



Formerly McDowell Group

Unified Export Strategy Front Section

May 2024

PREPARED FOR:

The Alaska Seafood Marketing Institute

Domestic Information

Introduction

Alaska fishermen caught more than 2.4 million metric tons (MT) of seafood in 2023, according to preliminary data. Groundfish including pollock, Pacific cod, and flatfish, among others, contributed 77% of this volume. Salmon, halibut, crab, sablefish, herring, and other species made up the remaining 23%. Alaska continues to be the principal source of America's seafood harvests and regularly produces more than 60% of the volume of the total national catch.

Alaska's harvest volume increased 10% year-over-year in 2023, driven by both the cyclical nature of Alaska pink salmon fisheries (which produce larger harvests on odd-numbered years) and an increased Total Allowable Catch (TAC) for Alaska pollock, the state's (and often the world's) largest single-species fishery. Complete price and value data for 2023 are not yet available, but preliminary data indicate that prices fell for most of Alaska's seafood products, in particular salmon, sablefish, and pollock.

Exports are a key market for Alaska seafood. In 2023, exports of Alaska seafood were valued at an estimated \$2.8 billion, a 6% decrease from 2022 in nominal dollars. The volume associated with these exports totaled 878,000 MT, a 7% increase. The average price across all seafood exports fell by 12% to \$3,225/MT.

Japan was the largest importer by value in 2023, importing \$619 million worth of Alaska seafood. China was the largest importer by volume importing 245,000 MT, more than 25% of Alaska's total seafood exports. European countries and South Korea are also among Alaska's largest trading partners. Trade volume and value regularly fluctuate as harvest volumes change, trade disputes shift trade flows, or the U.S. domestic market increases or decreases in strength, among other factors.

As seen in the most recent Alaska Seafood Marketing Institute (ASMI) report on the economic value of Alaska's seafood industry, the industry supports a total of about 81,000 jobs nationally paying \$5.8 billion in annual labor income (including multiplier impacts). The report - based on 2021/2022 data - can be found online at:

<https://www.alaskaseafood.org/resource/economic-value-report-april-2024/>

Alaska’s robust portfolio of more than 100 commercially harvested species is a valuable asset to the state and nation. Significant potential exists to increase the value of the state’s harvest through sustained innovation, marketing, and exploration of new markets.

Table 1. Ex-Vessel Volume of Alaska Commercial Fishery Species, Million lbs., 2014-2023

Year	Salmon	Sablefish	Pollock, Cod & Rockfish	Halibut	Flatfish	Crab	Other	Total
2014	711	26	3,986	22	643	85	189	5,663
2015	1,083	24	4,102	22	506	94	216	6,046
2016	569	22	4,208	24	518	66	199	5,605
2017	1,025	25	4,183	26	503	38	240	6,040
2018	594	27	4,031	24	485	42	239	5,442
2019	860	29	3,994	25	499	47	208	5,662
2020	521	31	3,778	23	502	54	181	5,091
2021	859	41	3,720	26	374	60	233	5,314
2022	724	55	3,276	24	487	21	239	4,826
2023	920	50	3,642	22	409	23	257	5,324
22/23 % Change	+27%	-9%	+11%	-7%	-16%	+8%	+7%	+10%

Table 2. Ex-Vessel Value of Alaska Commercial Fishery Species (\$millions), 2014-2022

Year	Salmon	Sablefish	Pollock, Cod & Rockfish	Halibut	Flatfish	Crab	Other	Total
2014	\$612	\$98	\$707	\$97	\$92	\$265	\$53	\$1,923
2015	\$491	\$94	\$679	\$100	\$70	\$280	\$54	\$1,769
2016	\$475	\$95	\$629	\$110	\$81	\$267	\$58	\$1,714
2017	\$782	\$124	\$630	\$115	\$94	\$193	\$80	\$2,018
2018	\$686	\$93	\$694	\$88	\$102	\$201	\$93	\$1,956
2019	\$711	\$73	\$720	\$93	\$99	\$226	\$65	\$1,987
2020	\$380	\$51	\$592	\$68	\$83	\$226	\$58	\$1,458
2021	\$775	\$85	\$583	\$117	\$55	\$331	\$65	\$2,011
2022	\$823	\$124	\$670	\$122	\$94	\$136	\$57	\$2,026
21/22 % Change	+6%	+46%	+15%	+4%	+71%	-59%	-13%	+1%

Source: Alaska Department of Fish and Game (ADF&G), National Marine Fisheries Service (NMFS), and McKinley Research Group estimates

Note: Figures may not sum to totals due to rounding. Data for previous years may change due to revisions to harvest volume or value.

Domestic Information: 2023 Alaska Salmon Harvest

Commercial harvest of the five salmon species in Alaska usually contributes about 15% of the state's total harvest volume and more than 30% of harvest value. Harvest occurs annually between May and October with production peaking in July and August.

Based on preliminary Alaska Department of Fish and Game data, 920 million pounds of salmon were harvested in 2023. Sockeye salmon contributed more than 284 million pounds making up 31% of the total statewide salmon harvest. Pink and keta (also called chum) harvests totaled about 468 million pounds (51% of total) and 151 million pounds (16%), respectively. Coho and Chinook salmon harvests totaled about 15 million pounds or roughly 2% of total salmon harvests. Preliminary 2023 ex-vessel value exceeded \$399 million and has the potential to increase once the data are finalized.

Due to the two-year life cycle of pink salmon, even-numbered years tend to show significantly lower returns than odd-numbered years. The 2023 pink salmon harvest was 99% above 2022. Prince William Sound is typically the primary region producing pink salmon, followed by Southeast and Kodiak. Over the past decade pink salmon have contributed about 45% of the total salmon harvest volume in Alaska, ranging from a high of 62% to a low of 25%. The relatively affordable fish has contributed about 23% of the total ex-vessel value over the past decade.

Measured by contribution to total ex-vessel value, sockeye salmon are the most valuable species harvested in Alaska. The species contributes more than half of the total salmon ex-vessel value in a typical year, exceeding 60% at times. Bristol Bay represents the world's largest wild sockeye fishery, accounting for about two-thirds of Alaska's sockeye harvest over the last decade. The largest recorded sockeye run in the region occurred in the 2022 season, with 60 million fish harvested.

Keta salmon are Alaska's second largest salmon species, weighing between seven and eight pounds on average. Also referred to as chum salmon, the species is widely harvested from Southeast to Kotzebue Sound. In recent years, keta have composed around 15% of both ex-vessel volume and value for Alaska salmon species.

Coho salmon harvests contributed roughly 3% of salmon volume and 5% of value between 2014 and 2023. Southeast Alaska is the primary harvest area, followed by the Kodiak area and Prince William Sound. The species generally receives a higher ex-vessel price than pink and keta salmon, and in recent years a higher price than sockeye salmon.

Chinook (or king) salmon is the most valuable and largest of the five species. While the Chinook salmon harvest accounted for less than one percent of total volume over the 2014 to 2023 period, the species contributed 3% of total value.

Note: 2023 harvest data are preliminary and subject to change. Though harvest volumes rarely change significantly on a percentage basis, ex-vessel value totals can change by about 10 to 20% when post-season adjustments are added. Therefore, 2023 ex-vessel value figures are considered a conservative estimate of the final value.

