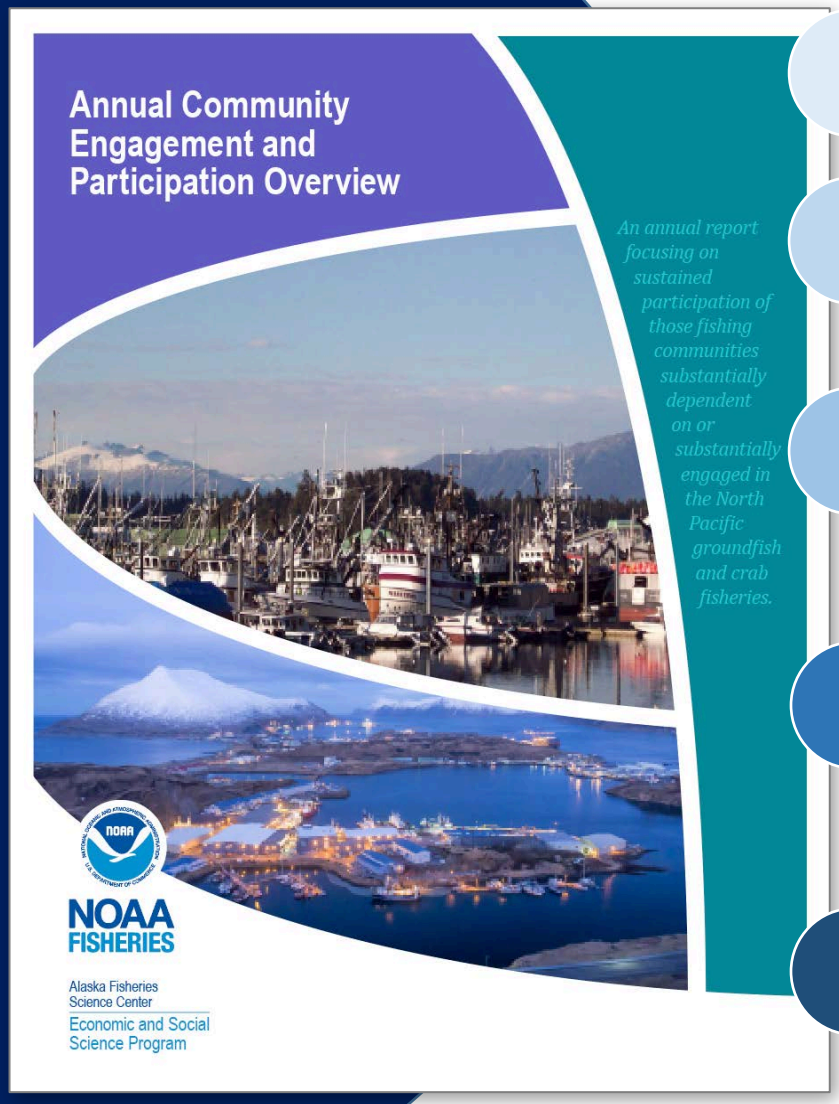
Crew Income & Employment by Community (A80 & GOA Trawl CV)

Amendment 80 CPs

	Community	Employ Count	Employ Share	Income $mil-lion
Alaska	Unalaska/Dutch Harbor	11	2 %	$ 1.12
	Other Alaska	16	3 %	$ 1.63
	Alaska Total	27	4 %	$ 2.74
Oregon	Oregon Total	10	2 %	$ 1.02
Washington	Seattle MSA	400	66 %	$ 40.63
	Other Wash.	53	9 %	$ 5.38
	Wash. Total	453	75 %	$ 46.01
Other	-	98	16 %	$ 9.95
Unknown	-	14	2 %	$ 1.42
All Locations		602	100 %	$ 61.15

GOA Trawl CVs

	Community	Employ Count	Employ Share	Income $mil-lion
Alaska	Anchorage	5	1 %	$ 0.22
	King Cove	2	1 %	$ 0.09
	Kodiak	97	25 %	$ 4.36
	Sand Point	30	8 %	$ 1.35
	Other Alaska	18	5 %	$ 0.81
	Alaska Total	152	39 %	$ 6.84
Oregon	Lincoln County	28	7 %	$ 1.26
	Other Oregon	24	6 %	$ 1.08
	Oregon Total	52	14 %	$ 2.34
Washington	Bellingham	2	1 %	$ 0.09
	Seattle MSA	41	11 %	$ 1.84
	Other Wash.	17	4 %	$ 0.76
	Wash. Total	60	16 %	$ 2.7
Other	-	37	10 %	$ 1.66
Unknown	-	84	22 %	$ 3.78
All Locations		385	100 %	$ 17.31



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.

Thanks

- Economic Groundfish SAFE is a product of the Economics and Social Sciences Research Program (ESSRP)

- Authors: Ben Fissel, Michael Dalton, Brian Garber-Yonts, Alan Haynie, Stephen Kasperski, Jean Lee, Dan Lew, Chang Seung, Kim Sparks and Sarah Wise.

- Alaska Fisheries Information Network (AKFIN) provided database programming, data management services and support.