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Developing Forward-Looking Snapshots for Social and Economic Conditions in Fisheries

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Presentation Overview



What Are the Snapshots?

Why Were They Created?

How Were They Done?

Alaska Seafood Snapshot

Shrimp Futures Initiative

Highly Migratory Species (HMS)

What Are the Snapshots?

Analyses summarizing the status of *economic and social* conditions in specific fisheries

- *Encompass the full scope of the seafood production sector*
 - *Audience is not just fishery management*
- *Based on*
 - *Data available to federal agencies: Landings, prices, trade, cost (where available)*
 - *Qualitative analyses: interviews, review of trade literature and media*
- *Snapshots motivated by a perception that fisheries could be providing better livelihoods*

Alaska Seafood Snapshot 2024



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Alaska Seafood Snapshot

NOAA Fisheries Alaska Fisheries Science Center
and Office of Science and Technology



Assessment of current economic and social conditions in the Alaska seafood industry

- Report completed August 2024
- Quick turnaround
- Conditions in 2022-2023
- *Attention to drivers of recent changes*
- Commercial, for-profit sector only

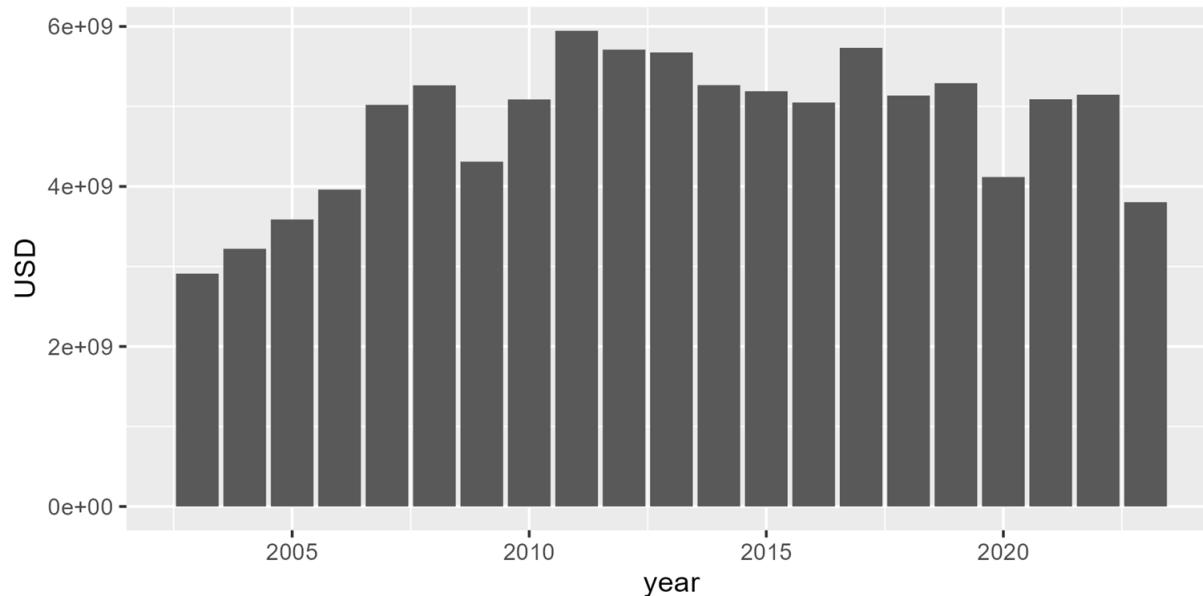
Declining Revenue in 2023

First-Wholesale Value

-26%

from 2022
(-\$1.2 B)

Statewide weighted average first-wholesale value (\$2022)

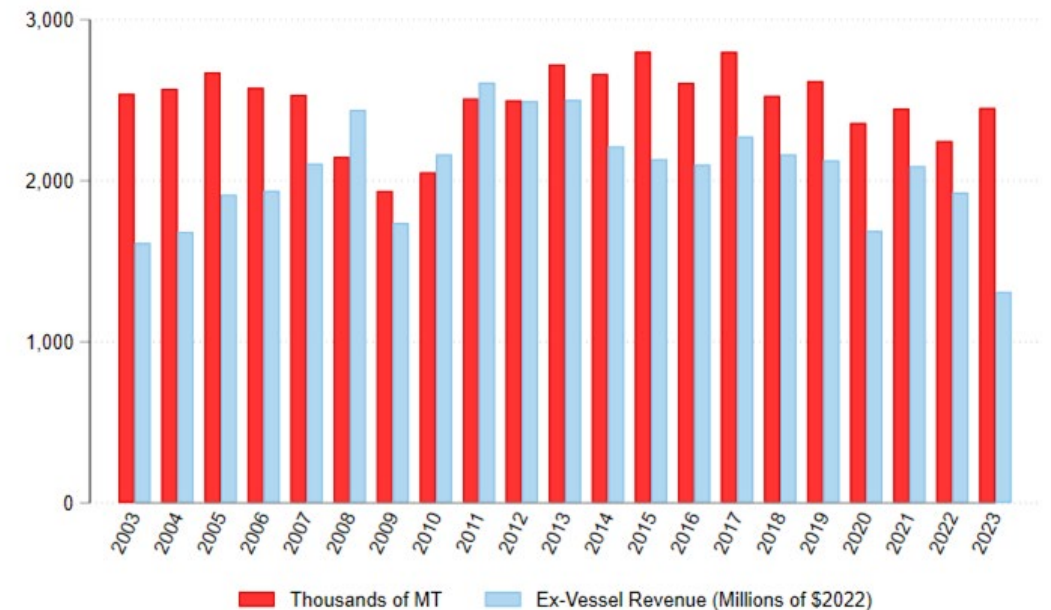


Ex-Vessel Revenue

-38%

from 2022
(-\$617 M)