Table 3. Alaska Salmon Harvest Volume and Ex-Vessel Value, 2021-Preliminary 2023

Species	2021		2022		Preliminary 2023	
	Volume (Million lbs.)	Value (\$million)	Volume (Million lbs.)	Value (\$million)	Volume (Million lbs.)	Value (\$million)
Sockeye	270	\$480	376	\$549	284	\$181
Keta	83	\$77	101	\$121	151	\$75
Pink	487	\$221	235	\$131	468	\$114
Coho	16	\$25	9	\$15	13	\$14
Chinook	3	\$15	3	\$16	2	\$15
Total	859	\$819	724	\$832	920	\$399

Source: ADF&G

Note: Figures may not sum to totals due to rounding. Data for previous years may change due to revisions to harvest volume or value.

2023 Salmon Value

Preliminary ex-vessel salmon value from the 2023 season was \$399 million. This is down 52% from the final 2022 value of \$832 million. Preliminary values exclude post-season adjustments which can increase the final value of the harvest significantly. For example, the preliminary value for 2022 was revised upwards by \$112 million (+15%) due to post-season adjustments.

Preliminary ex-vessel prices per pound were down in 2023 from 2022 for all salmon species except Chinook salmon.

Table 4. Average Ex-Vessel Price per Pound for Alaska Salmon Species, 2019–Preliminary 2023

Year	2019	2020	2021	2022	Preliminary 2022	Preliminary 2023
Sockeye	\$1.61	\$1.12	\$1.78	\$1.46	\$1.25	\$0.64
Keta	\$0.54	\$0.47	\$0.92	\$1.20	\$1.08	\$0.49
Pink	\$0.33	\$0.38	\$0.45	\$0.56	\$0.43	\$0.24
Coho	\$1.13	\$1.24	\$1.52	\$1.67	\$1.57	\$1.07
Chinook	\$4.36	\$4.74	\$5.70	\$6.13	\$5.58	\$5.89

Table 5. Ex-Vessel Value of Alaska Salmon Species (\$million), 2019–Preliminary 2023

Year	2019	2020	2021	2022	Preliminary 2022	Preliminary 2023
Sockeye	\$460	\$245	\$480	\$549	\$474	\$181
Keta	\$71	\$28	\$77	\$121	\$111	\$75
Pink	\$137	\$77	\$221	\$131	\$102	\$114
Coho	\$28	\$19	\$25	\$15	\$15	\$14
Chinook	\$14	\$12	\$15	\$16	\$19	\$15
Total	\$711	\$380	\$819	\$832	\$720	\$399

Source: ADF&G

Note: Figures may not sum to column totals due to rounding.

Alaska Salmon Harvesting Employment

In 2022 (the most recent data available), an estimated monthly average of 6,332 individuals harvested seafood in Alaska. The statewide monthly average for salmon harvesting employment alone in 2022 was 3,470 jobs, more than half the statewide total for all species. Seafood harvesting employment is particularly valuable to rural areas in Alaska that often lack other viable economic opportunities.

Alaska’s salmon fisheries are managed with a limited entry system, where fishermen own permits to gain access to specific fisheries. Since the early 2000s, the estimated value of all salmon permits combined has generally continued to trend higher as the total ex-vessel value of the harvest has increased. The estimated total value decreased in 2021, but rebounded and reached a new record high in 2022.

Table 6. Alaska Salmon Harvesting Employment and Total Permit Value, 2008-2023

Year	Salmon Permits Fished	Ex-Vessel Value (\$million)	Harvest Volume (million lbs.)	Peak Salmon Harvesting Employment	Avg. Monthly Salmon Harvesting Employment	Estimated Total Salmon Permit Value
2008	7,472	\$436	689	16,308	3,739	\$460
2009	7,372	\$402	705	16,611	3,830	\$450
2010	7,639	\$586	795	19,608	4,471	\$520
2011	7,983	\$635	768	20,344	4,681	\$690
2012	7,881	\$557	633	21,130	4,551	\$700
2013	7,823	\$746	1,045	21,088	4,505	\$730
2014	7,962	\$612	711	21,317	4,710	\$850
2015	7,910	\$491	1,083	21,409	4,759	\$810
2016	7,327	\$475	569	20,398	4,435	\$640
2017	7,299	\$794	1,025	20,569	4,577	\$690
2018	7,136	\$692	594	19,755	4,249	\$740
2019	7,198	\$711	860	20,334	4,342	\$790
2020	6,461	\$402	524	17,846	3,649	\$810
2021	6,333	\$819	859	17,767	3,611	\$790
2022	6,148	\$832	724	17,293	3,470	\$890
2023*	Not available	\$399	920	Not available	Not available	Not available

*2023 figures are preliminary.

Sources: ADF&G, Commercial Fisheries Entry Commission (CFEC), and Alaska Department of Labor and Workforce Development

National Importance of Alaska Salmon Production

Alaska is the main salmon-producing state in the nation, typically contributing more than 97% of all wild salmon volume annually harvested in the United States. Outside of Alaska, Washington harvests the most salmon, followed by Oregon and California. Alaska’s annual salmon harvest has been as high as a billion pounds in the past decade while all other states contribute about 10 million pounds annually in recent years.

Domestic Information: Alaska 2023 Groundfish and Flatfish Harvest

Alaska's groundfish and flatfish fisheries typically account for about 80% of the state's total seafood harvest volume and half of the entire U.S. harvest volume each year.

The groundfish and flatfish harvest of 1.9 million MT in 2023 represents a 9% increase from 2022. The total increase was caused by a 13% increase in groundfish harvest and came in spite of a 17% drop in flatfish harvests.

The biggest driver of the increased groundfish harvest in 2023 was Alaska pollock. Alaska pollock harvests rose by 17%. Landings for Pacific cod, the next-most harvested Alaska groundfish fell by 8%.

The Acceptable Biological Catch (ABC) of Alaska fisheries is set by fishery managers based on strength of the resource stocks and can be considered an indication of stock abundance. In 2023, the ABC for BSAI groundfish/flatfish fisheries was 3.2 million MT. However, fishery managers limited harvest to a maximum of 2.0 million MT as a conservation measure. While the Gulf of Alaska is not subject to a harvest cap, the TAC is consistently below the ABC level.

Table 7. Alaska Groundfish and Flatfish Harvests (Metric Tons), 2021 – 2023*

Species	Bering Sea and Aleutian Islands			Gulf of Alaska		
	2021	2022	2023	2021	2022	2023
Pacific Cod	112,900	136,900	128,000	12,000	17,300	14,300
Pollock	1,363,900	1,094,900	1,299,300	97,600	128,700	130,500
Sablefish	3,500	6,200	7,300	14,400	17,800	15,600
Atka Mackerel	60,600	57,400	65,600	800	800	400
Rockfish	40,600	42,200	46,000	33,600	33,400	33,900
Other groundfish	8,900	12,700	12,700	200	400	400
Groundfish Total	1,590,400	1,350,300	1,558,900	158,600	198,400	195,100
Halibut**	1,300	2,200	1,200	6,500	6,700	5,900
Sole	129,700	182,600	145,600	800	1100	800
Other flatfish	31,500	27,600	30,200	9,600	11,300	9,100
Flatfish Total	162,500	212,400	177,000	16,900	19,100	15,800
Grand Total	1,752,900	1,562,700	1,735,900	175,500	217,500	210,900

Sources: NMFS and International Pacific Halibut Commission

*2023 data are preliminary.

