




Castlemain

Analysis of commercial fishing licence, quota, and vessel values

Prepared for Fisheries and Oceans
Canada, Pacific region

As of December 31, 2021



© HER MAJESTY THE QUEEN IN RIGHT OF CANADA, 2022

CAT. NO. Fs1-94E-PDF

ISSN 2816-7090

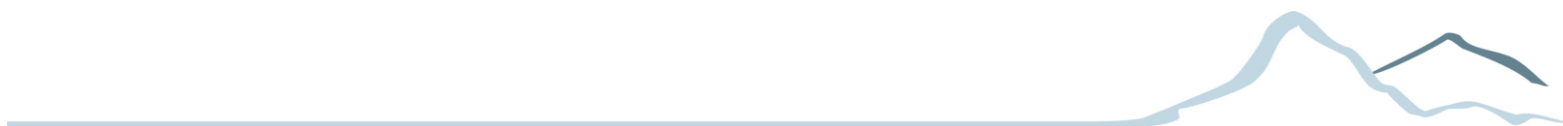
Analysis of commercial fishing licence, quota, and vessel values : prepared for Fisheries
and Oceans Canada, Pacific region : as at December 31, 2021

Citation for this publication:

Fisheries and Oceans Canada (2022). Analysis of Commercial Fishing Licence, Quota, and
Vessel Values as of December 31, 2021.

Contents

Introduction.....	1
Summary: Year ending December 31, 2021	4
Rates of return – leasing.....	12
Methodology.....	13
SALMON – Salmon seine (AS).....	17
SALMON – Salmon gillnet (AG)	22
SALMON – Salmon troll (AT).....	27
PELAGICS – Roe herring seine (HS)	31
PELAGICS – Roe herring gillnet (HG)	35
PELAGICS – Tuna (USA 68).....	39
PELAGICS – Sardine (ZS)	41
GROUNDFISH – Halibut (L)	43
GROUNDFISH – Sablefish (K).....	48
GROUNDFISH – Groundfish trawl (T).....	53
GROUNDFISH – Rockfish hook and line (ZN)	58
GROUNDFISH – Lingcod and dogfish	63
SHELLFISH – Prawn trap (W)	64
SHELLFISH – Crab (R).....	69
SHELLFISH – Shrimp trawl (S).....	72
SHELLFISH – Geoduck (G).....	76
SHELLFISH – Sea cucumber (ZD)	81
SHELLFISH – Red sea urchin (ZC).....	85
SHELLFISH – Green sea urchin (ZA)	89
SHELLFISH – Euphausiid (ZF)	93
Schedule II species (C).....	97
Conclusion	101



Introduction

On an annual basis, with few exceptions over the last three decades, the Indigenous Programs Division at Fisheries and Oceans Canada (DFO) has undertaken a licence and quota valuation study to determine valuations for commercial fishing licences and quota operating in commercial fisheries in the Pacific region.

The information gathered by DFO over the past 28 years of studies has been used for a wide variety of purposes including:

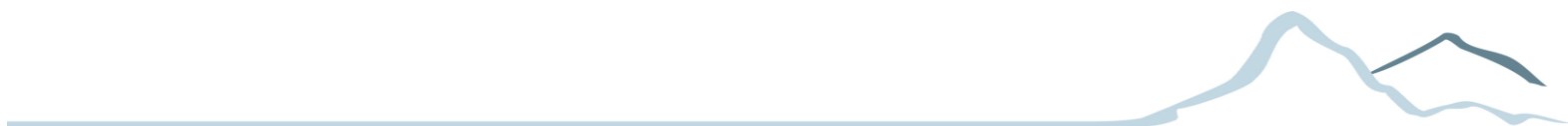
- Informing licence retirement and reallocation programs
- Estimating potential treaty impacts on the commercial fishery
- Gauging and analyzing the economic health of the Pacific fishing industry
- Developing policies around First Nations participation in the fishery and licence redistribution
- Estimating the impacts of policy decisions on the Pacific fishery

This year's report contains an assessment of commercial fishing licence and quota values for the period of January 1, 2021 to December 31, 2021.

Where possible, the valuations in this report are based on individual market transactions. Where no or few market transactions could be uncovered, anecdotal information may have been used, and, where no information could be uncovered, values from the 2020 study were used. In short, this report represents the contractor's best effort to summarize imprecise data into an existing time series of values.

Each valuation has been assigned to a level of confidence for the valuation, ranging from low to high. This is an attempt to qualify the contractor's professional opinion with regards to the accuracy of the valuation and is based on the number of individual transactions that were recorded, the quality of the information, and anecdotal information.

Each species valuation includes a market outlook and commentary section that draws together qualitative insights from interviewees that were contacted as part of the data collection phase of the report. The purpose of the outlook and commentary is to provide a fulsome picture of each individual species market. Interviewees include industry experts, fishers, brokers and/or other market participants in the BC commercial fishery.