Statewide Ex-Vessel Totals



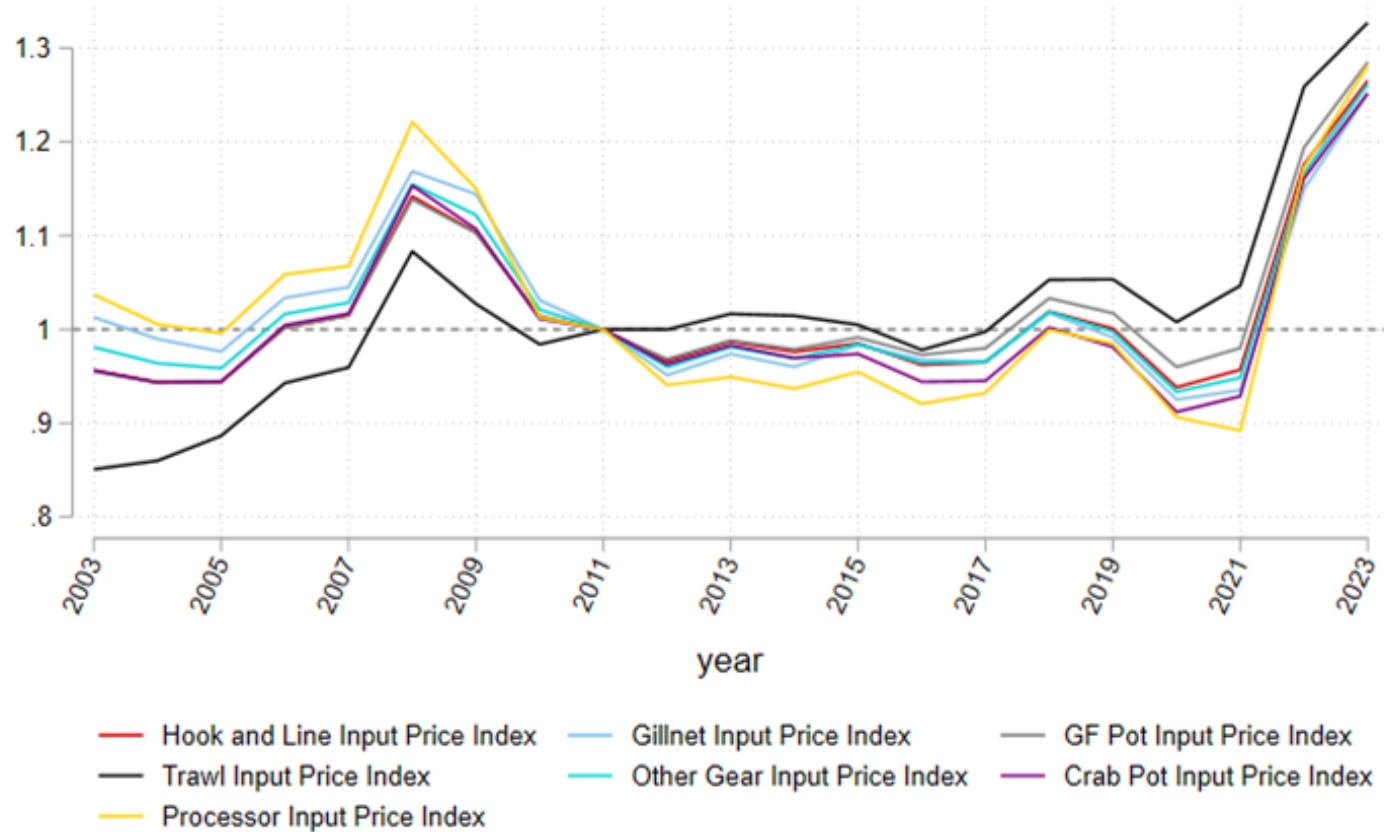
Increasing Costs since 2022



**Significant increases
in the cost of many
factors of production:**

- High interest rates
- Increasing fuel prices
- Wage increases
- General inflation

Input Price Index by Gear Type (2011=1)

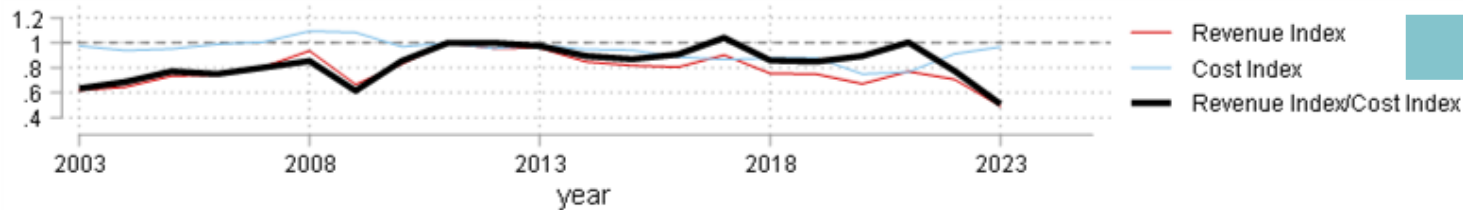


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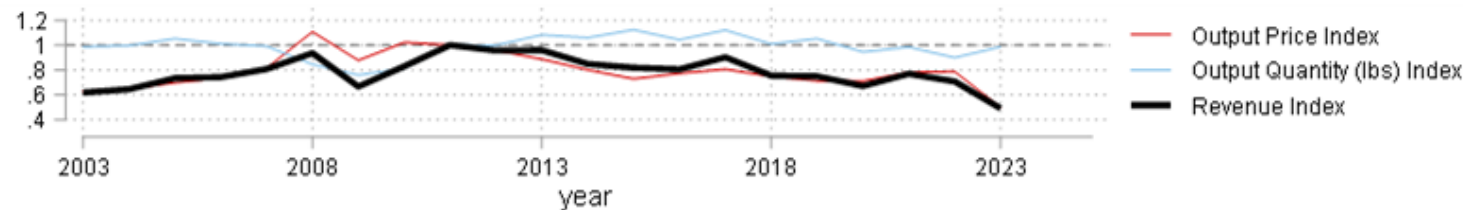
Declining Margins