** Halibut figures are represented on a net-weight basis.

Note: Values may not sum to totals due to rounding. Sole includes flathead sole, rex sole, yellowfin sole, and rock sole. Rockfish includes all named rockfish species and Pacific Ocean perch. Other flatfish includes Arrowtooth flounder, Kamchatka flounder, Alaska plaice, Greenland turbot, and unidentified flatfish species. Other groundfish includes skates, and other species. Figures shown above do not include relatively small Alaska groundfish harvests from state-managed fisheries. Figures have been updated to exclude discarded volume where possible.

The estimated volume of Alaska groundfish and flatfish exports totaled about 675,000 MT in 2023, a 12% increase from 2022. The value of these exports totaled \$1.9 billion. Over the last decade, groundfish and flatfish have represented about three-quarters of the volume of Alaska's seafood exports, and about two-thirds of the value.

Table 8. Groundfish and Flatfish Exports, 2017 – 2023*

Year	Export Value (\$000's)					Export Volume (mt)
	Groundfish	Flatfish	NSPF	By-Products	Total	
2017	\$1,574,600	\$201,820	\$150,860	\$157,380	\$2,084,660	834,300
2018	\$1,677,900	\$186,090	\$164,790	\$155,510	\$2,184,290	833,800
2019	\$1,594,160	\$204,670	\$142,930	\$142,050	\$2,083,810	784,300
2020	\$1,343,530	\$189,450	\$111,570	\$142,100	\$1,786,650	701,300
2021	\$1,265,400	\$151,970	\$84,820	\$150,800	\$1,652,990	626,700
2022	\$1,336,490	\$205,550	\$82,450	\$116,150	\$1,740,640	602,100
2023*	\$1,465,100	\$196,270	\$82,340	\$154,420	\$1,898,130	674,900

Source: NMFS

*2023 figures are preliminary.

Alaska Pollock

The Alaska pollock fishery is the nation's largest single-species fishery by volume, with harvests averaging about 1.4 million MT in recent years. Following the lowest export volume and value in more than a decade in 2022, exports rose in 2023, exceeding \$1 billion for the first time since 2019.

The fillet/H&G proportion of export value rose slightly to 42% in 2023, while the surimi share dropped to 47%. This reflects lower surimi prices, rather than production mix trends, which favored surimi over fillet and H&G in 2023. Average export prices for Alaska pollock surimi fell 12% from 2022 to \$2,671/MT.

Alaska pollock roe prices have been in long term decline because of weakening demand from Japan and South Korea as consumers age and tastes change. However, pollock roe value as a percentage of total pollock export value ticked up in 2023 due to stronger prices. Average pollock roe prices of \$5,628/metric ton were the highest since 2018.

Japan, the Netherlands, Germany, and the United States are typically the largest consumers of Alaska pollock, with South Korea and China the largest reprocessing or handling markets. Although data are limited, some sources indicate South Korea primarily supports export activity through cold storage of product which is re-exported to other Asian countries.

Table 9. Export Volume & Value of Pollock Products, 2017-2023

Year	Export Volume of Pollock Products (mt)	Export Value of Pollock Products (\$000's)	Roe Export Value (% of Total)	Fillet and H&G Export Value (% of Total)	Surimi Export Value (\$ of Total)
2017	397,900	\$1,007,500	11%	44%	42%
2018	415,200	\$1,129,100	13%	42%	42%
2019	380,100	\$1,119,900	13%	43%	43%
2020	323,500	\$941,900	14%	42%	42%
2021	311,400	\$898,800	10%	38%	49%
2022	274,100	\$885,600	8%	41%	49%
2023*	326,300	\$1,004,400	10%	42%	47%

Table 10. Surimi from Alaska Pollock, 2017 – 2023

Year	Total Production (MT)	Exported (MT)	Export Value (\$000)	Export Price \$/MT	Surimi as % of Pollock Export Value
2017	207,334	185,236	426,600	\$2,303	42%
2018	206,300	185,836	478,300	\$2,574	42%
2019	199,199	174,127	476,800	\$2,738	43%
2020	177,141	151,900	397,600	\$2,618	42%
2021	193,688	167,430	443,700	\$2,650	49%
2022	161,297	143,059	434,500	\$3,037	49%
2023*	195,107	177,010	472,900	\$2,671	47%

Source: NMFS

*2023 data are preliminary.

Note: Historical figures used in previous reports have been revised. Export figures do not include ancillary or composite products.

Pacific Cod

Pacific cod is the second-most important Alaska groundfish species by volume and value after pollock. Landings reached a 25-year low in 2021, increased in 2022, and fell slightly in 2023 due to changes to the Total Allowable Catch.

Despite lower harvest and production in 2023, export volumes increased by 33%, indicating a decreased proportion of production staying in the U.S. domestic market. Average export prices

also increased for Pacific cod in 2023. Total export value was nearly \$145 million, up more than 50% from 2022.

China, Japan, and Europe are the main export destinations for Pacific cod. China, Portugal, and Norway are primarily reprocessing centers where cod are either filleted or turned into a salted product for re-export. The global supply of Atlantic and Pacific cod has experienced large declines in recent years and global harvest continued to decline in 2023, reducing overall cod supply by 14%. Alaska was previously the main global producer of Pacific cod, but Russia overtook Alaska in 2020.

Table 11. Pacific Cod Production, Exports, and World Cod Supply, 2017-2023

Year	Total Production (MT)	Exported (MT)	Export Value (\$000)	Export Price \$/MT	World Atlantic and Pacific Cod Supply (MT)
2017	135,973	89,739	\$283,700	\$3,161	1,765,680
2018	111,694	70,120	\$241,800	\$3,448	1,637,296
2019	101,042	62,426	\$207,100	\$3,318	1,574,884
2020	79,804	42,403	\$131,200	\$3,094	1,498,688
2021	67,559	29,348	\$88,400	\$3,011	1,532,183
2022	83,648	30,813	\$96,700	\$3,137	1,462,230
2023*	75,807	41,064	\$145,900	\$3,552	1,260,000

Sources: NMFS, Food and Agriculture Organization of the United Nations (FAO), and Groundfish Forum
 *2023 data are preliminary.

Sole, Flounder, and Plaice (Flatfish)

Alaska’s flatfish fisheries primarily include a variety of sole, flounder, and plaice species. While halibut and skates are sometimes included in this category, the following data and narrative exclude these species.

Most of the state’s flatfish volume comes from fisheries in the Bering Sea/Aleutian Islands region with modest volume produced in the Gulf of Alaska. Nearly all flatfish are harvested with trawl gear and most flatfish is processed (headed and gutted) at-sea.

Harvest in 2023 totaled about 186,000 MT. Of all species included in the flatfish category, yellowfin sole contributes the most volume and value. Harvest volume for flatfish in 2023 was well below the peak of nearly 300,000 MT in 2013 and 2014 due to a variety of factors. One reason for the low harvest for flatfish is the trawl fleet's bycatch limits. These limits on the fleet's catch of nontargeted species such as Pacific cod can reduce the harvest of lower value species because the fleet stops fishing for flatfish to avoid exceeding the bycatch limits.

On average about half of the flatfish total allowable catch (TAC) has been harvested in recent years. This is a sharp contrast to other Alaska fisheries such as pollock, crab, and halibut which generally harvest 90% or more of the available TAC. In 2023, only 31% of the flatfish TAC was harvested in Alaska.

Most flatfish harvested in Alaska is exported to China as a frozen H&G or frozen whole-fish product. These fish undergo secondary processing and are then re-exported to other markets, primarily in Europe and North America.