Policies and Measures in relation to Salmon and Herring Stocks

Two major changes were announced by the federal government in relation to the Pacific salmon and herring fisheries:

- **Pacific Salmon Strategy Initiative (PSSI):** In June 2021, the Government of Canada initiated the Pacific Salmon Strategy Initiative (PSSI) – a \$647 million initiative aimed at stemming the declines of Pacific salmon and rebuilding populations over the longer term. The PSSI has four key pillars: Conservation and Stewardship, Salmon Enhancement, Harvest Transformation, and Integration and Collaboration. The PSSI is a transformative framework in response to years of engagement with First Nations and key stakeholders, with a vision of working together to conserve and restore priority Pacific salmon populations and their ecosystems, for those who depend on them.
 - In order to mitigate socio-economic impacts to commercial fishers, the Minister of Fisheries, Oceans and the Canadian Coast Guard announced the Commercial Licence Retirement Program (LRP) and the Pacific Salmon Communal Commercial Licence Alternation Program (Alternation Program), which are both voluntary programs. The LRP provides opportunities for fishers to retire their licences at fair market value and permanently exit the fishery. The Alternation Program provides Indigenous communal commercial fishers the opportunity to permanently retire their salmon licence for fair market value in return for financial support to transition to other non-salmon fisheries, as well as support for other eligible expenses (e.g. gear, training and etc.,) related to the new access.
 - As one of the key activities under PSSI, in 2021, the Minister announced several new commercial fishery closures to protect stocks of conservation concern. These closures were implemented on an interim basis in 2021 with a commitment to review longer term closures for 2022 and beyond after additional consultation with affected groups.¹
- **Commercial Herring Fishery:** In December 2021, the Minister of Fisheries, Oceans and the Canadian Coast Guard announced the government's coast-wide harvest plan for 2021-22, which will see most commercial fisheries for Pacific herring closed and limiting the harvesting rate to 10% in the Strait of Georgia.

Both of these changes in government policy have significantly impacted market sentiment and expectations for salmon and herring fisheries. Interviews with interviewees suggest that there is general uncertainty and pessimism regarding the long-term viability of these fisheries.

¹ Fisheries and Oceans Canada. 2021. Southern Salmon Integrated Fisheries Management Plan 2021/22. 21-2051: 600p. Accessed via: <https://waves-vagues.dfo-mpo.gc.ca/Library/40980078.pdf>

COVID-19

The ongoing COVID-19 pandemic has led to unprecedented impacts on the fishing industry. Although it is difficult to predict whether these impacts will be short-term or long-term, it has impacted the value of commercial fishing licences and quota. In general, the pandemic has created structural uncertainties that are likely to persist. Despite the rollout of domestic and international vaccination programs, the emergence of COVID-19 variants has exacerbated uncertainty for the commercial fishery industry.

The pandemic has impacted commercial fisheries through restrictions on access to international markets (particularly Asia) and shifts in demand from the domestic food service industry. The former has impacted commercial fisheries such as sea cucumbers, crabs, and frozen prawns, which have primarily been the export-focused products. Another fishery that has historically depended on international markets, geoduck, remained resilient, underscoring the differential impacts of the pandemic on fisheries.

Closures in the domestic food service (e.g. restaurants) industries hit some fisheries very hard, including sablefish and halibut. Halibut was able to offset some of this decline through the new direct-to-consumer channels. Sablefish, on the other hand, was less approachable for home cooks and did not reflect a similar shift. The decline in overall demand for sablefish continues to be more pronounced.

The pandemic has exacerbated existing supply chain and logistics issues, which continue to persist and have an impact on all fisheries at large. Some fisheries were impacted more severely at the start of the pandemic due to supply chains and markets adapting to new restrictions, general uncertainty in market sentiment persisted throughout all fisheries due to successive waves of the pandemic. However, success of the ongoing vaccination campaign has provided optimism where, the COVID-19 impacts on the commercial fishery industry, along with the broader economy, will attenuate.

Summary: Year ending December 31, 2021

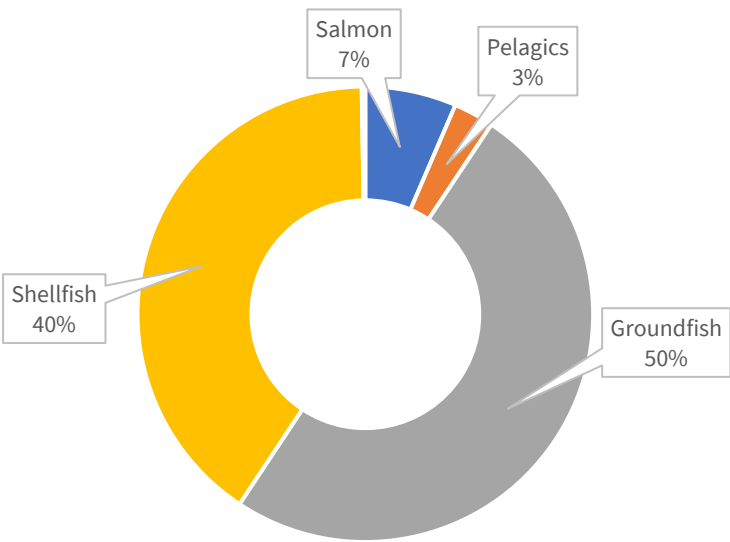
The following table summarizes the market capitalization of the Pacific commercial (not including communal commercial) fishing licences and quota as of December 31, 2021. The total value of licences and quota for the year ending December 31, 2021 was approximately \$2.28 billion, compared to the valuation of \$2.25 billion in 2020.