All State and Federal Fisheries in Alaska

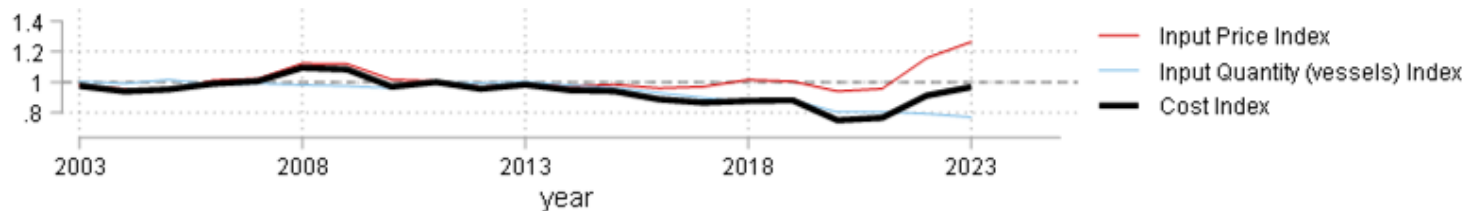
*Ex-Vessel
Margin
Index*



*Revenue
Index*



*Input
Price
Index*

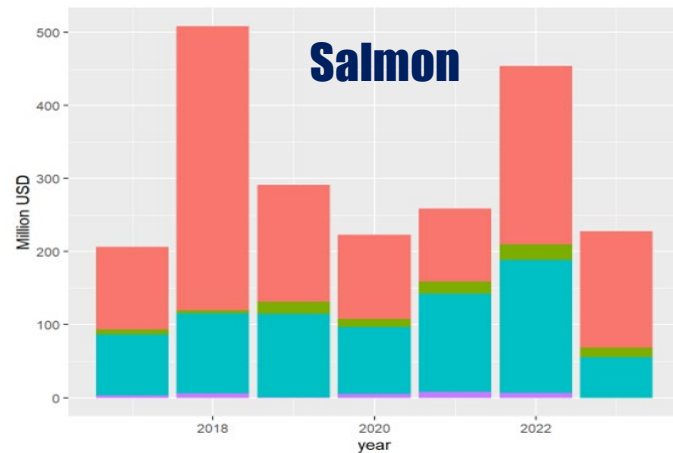
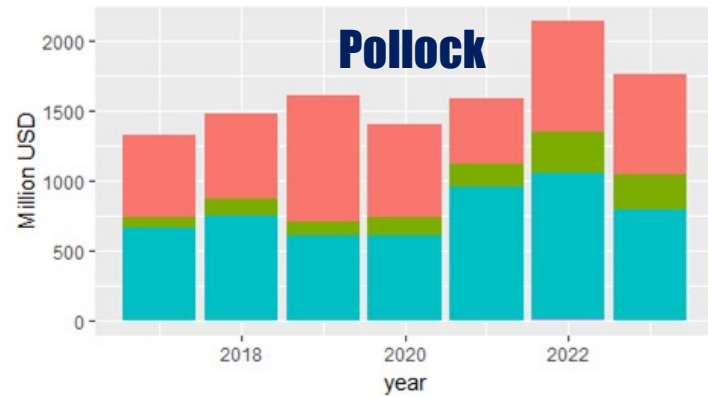