Exports of Alaska flatfish totaled 91,156 MT, worth about \$140 million in 2023. Compared to the prior year, export volume increased by 2%, while export value fell slightly, indicating lower prices on average in 2023 for flatfish.

Table 12. Flatfish Harvest and Estimated Exports, 2017 – 2023

Year	Total Flatfish Harvest	Estimated Ex-vessel Value	Estimated Exports (MT)	Estimated Export Value (\$000's)	Export Price (\$/mt)
2017	228,023	\$93,800	91,954	\$134,200	\$1,460
2018	220,067	\$101,800	85,434	\$132,800	\$1,554
2019	226,377	\$99,200	90,388	\$144,800	\$1,602
2020	227,880	\$82,900	91,249	\$136,000	\$1,491
2021	169,520	\$54,900	55,141	\$82,500	\$1,496
2022	220,778	\$93,800	89,489	\$141,200	\$1,578
2023*	185,728	Not available	91,156	\$140,400	\$1,540

Source: NMFS

*2023 data are preliminary.

Note: Harvest figures include the following NMFS flatfish species groups: Alaska Plaice, Kamchatka flounder, Arrowtooth flounder, flathead sole, BSAI other flatfish, GOA deep water flatfish, GOA shallow water flatfish, rex sole, Greenland turbot, rock sole, and yellowfin sole. Export figures include fewer species than reflected in the harvest figures due to data limitations. Export figures include only sole, Greenland turbot and plaice, and exclude NSPF ("Not Specifically Provided For," a category that includes products such as fish meal and fish oil).

Pacific Halibut and Sablefish

Although Pacific halibut and sablefish (also known as black cod) have different physical attributes, the two species share a similar fishery management structure and are often harvested by the same vessels. Both species are high-end seafood products, often valued at more than \$10,000/MT at the harvest level. Halibut and sablefish are primarily caught with longline gear by fishermen who hold individual fishing quota (IFQ) shares. Increasingly, pots are being used to harvest sablefish and some sablefish are harvested by trawl vessels.

Halibut harvests are often quoted in terms of "net-weight," which is equivalent to the weight of the fish after it has been headed and gutted, although in this document round unprocessed

pounds are used unless otherwise noted. Sablefish harvests are generally reported in round pounds.

In 2023 halibut harvest levels in Alaska fell to a new 30-year low of about 10,000 MT (round weight), a 7% decrease from the previous year caused by lower catch limits for halibut. The 2023 halibut harvest represents less than a third of the annual halibut harvest that took place in the early 2000's.

Most Pacific halibut harvested in Alaska goes to the U.S. domestic market. Industry sources indicate some of this volume may be transported by truck through Canada to the domestic U.S. market. About 1,000 MT of Pacific halibut was exported from Alaska in 2023, all of it going to Canada.

Several thousand metric tons of Greenland turbot (also called Greenland halibut) are harvested in Alaska annually. Greenland turbot are smaller than Pacific halibut with a similar taste profile. Greenland turbot is included in the flatfish category in this document.

The estimated 2023 sablefish harvest of about 23,000 MT was 9% less than 2022 and came despite an increased TAC for sablefish in 2023. The fishing fleet harvested only 59% of the sablefish TAC in 2023, compared to about 70% in 2021 and 2022. A large drop in the price of sablefish in its primary market, Japan, led to low prices and limited interest in sablefish from processors in Alaska and diminished fishing effort. Most sablefish caught in Alaska is exported, approximately 70% in recent years.

Crab

Alaska commercial crab fisheries consists of four main species groups: snow crab (*Chionoecetes opilio*), tanner crab (*Chionoecetes bairdi*), king crab (both red king and golden king crab), and Dungeness crab. Snow crab and king crab were historically the most valuable crab fisheries, but recent closures of major snow crab and king crab fisheries in Alaska have disrupted the species distribution and overall scale of commercial crabbing in Alaska. Snow crab and tanner crab are combined in the table below. Both are often sold under the name "snow crab" although efforts are being made to differentiate Alaska's tanner crab from the wider snow crab category.

Most snow and king crab are harvested in the Bering Sea. The harvest season spans two calendar years, opening in August or October (depending on the species) and closing in the following spring (or when the quota is reached). Traditionally, most king crab volumes are harvested before January 1st while snow crab is harvested after the first of the year. Dungeness crab are harvested primarily in Southeast, in addition to some activity around Kodiak and the Alaska Peninsula.

Based on a preliminary estimate, the total Alaska crab harvest volume increased in 2023, largely because of a limited re-opening of the Bristol Bay red king crab fishery in the 2023/2024 season following two years of closures because of low crab abundance. The federal Bering Sea snow crab fishery, the largest source of snow crab in Alaska in recent years was closed in both the 2022/2023 and 2023/2024 seasons, although the estimated snow/tanner crab harvest in Alaska was up in 2023 because of increased harvest in state-managed tanner fisheries.

Although estimated crab harvest volume was up in 2023, total value was down, based on estimates from spot prices that show crab prices generally fell in 2023, after hitting record highs in early 2022.

Table 13. Alaska Crab Harvest and Ex-Vessel Value, 2022 – 2023

Species	2022 Harvest (MT)	2023* Harvest (MT)	2022 Ex-Vessel Value (\$million)	2023* Ex-Vessel Value (\$million)
King Crab	2,010	3,124	\$47	\$54
Snow & Tanner Crab	4,183	5,469	\$66	\$40
Dungeness Crab	3,485	1,662	\$19	\$9
Total Alaska Crab	9,677	10,255	\$132	\$103

Source: ADF&G and NMFS

*2023 volumes and values are MRG estimates.

Pacific Herring

Alaska herring was once among the state’s most valuable commercially harvested species, with ex-vessel earnings totaling \$61 million in 1996. Recent harvests have annually produced less than \$7 million on average due to sharply lower demand and market prices.

Herring is primarily harvested for its roe with Japan traditionally the largest market. Falling demand and popularity of herring roe (*kazunoko*) in the country has driven the harvest value lower.

Herring is harvested statewide, beginning in Sitka in early spring followed (prior to 2023) by Kodiak and Togiak, in the Bristol Bay region. Most Alaska herring fisheries occur before spawning to maximize roe recovery. Market value is especially dependent on fish size. In addition to the spring roe harvest, a smaller harvest also occurs in the fall, targeting herring that are used for bait. A third type of herring harvest is the spawn-on-kelp fishery, which involves catching herring and confining them to pounds while they spawn and then gathering the herring-egg-covered kelp, which is salted and sold to Japan where it is a delicacy known as komochi kombu.

In 2022, the most recent year with available data, statewide herring harvest totaled about 36,000 metric tons, with an ex-vessel value of about \$10.5 million, the largest ex-vessel value since 2014.

The harvest fell in both 2023 and 2024, based on preliminary data, largely because the Togiak roe fishery, usually the largest, did not take due to low prices and lack of interest from processors. In 2024 there was also no harvest in Kodiak. The limited herring harvest comes in spite of large available biomass in recent years in all three regions. State biologists set a record high guideline harvest level of more than 73,000 metric tons in the 2024 Sitka Sound herring sac roe fishery, but less than 20% of it was harvested, according to initial reports.

Other Shellfish and Mariculture

Alaska commercially harvests a variety of shellfish and other marine invertebrates and has a growing mariculture industry that produces mostly seaweed and oysters.