Fish grouping	Fishery	Licence description	No. of commercial licences	Average licence value (\$)	Aggregate licence value (\$)	Aggregate quota value (\$)	Average quota value (\$/lb)	Total licence and quota value (\$)
Salmon	Salmon seine	AS	208	\$385,954	\$80,278,473	n/a	n/a	\$80,278,473
	Salmon gillnet	AG	798	\$37,806	\$30,169,309	n/a	n/a	\$30,169,309
	Salmon troll	AT	283	\$151,575	\$42,895,713	n/a	n/a	\$42,895,713
Pelagics	Herring – roe herring seine	HS	241	\$84,171	\$20,285,250	n/a	n/a	\$20,285,250
	Herring – roe herring gillnet	HG	979	\$30,199	\$29,564,445	n/a	n/a	\$29,564,445
	Herring – spawn on kelp	J	34	n/a	n/a	n/a	n/a	n/a
	Tuna	USA 68	45	\$250,000	\$11,250,000	n/a	n/a	\$11,250,000
	Sardine	ZS	25	n/a	n/a	n/a	n/a	n/a
Groundfish	Halibut	L	338	\$32,200	\$10,883,600	499,176,150	\$96.35	\$510,059,750
	Sablefish	K	41	\$400,000	\$16,400,000	290,401,990	\$77.67	\$306,801,990
	Groundfish trawl	T	135	\$41,000	\$5,535,000	198,749,531	\$1.70 (uncut) \$0.20 (hake)	\$204,284,531
	Rockfish inside	ZN	52	\$37,500	\$1,950,000	n/a	n/a	\$1,950,000
	Rockfish outside	ZN	158	\$243,000	\$38,394,000	n/a	n/a	\$38,394,000
	Lingcod hook and line	n/a	n/a	n/a	n/a	25,106,213	\$9.75	\$25,106,213
	Dogfish hook and line	n/a	n/a	n/a	n/a	5,037,116	\$0.24	\$5,037,116
Shellfish	Prawn	W	185	\$778,500	\$144,022,500	n/a	n/a	\$144,022,500
	Crab	R	186	\$1,362,000	\$253,332,000	n/a	n/a	\$253,332,000
	Shrimp	S	209	\$32,500	\$6,792,500	n/a	n/a	\$6,792,500
	Geoduck	G	50	n/a	\$12,500,000	\$401,700,000	\$803,400/block	\$414,200,000
	Sea cucumber	ZD	82	\$1,483,000	\$121,606,000	n/a	n/a	\$121,606,000
	Red sea urchin	ZC	80	\$325,000	\$26,000,000	n/a	n/a	\$26,000,000
	Green sea urchin	ZA	48	\$80,000	\$3,840,000	n/a	n/a	\$3,840,000
	Euphausiid	ZF	16	\$40,000	\$640,000	n/a	n/a	\$640,000
Schedule II	Schedule II species	C	308	\$18,500	\$5,698,000	n/a	n/a	\$5,698,000
Total					\$862,036,790	\$1,420,170,999		\$2,282,207,790



2021 Market value by fishery grouping

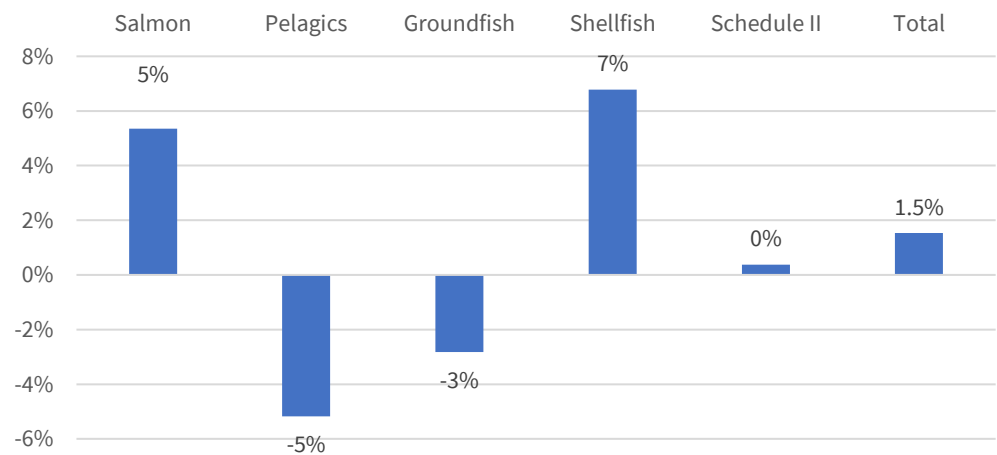
Share of Market Capitalization by Species Grouping



Percentage change in market value by fishery grouping, 2021 vs. 2020

Compared to 2020, total market capitalization grew by 1.5% in 2021.

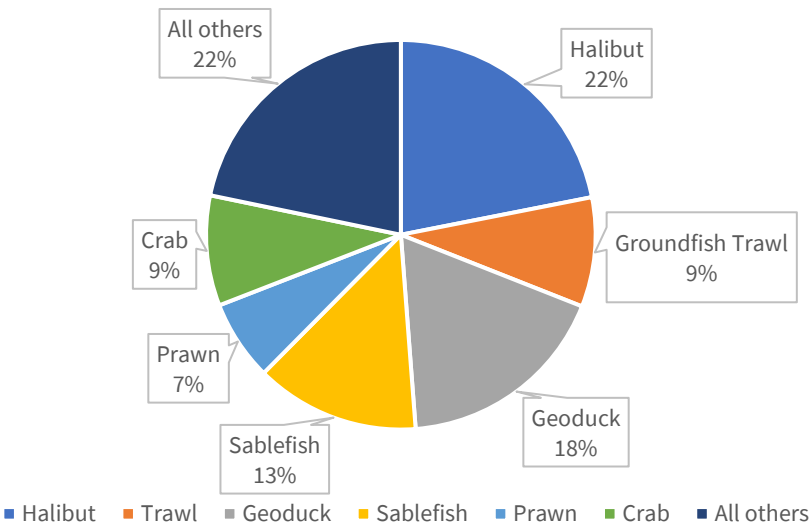
Change in Market Capitalization (2019 - 2020)