50% decline in
*Ex-Vessel Margin
Index* in 2022 and
2023

*Suggests reduced
profitability of the
harvesting sector
overall*

Trade Data

Russian Export Value (USD), 2017-2023



Trade Region

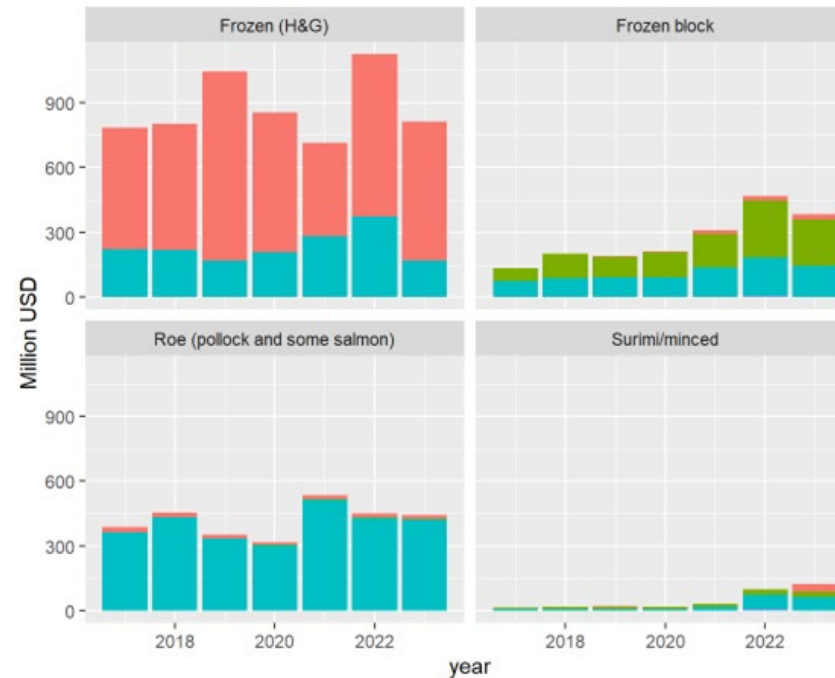
China

Europe

Other

US

Pollock by Product

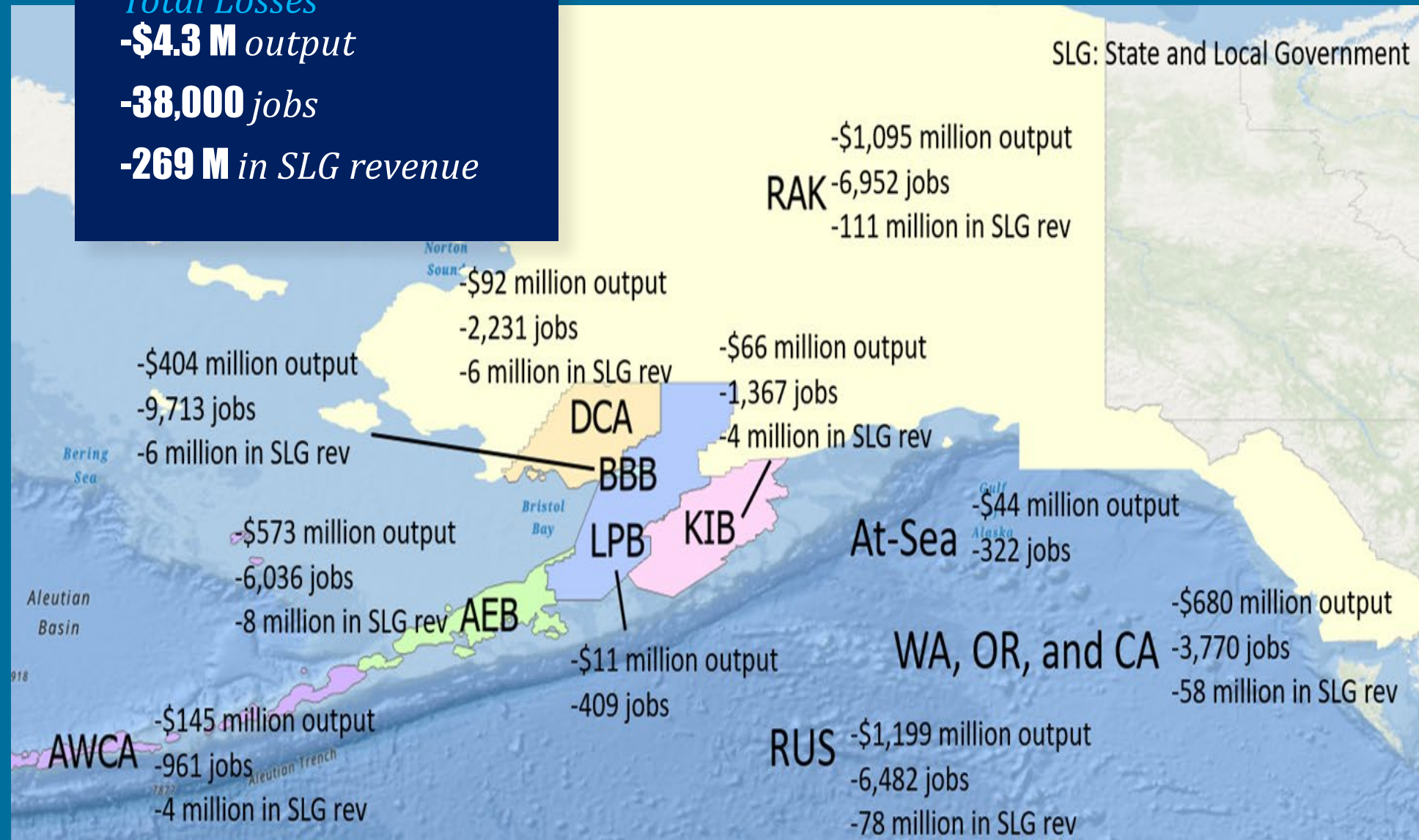


- Large pulse of Russian exports of pollock and salmon in 2022 contributed to recent large inventories
- Trends did not persist into 2023
- Russia increasing production of higher value-added products (frozen blocks, surimi)

Economic Impacts

from Alaska Fisheries
Revenue Changes,
2022-2023

Total Losses
-\$4.3 M output
-38,000 jobs
-269 M in SLG revenue



Alaska Seafood Snapshot Results

Estimated losses in the United States from 2022 to 2023:

\$1.8 B in AK seafood industry revenues

- **Over 38,000** fishing and non-fishing jobs
- **\$4.3 B** in total U.S. output
- **\$269 M** in state and local tax revenues

50% decrease of Ex-Vessel Margin Index, a measure of profitability, in 2022 and 2023. The compound effect of:

- 1) Decreased prices in 2023
- 2) Increased costs for key inputs to the production process, including labor rates (wages), energy prices, and interest rates starting in 2022

Revenue decreases in 2023 largely driven by:

- **Low seafood prices** across nearly all AK species as a result of global market forces including exchange rates and tariffs
- **High inventories**, high levels of global supply
- **Lower global consumer demand** for seafood due to inflation
- **Lower cost of seafood production and processing** in countries that compete with U.S. seafood products