In 2022 (the most recent year with available data), the wild harvest of sea cucumbers, clams (mostly geoducks), sea urchins, and shrimp totaled 1,500 MT and was worth \$13 million. Fisheries for these species are generally small in scale and focused on premium markets, mainly in East Asia. The most significant fishery is the sea cucumber fishery, which as in previous years remains impacted by Chinese tariffs.

Alaska is favorably positioned to expand mariculture production of oysters, geoducks, mussels, and seaweed. In 2023, 37 aquatic farms were active across Alaska, the largest number since 2017 when there were also 37.

Domestic Information: 2023 Preliminary Data and 2024 Outlook

Preliminary 2023 data show Alaska's commercial fishing harvests totaled 5.3 billion pounds in round weight terms. When data are finalized, this harvest level is expected to be up 10% from 2022.

Year-over-year harvest volume increases were largest for salmon (+27%), pollock, cod and rockfish (+11%), and crab (+8%). Volume decreases were largest for flatfish (-16%), sablefish (-9%), and halibut (-7%).

While ex-vessel value figures for 2023 fisheries are not yet available, the total ex-vessel value is expected to be down an estimated 30% in 2023 despite the increased harvest volume.

2024 Alaska Salmon Projections

The 2024 Alaska salmon harvest is projected to total roughly 135 million salmon, a decrease of roughly 95 million fish from 2023, if realized. Actual harvests may vary significantly from projected amounts.

Pink salmon harvests are typically smaller in even-numbered years, so it is appropriate to compare 2024's expected harvest with prior even-numbered years. The 2024 pink salmon harvest projection is roughly in line with recent even-year salmon harvests.

SOCKEYE SALMON

Sockeye is Alaska's most valuable salmon species, contributing more than half of the total salmon harvest value over the past decade. It is important to note that sockeye salmon sizes have seen a downward trend; therefore, a larger number of fish does not necessarily equate to an increase in harvested pounds or total harvest value.

About 39.5 million sockeye salmon are projected to be harvested in 2024. A harvest of this size would represent a 24% decrease from 2023, and a 23% decrease from the 10-year average.

PINK SALMON

Pink salmon are the most numerous of the five Alaska salmon species. For every 10 salmon harvested in the last decade, more than six have been pink salmon.

Pink salmon harvests in 2024 are projected at 69.1 million fish, a 55% decrease from 2023. This decrease is primarily due to the two-year life cycle of pink salmon, which results in significantly weaker harvests in even-numbered years. The forecasted 2024 harvest level is about 40% lower than the 10-year average including odd years, but in line with the 10-year average of even-numbered years.

KETA (CHUM) SALMON

An estimated 24.3 million keta salmon are expected to be harvested in 2024. A keta harvest of this size would be up 3% from 2023, and a 30% increase over the 10-year-average which included the record harvest of 25 million keta in 2017.

COHO

Of the five salmon species harvested in the state, coho contributes the second-smallest volume (and value) behind Chinook. The 2024 forecast of 2.6 million coho is 14% higher than the 2023 harvest, yet 33% below the 10-year average.

CHINOOK SALMON

Chinook salmon contribute the lowest volume of all salmon species harvested in the state, yet are the most valuable in terms of price per pound. Chinook are the largest of the five Pacific salmon species caught in Alaska. Southeast is the primary Chinook-producing region in the state.

In 2024, a projected 230,000 Chinook salmon will be harvested in the state. This harvest would be 2% lower than 2023 harvest, and 30% below the annual average harvest from the last decade.

Table 14. Actual Alaska Salmon Harvests and 2024 Projections, Millions of Fish

	2014-2023 Average Harvest	2014-2023 Even Year Avg. Harvest	2023 Harvest	Projected 2024
Pink	115.90	69.00	152.36	69.08
Sockeye	51.15	50.69	51.82	39.49
Keta	18.75	16.19	23.48	24.29
Coho	3.94	4.11	2.31	2.64
Chinook	0.33	0.34	0.23	0.23
Total	190.06	140.34	230.20	135.73

Source: ADF&G

Note: Values have been rounded. 2023 data are preliminary.

Groundfish and Flatfish Production Outlook for 2024

The 2024 TAC for Alaska groundfish and flatfish fisheries is 2.5 million MT, which is 2% larger than the 2023 TAC. The 2024 TAC is up for Pacific cod (+17%), Alaska pollock (+3%, with all of the increase in the smaller Gulf of Alaska fishery, not the larger fishery in the Bering Sea). The TAC is up 7% for rockfish, Atka mackerel and skates. The TAC is down for all other species groups, with the biggest drop for flatfish, down 5%. Among flatfish, the TAC was reduced the most for yellowfin sole (-15%).

Note that 2024 TAC figures should be considered preliminary and are subject to change.

Table 15. Alaska Groundfish and Flatfish Total Allowable Catch by Species Group (Metric Tons), 2022-2024

Species	2022 TAC	2023 TAC	2024 TAC	2024 YoY Pct. Change
Alaska Pollock	1,271,367	1,475,878	1,514,970	+3%
Flatfish	609,581	575,126	545,509	-5%
Pacific Cod	174,374	153,936	179,600	+17%
Rockfish	104,408	102,368	109,617	+7%
Atka Mackerel	69,481	72,282	77,687	+7%
Skates	32,063	29,888	31,977	+7%
Sablefish	34,201	39,179	38,574	-2%
Pacific Halibut	9,757	8,614	8,378	-3%
Total	2,305,232	2,457,271	2,506,312	+2%

Source: North Pacific Fishery Management Council and International Pacific Halibut Commission

Note: Figures may not sum to totals due to rounding. Pacific halibut TACs are shown in net weight terms.

Domestic Information: Share of Alaska Seafood Exported

Alaska Groundfish and Flatfish

About 1.9 million MT of groundfish and flatfish were harvested in Alaska in 2023, yielding an estimated 841,000 MT in wholesale seafood products based on the average recovery rate for each species group. In the same year, an estimated 653,000 MT of these products were exported, or about 65% of the total. These estimates indicate a smaller proportion of Alaska groundfish (61%) are exported than flatfish (88%).

Table 16. Estimated Production and Exports of Alaska Groundfish and Flatfish, 2023

Category	2023 AK Production*, MT	2023 US Exports, MT	Percent Exported	2023 Export Value (\$'000)
Groundfish**	737,000	453,000	61%	\$1,465,000
Flatfish	104,000	91,000	88%	\$140,000
By-Products and NSPF Products***	-	109,000	-	\$214,000
Grand Total	841,000	653,000	65%	\$1,819,000

Sources: NMFS Harvest Data and NMFS Foreign Trade Data

* Harvests are presented in finished product weight based on 42% processing recovery from live weight for groundfish and 54% for flatfish.

** Groundfish includes Alaska pollock, cod, rockfish, Atka mackerel, and sablefish. Flatfish includes Greenland turbot, sole, plaice, skates, and halibut.

*** By-products include fish meal, fish oil, and other by-products made from Alaska groundfish and flatfish. Species harvested in lower volumes generally do not have their own trade (HS) codes and instead fall under catch-all NSPF codes. Nearly all NSPF volumes are groundfish or flatfish species.

Note: Figures may not sum to totals due to rounding.

Alaska Salmon

Nearly 186,000 MT of salmon were exported in 2023. The proportion of Alaska salmon exported decreased from 77% in 2022 to 64% in 2023. It is possible for the export proportions to be unreliable as salmon harvested in one year can be exported in the following calendar year. Therefore, averaging the annual production and export volumes from a specified time span can provide a more accurate understanding of total salmon exports.