Fisheries relative to overall licence and quota values

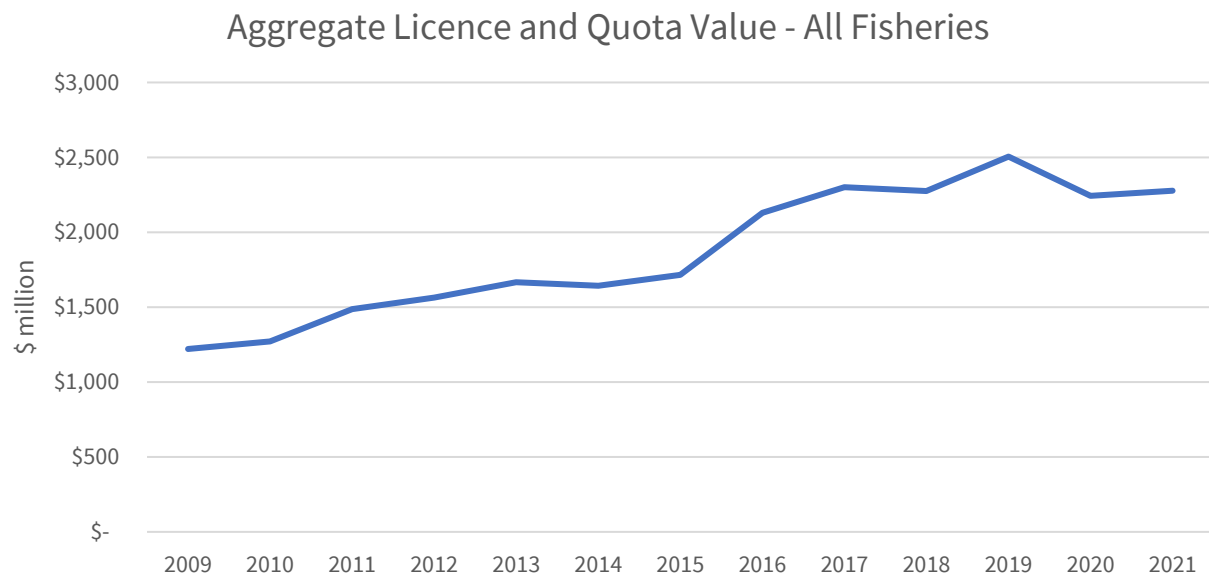
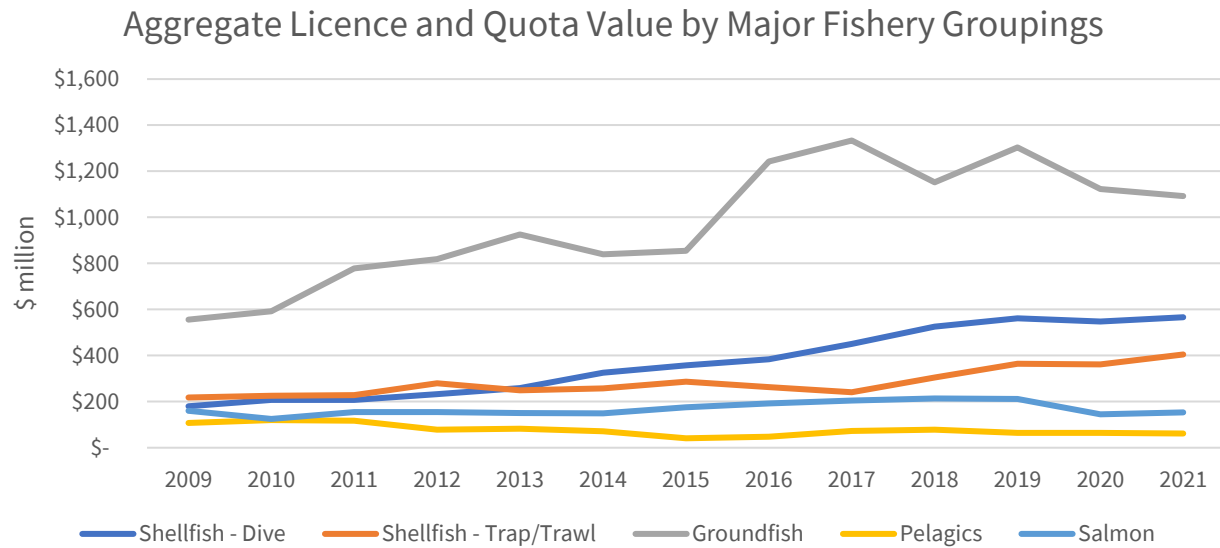
As represented in the chart below, the six fisheries with the largest aggregate licence and quota valuations account for 81% of the total value, while the remaining eighteen fisheries make up the remaining 19%.

Share of Aggregate Licence and Quota Values by Top Six Fisheries



Aggregate licence and quota value by major species

Aggregate values over the past 12 years are shown separately by major fishery grouping and for all fisheries in the charts below.