Shrimp Futures 2025+



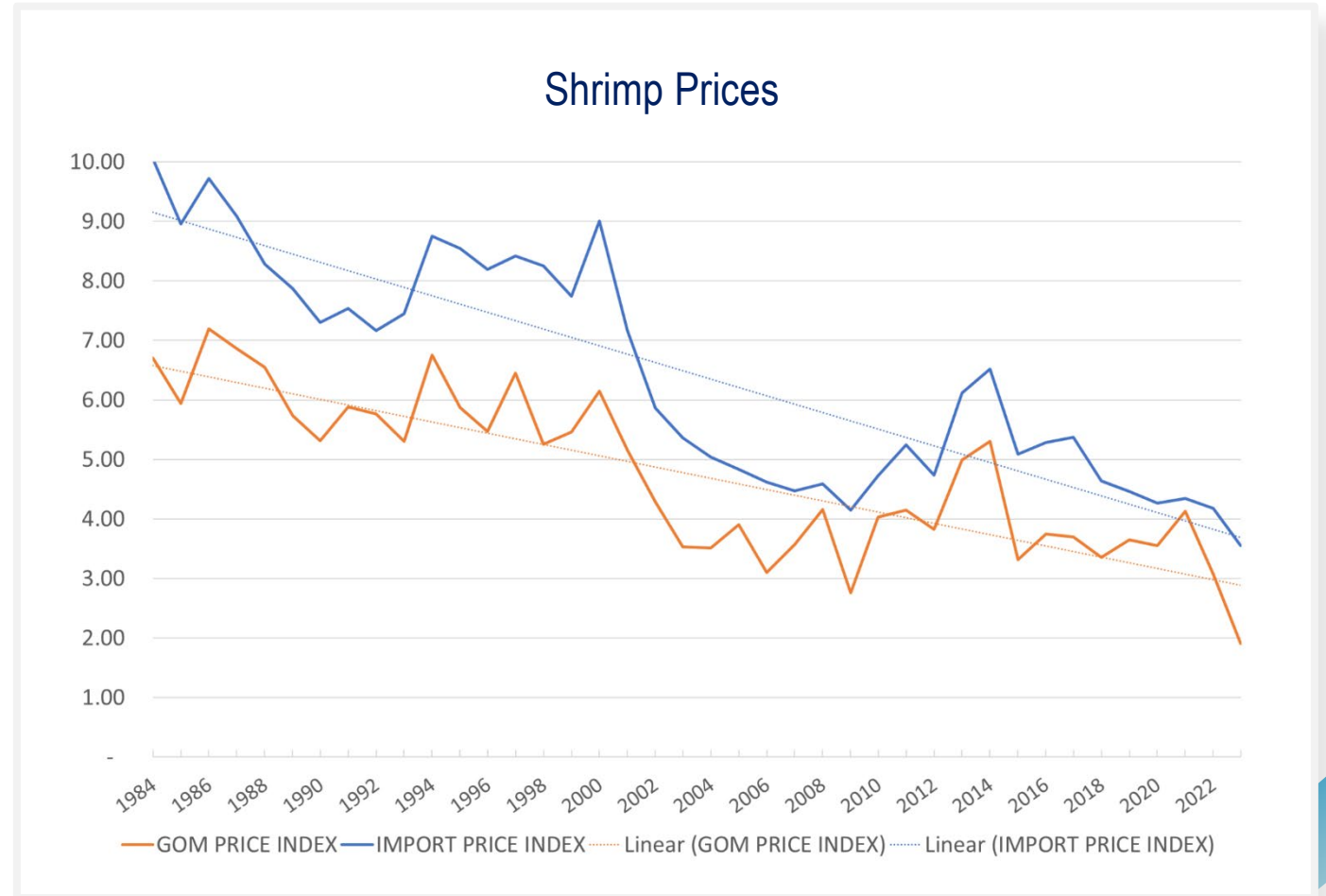
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Shrimp Futures Initiative

NOAA Fisheries SEFSC
and Gulf States Marine Fisheries Commission

Gulf Shrimp fishery experienced significant reduction in prices and increases in cost in 2022 and 2023

- Document changes
- Outline pathways for continued viability of the fishery into the future
- Broader in scope than just a snapshot
- Scenario planning and the desired future state of the fishery are key
- Stakeholder participation



Shrimp Futures Initiative – Objectives

PART 1 – *Supporting the Industry in the Present*

- Characterize current state and major challenges
- Build connections with key partners and agencies
- Identify immediate actions/opportunities

PART 2 – *Supporting the Shrimp Industry into the Future*

- Develop a 2050 vision for the industry
- Identify strategies to support a resilient industry
- Create action items that are robust to uncertainty

Shrimp Futures Initiative – Activities

PART 1 – *Supporting the Shrimp Industry in the Present*

Social Snapshot

Assess

- Supply chain dynamics
- Key threats, adaptation strategies
- Changes necessary to ensure the long-term viability of the industry

Based on interviews with SMEs and shrimp industry members

Economic Analysis and Snapshot

Provide an overview

- Current economic state of the industry in the context of long term trends
- Published as a user-friendly snapshot report

Communications and Education

Highlight

- Sustainability of shrimping in the region
- Issues the industry is facing

Feature industry members via web stories and blog posts

Assist with marketing/outreach efforts



Shrimp Futures Initiative – Activities

PART 2 – *Supporting the Shrimp Industry into the Future*

Scenario Planning: Anticipated Deliverables

- A short and long term vision for the industry
- A scenario matrix outlining plausible futures for the industry
- Stakeholder priorities for advocacy and strategic action
- Workshop discussion reports summarizing key concerns and proposed solutions
- Policy recommendations based on scenario insights
- Projected industry trajectories under different policy and economic conditions