Between 2019 and 2023, an average volume of 71% of salmon produced in Alaska has been exported. An unknown portion of exports return to the U.S. domestic market after reprocessing.

Table 17. Estimated Alaska Salmon Production Versus Exports, 2018 - 2023

	2018-2023 Avg.			2023 (Preliminary)		
	Produced (MT)	Exported (MT)	Percent Exported	Produced (MT)	Exported (MT)	Percent Exported
All Salmon Species	236,980	169,303	71%	292,031	185,841	64%

Source: ADF&G, NMFS

Note: Produced estimate is based on 70% processing recovery from harvest weight. 2023 production data are preliminary.

Alaska Crab

Cooked and frozen clusters are the primary crab product produced in Alaska, although 2023 export data indicates an increase in the sale of live crab. In recent years, snow crab accounted for most export volume and value, followed by golden king crab, although in 2023 the leading Alaska crab export was nonspecified live or fresh crab exported to China. Industry interviews indicate that live golden king crab and live Dungeness king crab are likely the main products exported under this vaguely defined harmonized system code.

Preliminary data indicate Alaska's crab fishermen harvested about 10,300 MT of crab in 2023, a 6% increase from 2022. Assuming a 70% average recovery rate, more than 7,100 MT of finished crab products were produced in 2023, of which 4,200 MT was exported. This amounts to 60% of total production volume, up from 36% in 2022.

Table 18. Estimated Alaska Crab Production and Exports, 2023

	Estimated AK 2023 Crab Production (MT) ¹	2023 Crab Exports (MT)	Percent Exported	2023 Export Value (\$000)
All Crab Species	7,133	4,266	60%	\$71,981

¹ Estimated crab production is based on a 70% recovery rate of the preliminary harvest volume. This recovery rate was adjusted up from the standard 60% for crab sold as cooked sections because of a higher-than-usual percentage of crab sold live in 2023.

Source: ADF&G, and NMFS.

International Information

Alaska and Global Supply

Although Alaska produces the most seafood of any U.S. state, Alaska harvests accounted for less than 1.2% of the global seafood supply in 2022.

For the first time in 2022, world aquaculture production of fish and shellfish exceeded wild capture harvest. Aquaculture produced 50.9% of supply, compared to 49.1% from wild capture fisheries. This global supply accounting includes fish and shellfish but excludes harvest of “aquatic plants” (including seaweed) and aquatic mammals. Global seafood supply models that include seaweed show aquaculture eclipsed wild capture many years before 2022 due to the large volume of aquaculture-produced seaweed.

Table 19. Alaska’s Role in the Global Seafood Supply (Metric Tons), 2020 - 2022

	2020	2021	2022	Percent of 2022 Global Supply
Global Capture Fisheries (Excluding Alaska)	87,452,776	89,226,644	88,840,302	47.9%
Alaska Capture Fisheries	2,309,053	2,410,239	2,189,227	1.2%
Aquaculture	87,719,189	91,127,210	94,412,723	50.9%
Total Global Seafood Supply	177,481,018	182,764,093	185,442,252	100%

Source: FAO and McKinley Research Group estimates.

Note: These data do not include aquatic plants, aquatic mammals, and count-denominated data (e.g., number of fish). Figures may not sum to column totals due to rounding.

Alaska’s contribution to global supply varies widely by species and species group. Alaska is the largest global producer of sablefish, contributing an estimated 69% of global supply in 2022. The state also contributes the majority of Pacific halibut (64%) and a large portion of Alaska pollock (36%) to the global supply. Other Alaska fisheries, like Pacific cod and flatfish, contribute a far smaller portion of global supply. Alaska's cod harvest was 11% of total Atlantic and Pacific cod harvest in 2022, and the flatfish harvest was 22% of the global flatfish catch.

The five salmon species harvested in Alaska accounted for an estimated 8% of the total salmon global supply (farmed and wild) in 2022. Of the 3.9 million MT of salmon harvested in 2021, 81% was farmed salmon. Of the global wild salmon harvest, Alaska’s share was 45%. Most of the world’s remaining wild salmon harvest occurred in Russia.

While Alaska's king and snow crab species enjoy a high profile, their contribution to total supply was less than 2% in 2022, down from 9% in 2021. This reduction was caused by the closures of the Bering Sea snow crab and Bristol Bay king crab fisheries in 2022.

Table 20. Alaska Harvest of Major Commercial Species versus Global Supply (Metric Tons), 2020 - 2022

Species	2020	2021	2022	Pct. of Global Supply, 2022
Global Salmon	3,633,900	4,204,100	3,885,700	
Farmed Salmon	2,971,100	3,171,500	3,162,800	81%
Wild Salmon	662,800	1,032,600	722,900	19%
Alaska Salmon	236,500	389,800	328,300	8%
Global Alaska Pollock	3,544,300	3,484,200	3,358,600	
Alaska Pollock from Alaska	1,463,000	1,461,500	1,223,600	36%
Global Atlantic & Pacific Cod	1,498,700	1,532,200	1,462,200	
Alaska Pacific Cod	149,100	124,900	154,200	11%
Global King & Snow Crab	232,700	252,900	259,700	
Alaska King & Snow Crab	19,500	23,000	6,200	2%
Global Pacific Halibut	16,100	17,500	16,800	
Alaska Pacific Halibut	10,400	11,800	10,800	64%
Global Sablefish	21,300	27,200	35,000	
Alaska Sablefish	14,000	17,900	24,000	69%
Global Flatfish (ex. Pacific halibut)	1,082,700	1,030,300	1,025,600	
Alaska Flatfish	227,900	169,600	220,800	22%

Source: ADF&G, NMFS, and FAO

Although Alaska accounts for a modest amount of global seafood production, it is a globally important seafood exporter. If Alaska were a country, it would rank the 14th-largest by export value, behind Indonesia (\$3.97 billion) but ahead of Poland (\$2.71 billion), Iceland (\$2.15 billion), and the United Kingdom (\$2.01 billion).

Table 21. Ranking of Top Seafood Exporting Nations and Alaska, 2023

Country	2023 Export Value (\$billions)
Norway	\$15.49
China	\$10.84
Ecuador	\$7.53
Chile	\$7.33
India	\$6.36
Russia*	\$6.18
Sweden	\$5.72
Netherlands	\$5.59
Vietnam*	\$5.49
Canada	\$5.16
United States (includes Alaska)	\$4.44
Alaska	\$2.83
Spain	\$4.44
Denmark	\$4.19
Indonesia	\$3.97
Poland	\$2.71
Iceland	\$2.15
United Kingdom	\$2.01
Total Among Top Exporters	\$99.60

Source: Trade Data Monitor, NMFS

Note: Country-level data include HS 03, 160411, & 160510; Alaska data include a small amount of data outside these codes.

*2023 seafood export data were not available for these countries. The value of seafood imports to all other countries from these countries is used as a proxy.

International Information: World Market Conditions

Whitefish

Whitefish is a category describing a wide range of non-oily, white-fleshed species, especially those in the order *Gadiformes*. This category typically describes species harvested primarily in the North Pacific and North Atlantic. Outside of flatfish species, pollock, hake, haddock, and cod are the most common whitefish. Alaska’s whitefish harvest occurs mostly in the Bering Sea and Aleutian Islands region.

Due in part to the large volume of harvest and long-established processing and consumption traditions, hundreds of different whitefish products are produced globally. Wild whitefish compete with farmed freshwater whitefish including tilapia and pangasius.