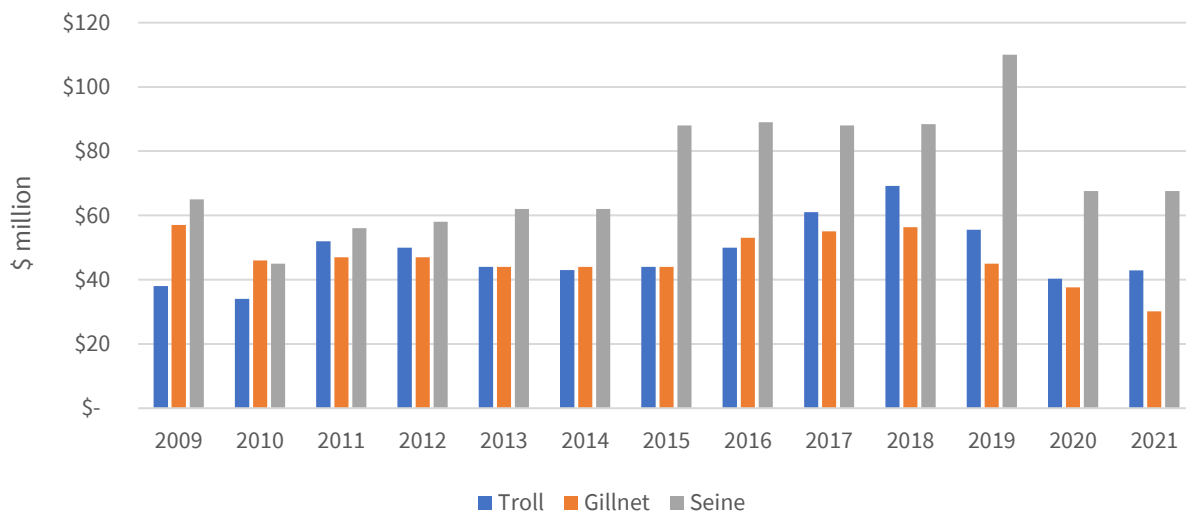


Salmon

Salmon licence values trended slightly upward until 2018 but declined since then till 2020. Licence values recovered in 2021, with seine licences increasing by 18%, troll licences increasing by 6% and gillnet licences increasing by 4%. Interviewees noted part of the increase in value can be attributable to the recovery from the impacts of COVID-19 seen across all fisheries. In addition, part of the recovery in the salmon industry is attributable to the recovery of sockeye returns after the Big Bar Landslide in 2019. Nonetheless, interviewees noted lingering uncertainty with the announcement and implementation of PSSI.

Given the foregoing, most trading activities are stalled and market participants are in a 'wait and see' mode for further information on the implementation of PSSI and PSCTP. Interviewees note that there will likely be increased trading activity over 2022 as the government implements these policies and program. Nonetheless, the long-term viability of the fishery is in question due to loss of access and fishing opportunities as well as the health of the salmon population in BC.

Salmon licence values by type, 2009-2021



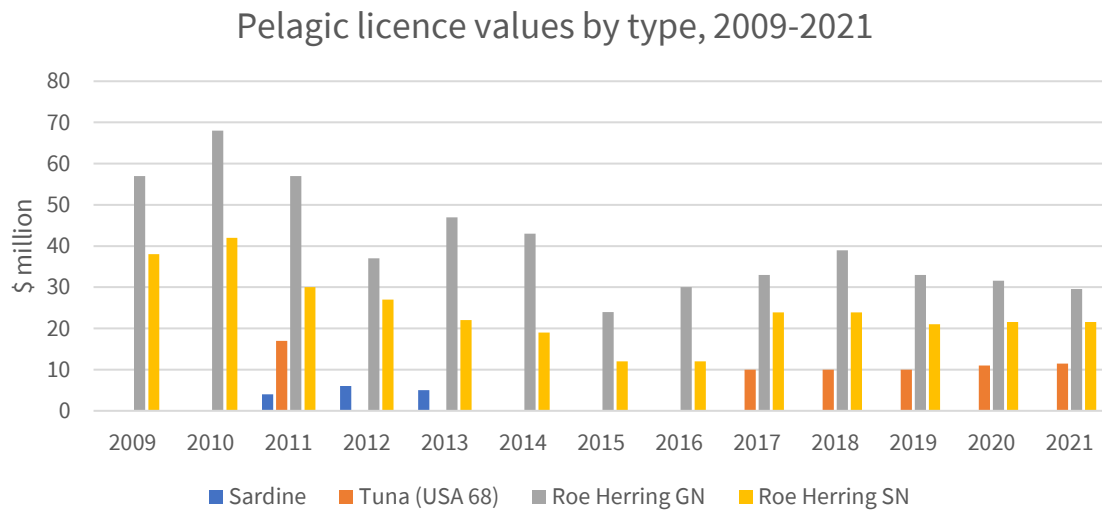
Pelagics

Herring fisheries declined in 2021. The value of herring gillnet licences has declined by 6% since 2020, while the value of herring seine licences has remained the same as 2020. There has been limited movement in seine licences, but moderate to high movement in gillnet licences.

The government's announcement on herring fisheries significantly impacted market sentiment. Interviewees has noted there may be pessimism around the lack of economic opportunities and fishery openings for herring seine and gillnet. There continues to be a strong uptake for herring spawn-on-kelp, particularly in Japan.

There have not been any sardines present off the coast of B.C. for the seventh year straight, resulting in no sardine fishery.

Canada and the U.S. have concluded in negotiations on the United States – Canada Albacore Tuna Treaty in mid-2020. USA 68 licences saw a 5% increase in value with moderate licence movement.

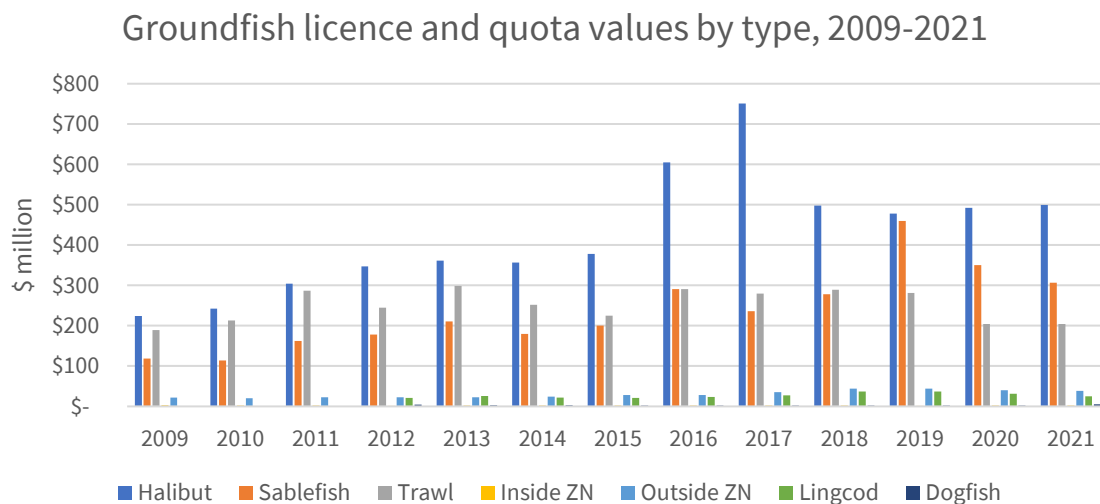


Groundfish

The total value of licences and quota in all groundfish fisheries fluctuated moderately over the past year. Halibut licences rose by 1% while dogfish (hook & line) licences increased twofold. Sablefish, outside rockfish and lingcod (hook & line) licences fell by 12%, 10% and 19%. Inside rockfish and groundfish trawl licence values remained stable.