Shrimp Futures Initiative – Economic Analysis

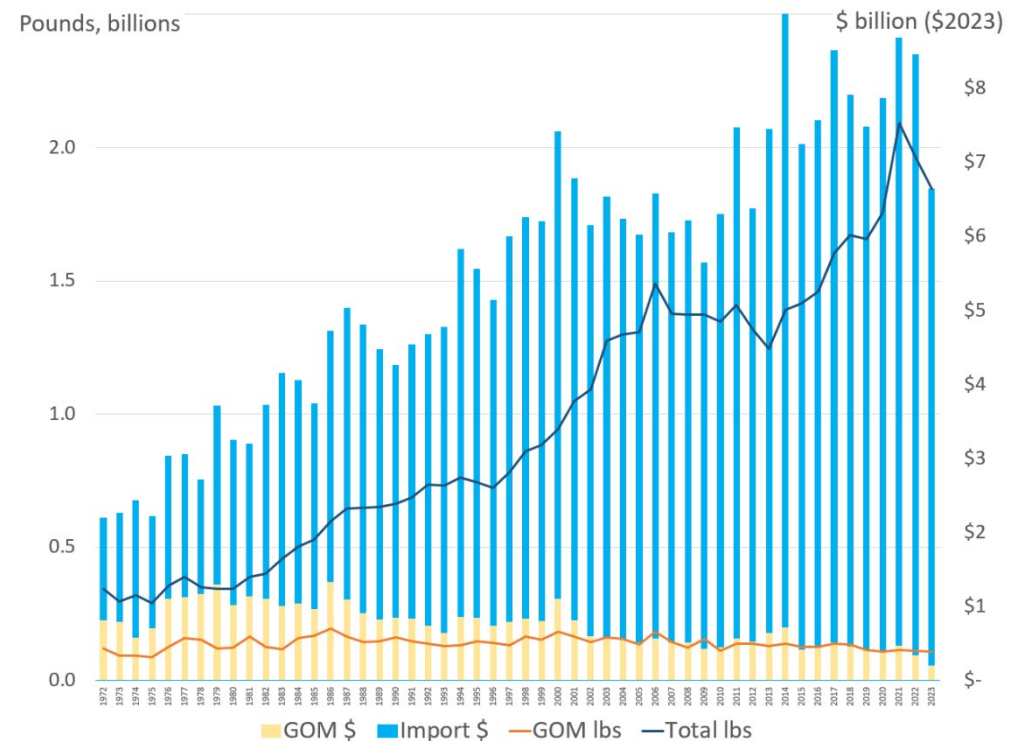
Economic Analysis Goal:

- Compile an economic report that provides a snapshot of economic conditions in 2023 in the context of the long term trend in the Federal Gulf shrimp fleet

Tentative Outline for Snapshot

- Introduction and Context
 - Total Gulf shrimp revenue and landings in context of US shrimp market over time
 - Import and Gulf shrimp price indices over time
 - The Gulf shrimp fleets—Federally-permitted and State-licensed—over time
- Economics of the Federal Gulf shrimp fleet

The Gulf Shrimp Fishery in the Context of the U.S. Shrimp Market (1972-2023)



The Gulf Shrimp Fleet

	2019	2020	2021	2022	2023
<u>Total Gulf shrimp fishery</u>					
Number of active vessels	3,558	3,348	3,154	2,971	2,467
Landing (lbs, heads off)	115 million	109 million	114 million	111 million	107 million
Gross revenue (nominal USD)	420 million	385 million	471 million	341 million	204 million
Average Price	4.29	4.12	4.58	3.19	1.91

Fleet Returns

	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
# of Observations	344	325	319	365	324	268	274	271	238	204
Margin (on shrimping)	9.9%	3.0%	(0.5%)	10.0%	6.3%	0.3%	3.0%	9.8%	(5.0%)	(6.1%)
Economic return (from shrimping)	15.0%	3.1%	(0.6%)	11.8%	6.5%	0.2%	2.9%	11.2%	(4.3%)	(4.4%)
Shrimp price	6.23	3.85	4.35	4.22	3.99	4.10	3.91	4.64	3.41	2.50
Fuel price	3.77	2.41	2.15	2.42	2.77	2.49	1.77	2.70	3.87	3.07
MFP index	0.81	0.92	0.79	0.98	0.99	0.83	0.86	0.98	1.28	1.35

Shrimp Futures Initiative

Social Snapshot

- **Qualitative assessment** of supply chain dynamics
- **Summarize:**
 - Key threats
 - Adaptation strategies
 - Changes that would need to be made to ensure the long-term viability of the industry
- **Analyses** based on interviews with subject matter experts and shrimp industry participants



Highly Migratory Species (HMS) 2025+



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*Baseline economic
information on highly
migratory species
caught or consumed in
the United States:
responding to current
market challenges*

- Pacific bluefin tuna
- North Pacific swordfish
- Pacific Ocean yellowfin and bigeye
- North and South Pacific albacore
- Pacific mako and blue shark
- Atlantic bluefin tuna
- North Atlantic swordfish

HMS

Healthy stocks,
relatively low bycatch

Little to no price premium
for U.S. product

Price pressure from
imports in the U.S. market

- Pacific bluefin tuna
- North Pacific swordfish
- Pacific Ocean yellowfin and bigeye
- North and South Pacific albacore
- Pacific mako and blue shark
- Atlantic bluefin tuna
- North Atlantic swordfish

HMS

- **Total landings and vessels**
- **U.S. landings and processing locations and final destination**
- **HMS's contribution to the U.S. seafood trade deficit**
- **Quantity of imports and their origins**
- **Differences in price of HMS compared to that of other proteins**
- **Context will include:**
 - Factors causing financial stresses and impacts on fishermen, processors, and coastal communities
 - Comparison of domestic regulations for U.S. fisheries and those we imports

- Pacific bluefin tuna
- North Pacific swordfish
- Pacific Ocean yellowfin and bigeye
- North and South Pacific albacore
- Pacific mako and blue shark
- Atlantic bluefin tuna
- North Atlantic swordfish

Conclusions

Motivations for Snapshot Analyses

Snapshots motivated by a perception that fisheries could be providing a better livelihood

In all cases, stakeholders view is that there could be more domestic consumption

Information Provide by Snapshots

What are the main drivers of seafood industry outcomes?