Whitefish prices have generally been strong in recent years due to factors including healthy demand and limited wild supply, although prices fell – especially for products such as pollock surimi – in 2023.

Pollock

Measured by volume, Alaska pollock is regularly the largest wild capture species (sometimes surpassed by harvest of the Peruvian anchoveta) and is the most plentiful whitefish species in the world. Russia and the U.S. (Alaska) contribute about 90% of the annual supply. Both regions consume the fish domestically in addition to exporting significant volume to final markets or reprocessing markets, primarily in China.

In Alaska, pollock is harvested and processed with two primary methods. About half of all Alaska pollock is harvested by catcher-processors that process the fish into a variety of products on board. Catcher-processors' pollock often receive higher prices, as processing the fish immediately after harvest preserves quality. The other half is harvested by smaller catcher vessels that bring their catch to shoreside facilities for processing. These shoreside processors can quickly shift production among a variety of different product lines in a way space-constrained catcher-processors cannot.

Key pollock products include frozen fillet blocks, surimi, H&G (headed and gutted), and IQF (individually quick frozen) fillets. Pollock fillets are typically processed by secondary processors (primarily in Europe or China) into a variety of breaded products (e.g., fish sticks/fingers). Pollock roe is also an important higher-value pollock product for Alaska producers although it is consumed almost exclusively in Japan and South Korea.

Estimated 2023 world pollock harvest of 3.7 million metric tons was the largest in 25 years, due to larger harvests in both Alaska and Russia. Average wholesale prices for pollock fell in 2023, especially for pollock surimi.

The 2024 pollock harvest is expected to increase by 3% or more, due to a large increase to the Total Allowable Catch (TAC) on the Russian side of the Bering Sea, and a smaller TAC increase in the Gulf of Alaska.

Increased supply may contribute to lower prices in 2024, although the impacts of new U.S. policy to block the import of Russian-origin seafood on domestic supply are unclear.

In 2023 Russia shifted its pollock production mix in the face of sanctions from the U.S. and European Union, producing fewer fillets, and more whole and headed pollock as well as pollock surimi.

Pacific Cod

After Alaska pollock, Pacific cod remains the second-most important whitefish species in Alaska measured by volume and value. Pacific cod TAC has declined in recent years but rose by 16% in 2024.

Compared to other Alaska groundfish and flatfish, prices were relatively strong for Pacific cod in 2023, likely because of limited global supply of Atlantic and Pacific cod. This trend may continue in 2024, a year in which global supply of Pacific cod and especially Atlantic cod is expected to decrease, despite increased Pacific cod opportunity in Alaska.

Flatfish

Flatfish in Alaska include a wide variety of sole and flounder species, with yellowfin sole contributing the most volume and value. The key product coming from these fisheries are frozen blocks of H&G fish. Most of this product is exported to reprocessing markets in China.

Average export prices were flat for Alaska flatfish in general between 2022 and 2023, while harvest volume was down 17%. Alaska flatfish TAC is down 5% in 2024, but this is an imperfect indicator of 2024 supply because a relatively low percentage of flatfish TAC is usually harvested.

Crab Products (King Crab & Snow Crab)

The Russian invasion of Ukraine transformed the world market for crab products - especially king crab - in 2022. Russia is the world's largest king crab producer and was the primary supplier of king crab to North American markets. In 2021, Russia sold more than \$1 billion in crab (both king crab and snow crab) to the United States.

Starting in June 2022, U.S. sanctions banned the (direct) importation of Russian seafood, including crab. Initially these U.S. sanctions did not apply to Russian products processed in third-party countries (such as China) before coming to the U.S. While significant volumes of other Russian seafood products such as salmon and pollock likely made their way to the U.S. through indirect routes after 2022, import data through March 2024 suggest this has not been the case with Russian crab. Instead of going to the U.S., Russian crab was diverted to other markets, predominantly in East Asia.

Snow crab prices fell to 10-year-lows (at the wholesale level in the United States) in spring 2023, falling rapidly from the record high prices reached in early 2022. Wholesale spot prices for

Canadian snow crab through spring 2024 show a slight recovery in average prices, which is potentially a market reaction to lower anticipated snow crab harvests in 2024.

King crab prices followed a similar trajectory as snow crab through the pandemic and beyond, although with so little king crab product available in the United States there is limited data to judge whether prices have started to recover from the lows experienced in 2023.

Salmon

Global salmon prices have been volatile but on average higher than pre-pandemic prices. The Urner Barry Farmed Salmon Index of Atlantic salmon wholesale fillet prices average \$6.93 per pound in 2023, the second highest annual average price on record, but down 3% from the record 2022 average price of \$7.14. First quarter 2024 prices were lower than first quarter 2022 and 2023 prices.

Farmed Atlantic salmon is a useful barometer for the direction of the overall salmon market since it is the most widely available salmon product on the market. Wild Alaska salmon products, especially sockeye salmon, typically enjoy a price premium over competing farmed Atlantic salmon products. This price premium at U.S. supermarkets averaged \$3.17 per pound in 2023, as tracked by the Bristol Bay Regional Seafood Development Association. This price spread has dropped over the last two years but remains above the average of about \$2.50 in the years before the pandemic.

International Information: Supply Outlook

Whitefish

Consumers have many options to choose from when buying whitefish. Nearly all species offer a neutral taste profile and similar appearance which allows for extensive substitution among species. For example, wild Alaska pollock often competes with farmed tilapia. This dynamic means markets for one type of whitefish impact other types of whitefish.

The projected 2024 global whitefish supply (5.74 million MT) is similar to the estimated 2023 harvest of 5.76 million MT. Global supply is expected to increase slightly for pollock and saithe (which is also known as Atlantic pollock), but decrease for the other species, especially Atlantic cod.

Wild whitefish supply is also expected to be flat based on a wider definition of whitefish used by the Groundfish Forum, which predicts a harvest of 7.04 million tons in 2024. The Groundfish

Forum’s whitefish definition includes additional whitefish species: hakes, hoki, and Pacific whiting.

Farmed freshwater fish, including tilapia and pangasius, are produced in large volumes and frequently compete with wild whitefish species. These farmed species also often sell for a lower price. Tilapia and pangasius farming has expanded rapidly over the last decade. Harvest of the two species groups is expected to be up 4% between 2023 and 2024.

Table 22. Estimated Global Seafood Supply for Select Whitefish Species (000s MT), 2021-2024

Category	2021 Production	2022 Production	2023 Estimate	2024 Outlook
Pollock	3,480	3,360	3,700	3,800
Atlantic Cod	1,150	1,080	920	790
Pacific Cod	390	380	340	330
Saithe	320	340	370	380
Haddock	330	310	280	270
Redfish	190	170	150	170
Total Wild Production	5,860	5,640	5,760	5,740
Farmed Pangasius	3,000	3,290	3,130	3,220
Farmed Tilapia	6,290	6,550	6,700	7,030
Total Farmed Production	9,290	9,830	9,830	10,250

Sources: FAO, Groundfish Forum, and Global Seafood Alliance

Crab (King Crab & Snow Crab)

Alaska is a small contributor to the global king and snow crab supply, accounting for just 2% according to 2022 FAO estimates. This share may grow if the Bristol Bay red king crab and Bering Sea snow crab fisheries recover. These two stocks have historically produced large volumes of snow crab and king crab in Alaska.

Canada is the main global producer of snow crab, (responsible for 45% of world harvest with a particularly large harvest in 2022), followed by Russia (28%). Alaska’s snow crab harvest represented about 2% of the world harvest by volume in 2022, falling behind South Korea, Japan, and Norway because of the large reduction in harvest caused by the closure of the Bering Sea snow crab fishery.