The halibut fishery was perceived as resilient and strong, and was viewed as a success story during COVID-19, due to the shift in focus to direct-to-consumer markets from food service industries. Sablefish is viewed as a fishery with strong fundamentals (in terms of market value and product quality), but also the one where active price discovery is still underway. Licence and lease values higher than fundamentals would indicate higher costs of fishing and difficulty in fishing.

Sablefish was greatly impacted by restaurant closures and the shutdown of the cruising industry, and it did not see direct-to-consumer uptake as it was seen as a difficult to prepare at home. Rockfish (particularly outside rockfish) continues to be strong due to its value for bycatch species. There was very little movement in groundfish trawl licences.

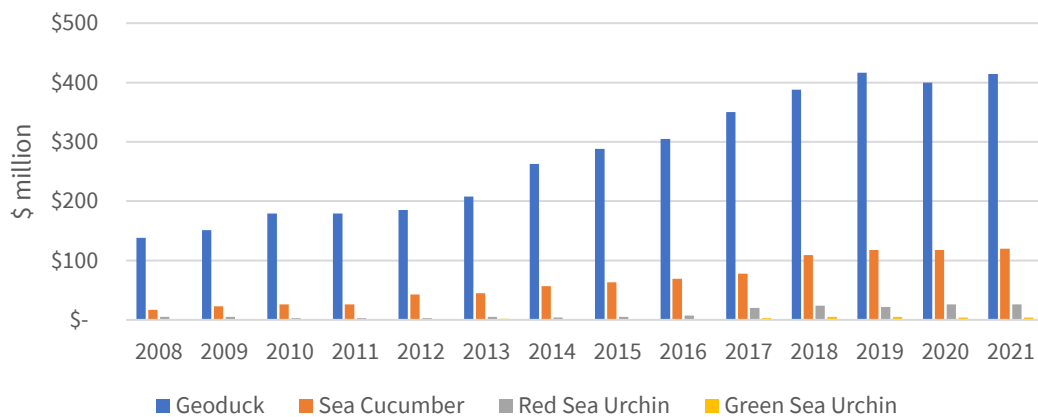


Shellfish

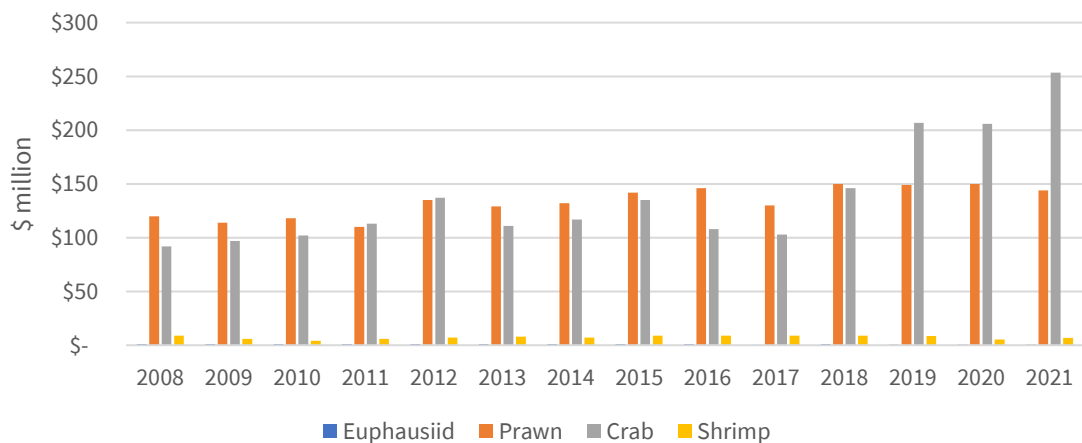
The shellfish dive fisheries appeared stable with slight growth. Geoduck licence and quota values rose by 4%. Sea cucumber licences were thinly traded over 2020, and the prices fell by 2%. Red and green urchin values remained the same.

Prawn licence values fell by 4%, reflecting a price stabilization after the perception that last year's market may have been overly frothy from the proliferation of small, high-speed boats that drove up the prices of shorter vessel licences. Both shrimp and crab fisheries resumed their upward trend after COVID-19, rising by 31% and 23% respectively.

Shellfish and dive fishery license values by type, 2009-2021



Trap fishery licence values by type, 2009-2021



Rates of return – leasing

The estimated rates of return for readily-leased licences or quota for the valuation period are shown in the following table. These licences are typically party-based or fisheries with individual vessel quota (IVQ). Estimates are the contractor's best effort to capture a value for market lease rates that can vary widely based on fishing area, vessel length, and other fishery specific factors. In cases where no lease transactions were uncovered, estimates were used based on the 2020 report. For the herring fisheries, these values reflect the value and return on full fee licences only.