What do we (policy makers, fishery participants, other stakeholders) have control over?

Common set of knowledge for structured decision making processes

Information for planning and decision making by private actors

Common Conclusions and Analytical needs

Some Common Conclusions

- Producers are getting squeezed by lower prices and higher costs
- Many important drivers of seafood sector performance may be outside fisheries management (trade, costs)

What Do We Need to Do a Good Snapshot Analysis

- Economic data collection
- Capacity for qualitative analysis

Transitory and Structural Drivers

Type	Transitory	Structural
Malleable	<ul style="list-style-type: none">● High Inventories	<ul style="list-style-type: none">● Tariff and non-tariff barriers (market access)● Depreciating (aging) physical capital● Lack of investment in processing infrastructure● Interest rate on federal loans● Product quality● Lack of revenue insurance
Immutable	<ul style="list-style-type: none">● Exchange rates● Exports from Russia● Energy and fuel costs● Market interest rates (business ops)	<ul style="list-style-type: none">● Higher wages (processing and crew)● Market insurance rates (on capital/business ops)● Climate change/heat waves (impacts on abundance and location of stocks)

Thank You

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Alaska Seafood in a Global Market

Global trade markets are integral to Alaska seafood products

- Upwards of 70% are exported
- Many products undergo secondary processing abroad (e.g., China)

Exposure to trade shocks

- Supply chain disruptions/costs
- A strengthening U.S. dollar, exports more expensive



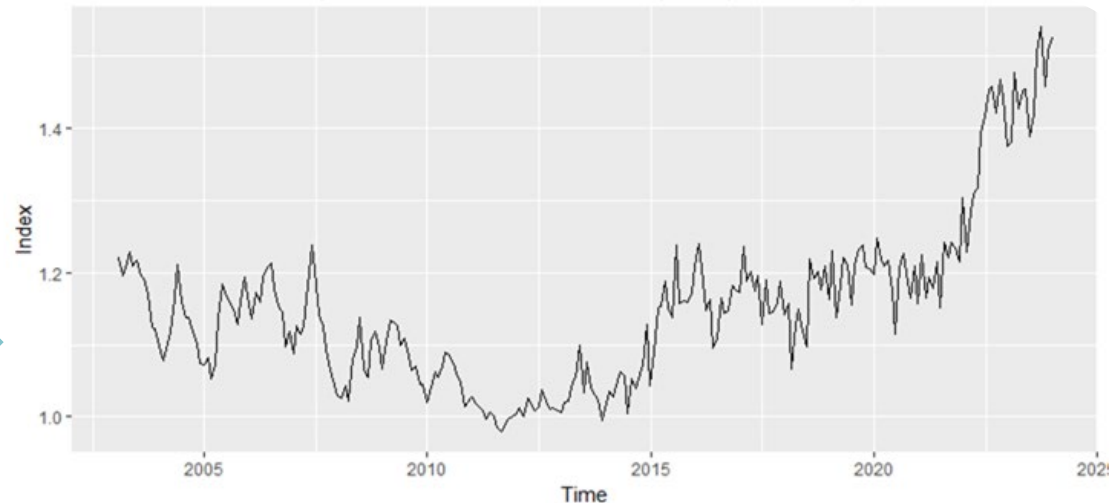
Alaska seafood competes in global markets

- Countries with lower operating costs and subsidy support
- Exposure to supply shocks

Tariffs and non-tariff barriers

- Inhibits development of new markets
- Asymmetries across trading partners
- Upward pressure on domestic prices
- U.S. producers may gain U.S. market share