World snow crab supply is forecast to be down slightly or flat in 2024, according to estimates from crab consultant Les Hodges and seafood supplier Tradex Foods Inc., with a lower harvest anticipated in Canada and a record harvest in Norway.

Russia is the world's largest producer of king crab, harvesting 90% of global supply (excluding southern king crab) in 2022. Alaska produced about 5% of global king crab, with Norway catching most of the remaining supply. In addition to king crab from Russia and Norway, Alaska king crab competes with southern king crab from Chile and Argentina.

Alaska's king crab production includes red king crab (*Paralithodes camtschaticus*) and golden king crab (*Lithodes aequispinus*). Golden king crab harvests were historically smaller than red king crab harvests, but golden king crab has been the main king crab harvest in recent years with the closure of the Bristol Bay red king crab fishery in 2021/2022 and 2022/2023. This fishery re-opened with a limited harvest in the 2023/2024 season.

Salmon

Global salmon production is expected to decrease by about 10% in 2024, with an expected increase in farmed salmon production not making up for much smaller wild salmon harvests in Russia and Alaska.

Farmed Atlantic salmon makes up most of the global salmon market, and production of this species is expected to increase by about 4% in 2024, surpassing 3 million metric tons for the first time, according to Norwegian research firm Kontali Analyze. Growth is expected in Norway, the world's largest Atlantic salmon producer, and the United Kingdom. Kontali also predicts production of farmed coho salmon (primarily in Chile) will fall by 20% to less than 250,000 metric tons in 2024.

In Russia, often the largest producer of wild salmon, the federal fishery agency forecasted a 2024 salmon harvest of 320,000 MT, which is down almost 50% from the 2023 Russian harvest. Meanwhile, Alaska's 2024 salmon forecast is for about 275,000 MT, based on fish count forecasts and average fish weights. If realized, this would be a 35% decrease in salmon harvest weight from 2023. Salmon harvests tend to be significantly smaller on even-numbered years in both Alaska and Russia due to two-year fluctuation in pink salmon volumes.

International Information: Competitive Threats

Russian Competition

Competition from Russia will continue to challenge the Alaska seafood industry in 2024 despite a December 2023 executive order that sought to block Russian-origin salmon, pollock, and Pacific cod from entering the U.S. market.

Russia is a key competitor to the Alaska seafood industry as the only other major harvester of many of the species caught in Alaska. For years, lower-priced Russian products have put

downward pressure on Alaska seafood products. In February 2022, the U.S. announced sanctions on Russia for the invasion of Ukraine that blocked the importation of Russian seafood into the U.S. While these sanctions blocked *direct* imports - which largely consisted of frozen king crab and snow crab - they did not prohibit Russian-origin products that were processed in China from entering the U.S. market and competing with Alaska seafood.

Following demands from ASMI, other Alaska seafood industry stakeholders, and Alaska's Congressional delegation, the Biden administration issued Executive Order 14114 in December 2023. The order seeks to close the loophole in sanctions that allowed imports of Russian-origin products that were processed in a third country such as China. This executive order went into effect in May 2024, and it remains to be seen if U.S. Customs enforcement will be effective at identifying and blocking Russian-origin seafood. Even if the new policy is able to halt the flow of Russian seafood into the U.S., these products will continue to compete with Alaska seafood in other key markets such as Japan and Europe.

Consumer Price Sensitivity and Competition from Lower Cost Proteins

Consumer behavior in 2023 demonstrated an ongoing challenge for the seafood industry in general, as it competes with other proteins such as poultry, eggs, pork, and beef. When prices rise and consumers are under pressure to economize, they tend to switch away from seafood, which is often higher-priced than other proteins and seen as a luxury.

In 2023, the signal of fewer seafood purchases reverberated down the supply chain, causing buyers to demand lower prices, in some cases prices that were at or below the operating costs of processors or harvesters in Alaska.

Growth of Aquaculture

New data from the Food and Agricultural Organization of the United Nations (FAO) this year showed that in 2022 world aquaculture production overtook wild seafood harvest as the world's largest source of fish and shellfish. This inflection point in global seafood supply has been coming for years as global wild harvest (which is constrained by natural populations) has been flat while aquaculture has grown rapidly.

Aquaculture is a competitive threat to Alaska's wild seafood industry on both the low-end and high-end of the market.

In the commodity market, farmed seafood is a competitive challenge because of low production costs, consistent year-round supply, and the industry's ability to produce large volumes for the world market. This is especially true of farmed salmon, which already has more than twice the market share of wild salmon. In the whitefish market, farmed freshwater species, like tilapia and pangasius also drive down prices for Alaska's groundfish.

Emerging technologies such as genetically engineered fish and land-based aquaculture systems may further increase the sector's competitiveness through reduced production costs, increased proximity to markets, and other factors.

Alaska has traditionally used the taste, health, and sustainability of the state's wild seafood to differentiate it from low-cost farmed products and command a higher price. Emerging higher-quality farmed products target similar consumers as premium Alaska wild products and make some of the same product differentiation arguments.

China Processing Human Rights Abuses and Geopolitical Tensions

Investigative reporting from The Outlaw Ocean project in 2023 revealed the extent of human rights abuses in the Chinese seafood processing sector, including the use of vulnerable Uyghur and North Korean people for forced labor inside seafood plants.

The Alaska seafood industry's reliance on Chinese reprocessing plants risks the "wild, natural, & sustainable" reputation of Alaska seafood and subjects it to additional regulatory scrutiny. This is especially true if existing audit systems to detect forced labor along a product's supply chain are found to be ineffective, as The Outlaw Ocean's reporting indicates.

The U.S. China trade conflict also complicates the Alaska seafood industry's relationship with China. While Alaska relies on China for seafood processing, the growing Chinese domestic market remains largely closed to the industry as a final market due to high tariffs that make the price of Alaska seafood uncompetitive compared to Chinese products and other foreign products. The tariffs partially spare the reprocessing sector, but not entirely: products imported by China for reprocessing are exempted from Chinese tariffs, but some Alaska products that are reprocessed in China are subject to U.S. tariffs when they are imported by the U.S. for final consumption.

Weak Japanese Yen

The value of the U.S. dollar has dropped from the peak value reached in fall 2022 but remains at historically high levels compared to other major currencies as of spring 2024.

This is especially true of the exchange rate with the Japanese yen. In April 2024, the dollar was trading at a rate of \$1 to ¥157, the lowest value of the yen since 1990. Because Japan is the largest importer of Alaska seafood products by value, the exchange rate between the U.S. dollar and the Japanese yen is an especially important indicator. Japan is a key market for Alaska seafood products including pollock roe, surimi, and sablefish.

Climate Change

Ocean warming and acidification are global problems and a competitive threat to the Alaska seafood industry. Climate change has not been a uniform process. The Arctic region has warmed over two times faster than the rest of the world, disproportionately affecting Alaska's fisheries. Climate change is considered a contributing factor to several recent Alaska fishery collapses, including the Bering Sea snow crab and Yukon River salmon disasters.

McKINLEY RESEARCH GROUP, LLC

3800 Centerpoint Drive, Suite 1100 • Anchorage, AK 99503 • (907) 274-3200
801 West 10th Street • Juneau, AK 99801 • (907) 586-6126

info@mckinleyresearch.com • mckinleyresearch.com