Fishery	Lease Rate	Quota/Licence Valuation	Rate of Return	Year of Lease Valuation
Herring – roe seine	\$-	\$85,000/licence	0.00%	n/a
Herring – roe gillnet	\$2,750/licence	\$32,750/licence	8.40%	2021
Halibut	\$5.25/lb	\$96.35/lb	5.45%	2021
Sablefish	\$1.70/lb	\$77.67/lb	2.19%	2021
Trawl – groundfish (uncut)	\$0.13/lb	\$1.70/lb	7.65%	2020
Trawl – groundfish (hake)	\$0.01/lb	\$0.20/lb	5.00%	2020
Rockfish inside	\$2,150/licence	\$37,500/licence	5.73%	2021
Rockfish outside	\$8,500/licence	\$243,000/licence	3.50%	2020
Lingcod hook and line	\$0.34/lb	\$9.75/lb	3.49%	2021
Dogfish hook and line	\$0.01/lb	\$0.24 /lb	4.17%	2021
Prawn	\$37,500/licence	\$778,500/licence	4.82%	2021
Crab	\$23,750/licence	\$1,362,000/licence	1.74%	2021
Geoduck	\$12/lb (\$66,000/block)	\$803,400 /block	8.22%	2021
Sea cucumber	\$75,000/licence	\$1,400,000/licence	5.36%	2021
Red sea urchin	\$-	\$325,000/licence	0.00%	n/a
Green sea urchin	\$-	\$80,000/licence	0.00%	n/a

Methodology

Valuations performed

Fishery grouping	Fishery	Gear	Valuation				
			Avg. Vessel Value	Avg. Licence Value		Quota Value	Lease Value
				Full Fee	Reduced Fee		
Salmon	Salmon	Seine	x	x	x		x
	Salmon	Gillnet	x	x	x		x
	Salmon	Troll	x	x	x		x
Pelagics	Herring – roe	Seine	x	x	x		x
	Herring – roe	Gillnet		x	x		x
	Herring – SOK						
	Tuna	Hook and Line		x			
	Sardine	Seine					
Groundfish	Halibut	Longline	x	x		x	x
	Sablefish	Longline/trap	x	x		x	x
	Groundfish trawl	Trawl	x	x		x	x
	Rockfish	Hook and Line	x	x			x
	Lingcod and Dogfish	Hook and Line				x	x
Shellfish	Prawn	Trap	x	x			x
	Crab	Trap	x	x			x
	Shrimp	Trawl	x	x			
	Geoduck	Dive	x	x		x	x
	Sea cucumber	Dive	x	x			x
	Green sea urchin	Dive	x	x			x
	Red sea urchin	Drive	x	x			x
Schedule II	Euphausiid	Trawl	x	x			
	Schedule II species			x			



Valuation methodology

Information on commercial fishing licence and quota values was gained through interviews with individual licence holders, brokers, fishers, processors, and anyone with knowledge of specific market transactions. Most valuations are a synthesis of multiple sources listed above. In cases where information could not be uncovered, data from the 2020 report was utilized. The following is a list of information sources, in descending order of perceived accuracy:

- Information based on actual transactions
- Anecdotal information on transactions or interviewee opinions on price levels
- Prices listed (but not transacted) from boat brokers or trade publications
- Contractor's judgement

Within each fishery valuation, the contractor has noted the number of uncovered transactions and denoted a confidence level. Confidence levels have been assigned based on three factors: the confidence assigned in previous reports, consistency among transactions, and the variety of sources with consistent transactions. Confidence level values assigned are high (all three factors are met), medium (two factors are met), or low (one or none of the factors are met).

The total value of each fishery is noted as part of each species summary, in addition to the total number of licences. Total quota and licence valuation values may not add up due to rounding and weighted values.

Licence and quota stratification and valuation criteria

The valuation for each licence type includes the number of active licences and quota, units (per foot, per licence, etc.), an indication of the number of transactions uncovered, and the confidence of the valuation.

A general description is also included for:

- Licence designation (AS, AG, AT, etc.)
- Nature of licence (vessel or party-based)
- Number of commercial licences available
- Number of communal commercial licences available
- Licence management regime (area licensing including number of areas, stacking, etc.)
- The type of stratification utilized (per licence, per lb, etc.)
- Vessel build (classic or modern)
- Number of vessels

Valuation trends

The valuation trend graphs were updated for each commercial fishery. It should be noted that these graphs are not adjusted for inflation, and in some cases, no new data was uncovered.

Licensing information

For additional information regarding licensing of commercial fisheries in the Pacific region, please refer to the following sources:

- Integrated Fisheries Management Plans: <http://www.pac.dfo-mpo.gc.ca/fm-gp/ifmp-eng.html>
- DFO Licensing: <https://www.pac.dfo-mpo.gc.ca/fm-gp/licence-permis/licence-commercial-eng.html>

Vessel valuation

Vessel values are arrived at by using past data for average vessel value as a baseline; however, the number of vessels has been updated and adjusted. This is an imperfect valuation approach given that there have been major changes to the Pacific fishing fleet in the last decade, and the consultant notes that these estimates may not always reflect true pricing in 2021. Vessel values presented in tables below may not add up due to rounding and weighted values.

In determining the number of vessels, duplicates within a licence eligibility were identified and removed from the total count as some licences allow for stacking multiple licences on a single vessel. If a vessel has more than one licence eligibility, it may be counted separately under different licence categories. For example, a vessel may be counted once under its halibut licence, and once under its salmon gillnet licence. Vessels were then counted as either modern or classic. Modern vessels are those built from 1980 while classic vessels are those built before 1980. Since this criterion was used to distinguish vessels, vessels that did not include information about the year the vessel was built were not counted. As a result, not all vessels from the data set are included in the valuation.