Real Effective Exchange Rate for Alaska Seafood Exports

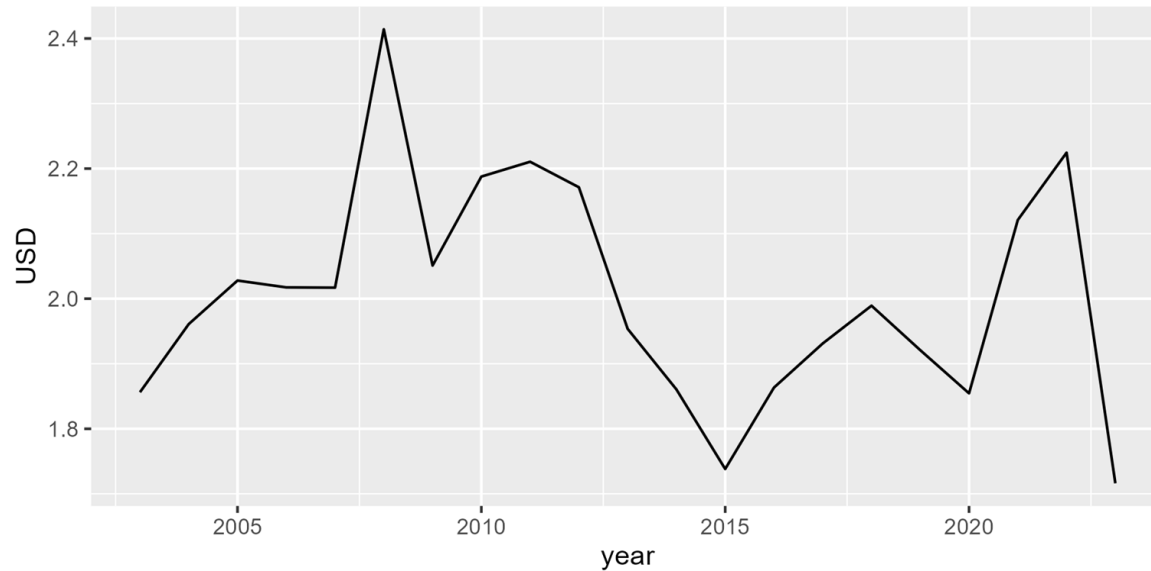


Declining Prices in 2023

First Wholesale Prices

-23%
from 2022

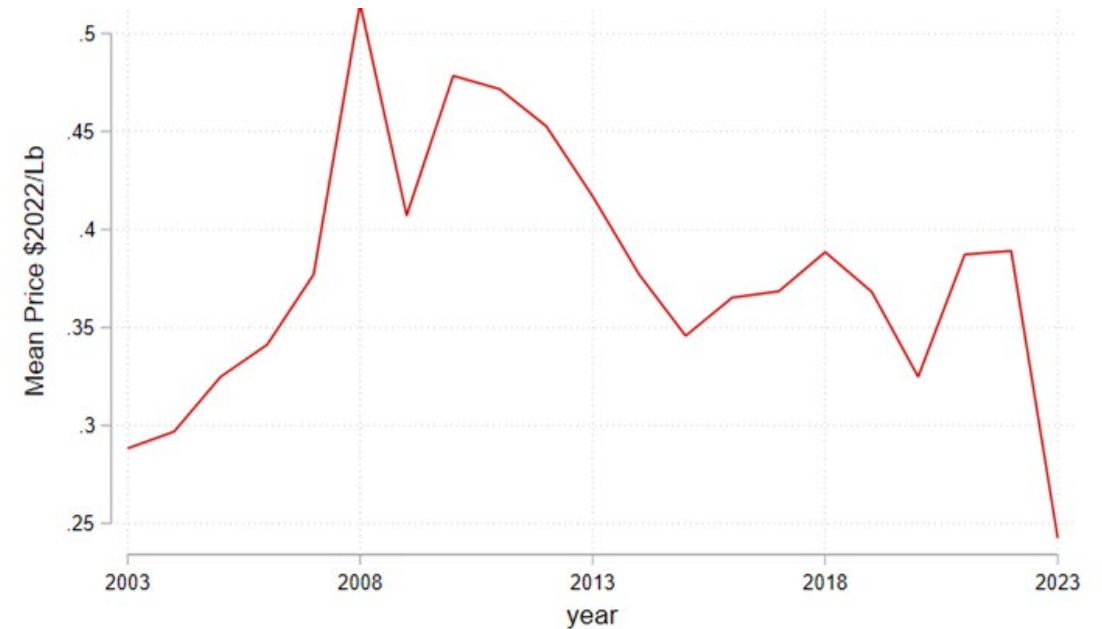
Statewide Weighted Average First-Wholesale Price (\$2022)



Ex-Vessel Prices

-38%
from 2022

Statewide Weighted Average Real Ex-Vessel Price (\$2022)



Implications of Downturns on Well-Being

Declining profits from last two years of low prices compound stressors associated with ecological changes

- The “Blob” and impacts on Pacific cod and multiple salmon species and runs in the Gulf
- Disappearance of snow crab from the Bering Sea
- Closures of commercial and subsistence salmon fisheries for Western Alaskan communities

Some fishermen and fishing communities are struggling to survive in response

- Reporting declining physical and mental health, increasing substance abuse issues
- Struggling to make loan payments (boats, permits, insurance) with declining profits
- King Cove lost Peter Pan and 70% of its community revenues
 - *Compounded by losing momentum on multiple community projects that relied on the processing facility to purchase hydroelectric power, water, and solid waste disposal*

Growing local food security implications

Concerns over large-scale losses in fisheries participation, with generational implications for fishing communities

Recent market disruptions undermine fishermen’s and communities’ capacity to ultimately be resilient and survive in fisheries under climate stressors



Income Statement and Returns

	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
# of Observations	344	325	319	365	324	268	274	271	238	204
Revenue from Operations	471,141	351,927	356,455	401,837	400,805	342,207	324,548	441,829	313,347	241,334
Costs of Operations	424,456	341,279	358,383	361,691	375,647	341,288	314,662	398,331	328,963	255,969
Variable costs - Non-Labor (fuel, supplies)	49.2%	45.3%	43.2%	43.4%	48.4%	47.4%	40.4%	44.8%	51.7%	50.5%
Variable costs - Labor (hired, owner)	32.5%	30.6%	30.9%	35.0%	30.8%	30.0%	33.8%	33.7%	26.4%	25.1%
Fixed costs (maint., repair, insure, overh., depreci.)	18.3%	24.1%	25.9%	21.5%	20.8%	22.6%	25.8%	21.5%	21.9%	24.3%
Net Revenue from Operations	46,685	10,648	(1,928)	40,146	25,157	918	9,887	43,497	(15,616)	(14,635)
Profit or Loss (before tax)	51,655	69,745	82,294	43,094	29,619	14,824	17,122	48,519	(15,930)	(14,324)
Margin (on shrimping)	9.9%	3.0%	(0.5%)	10.0%	6.3%	0.3%	3.0%	9.8%	(5.0%)	(6.1%)
Economic return (from shrimping)	15.0%	3.1%	(0.6%)	11.8%	6.5%	0.2%	2.9%	11.2%	(4.3%)	(4.4%)
Return on Equity	18.0%	22.0%	26.9%	13.5%	8.2%	4.2%	5.5%	13.6%	(4.8%)	(4.6%)