Fleet vessel valuation is imprecise and uses incomplete datasets. The number of licensed vessels is drawn from one data source, DFO's *Pacific Region Commercial Fishing Licences Database*. This database provided vessel details for the following licence eligibilities: AS, AG, AT, L, K, T, W, R, S, and G. It did not include information on HS, HG, ZN, ZD, ZA, ZC, or ZF. For these fisheries the vessel count is based on past information.

As part of the data collection process, the consultant asked fishers and interviewees their views on amending the vessel valuation process and perceptions of the BC commercial fishing fleet. These views and perceptions are outlined below:



- Experts noted there are essentially two, bifurcated markets for vessels – one for longer, modern, multi-fishery vessels that are highly valuable, and another for shorter, older, single-fishery species that are not as versatile and much less valuable
 - There are some exceptions to the rule – for instance, short, high-speed prawn vessels are highly valuable as they can transport live catch quickly.
- The announcement and implementation of government policies for the salmon and herring fisheries will likely have a significant impact on vessel values over the upcoming years.
 - In tandem with reduced fishing opportunities, the vessel values for older, single-fishery species will reduce significantly, while
 - Larger commercial fishery companies are likely purchase the remaining vessel fleet that is attractive, viable and can fish multiple fisheries, as they consolidate their own holdings of a limited pool of licences
 - Experts anticipate the market to be flooded with older, single-fishery vessels in 2022 as fishers wish to retire from the profession due to limited fishing opportunities
- With limited fishing opportunities, demand for modern, multi-fishery vessels will increase, however experts anticipate supply will not catch up.
 - Most shipyards on the Pacific coast are located in Alaska and Washington, and most modern, multi-fishery vessels in BC end up fishing in these jurisdictions, constraining the supply of these vessels
 - With greater demand and limited supply, the prices of the vessels are anticipated to rise over the coming years, while the price of older, shorter, single-fishery vessels are anticipated to fall significantly
- Experts note the follow-on impacts from the changes in governmental policy, particularly in a large fishery such as salmon, on the state of the BC fleet.
 - Given the majority vessel repair shops service gillnetters and seiners, the reduction in the salmon fishery will mean many of these repair shops may be forced to close, impacting repairs for the rest of the BC fleet and potentially impacting the long-term state of vessels and viability of the fleet



SALMON – Salmon seine (AS)

Background to valuation

General	
Licence designation	AS
Nature of Licence	Vessel-based
Number of commercial licences	208
Number of communal commercial licences	67
Area licensing?	2 areas (A + B)
Stacking?	Yes
Competitive or quota mgmt.?	Competitive

Valuation Parameters	
Licence	Per licence
Quota	n/a
Vessels	yes
Amount of trading activity in category this year	low
Number of transactions underlying valuation	~2
Confidence in current year valuation	Low

Current valuation

Licence value as of December 31, 2021

Category	Number of Licences	Value/Licence	Total Value
AS Licence - Full fee	194	\$387,500	\$75,175,000
AS Licence - Reduced fee	14	\$364,530	\$5,467,950
FAS Licence - Communal commercial	67	n/a	n/a
All AS (AS+FAS)	208 (275)	\$385,852	\$80,278,473

Valuation comments

- We uncovered AS licence transactions in the range of \$350,000-\$450,000, showing an uptick from 2020 values that were in the \$300,000 range.
- There were few transactions of salmon seine licences, given ongoing uncertainty around governmental policy initiatives.
- No reduced fee licence transactions were uncovered. Reduced fee values have been estimated by applying the 2020-2021 rate of change of the full fee licence value to the 2021 reduced fee licence value.

Vessel value

Vessel value is calculated by using past data for average vessel value as a baseline and increasing the value based on inflation. The number of vessels has been updated based on DFO's *Pacific Region Commercial Fishing Licences Database*. However, this report only includes vessels for which a vessel age was provided. As such, aggregate value represents only a portion of the total fleet. For more information about the limitations of this analysis, please refer to the Valuation Methodology.

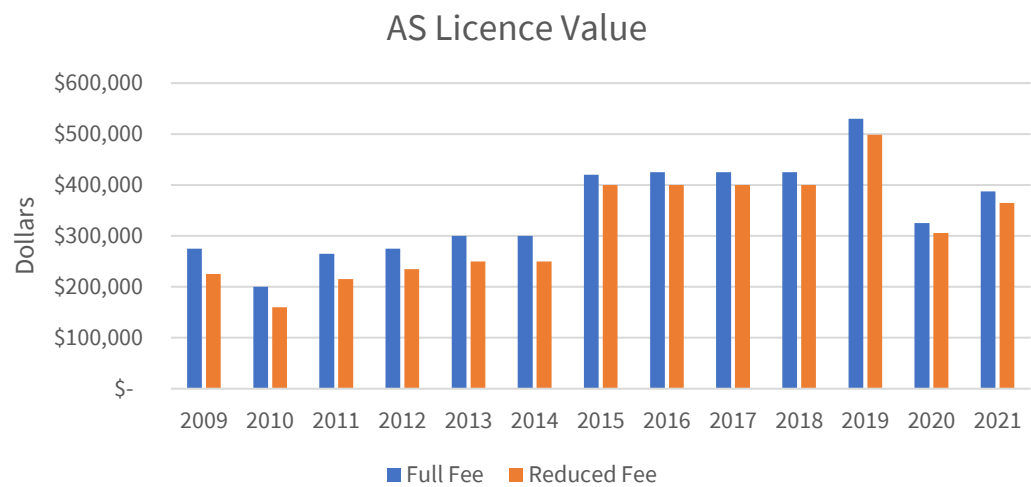
Salmon Seine	Number of Vessels	Avg. Vessel Value	Aggregate Value
Classic	69	194,806	\$13,441,586
Modern	38	683,991	\$25,991,658
Total	107	356,368	\$38,131,387



Licensing trends

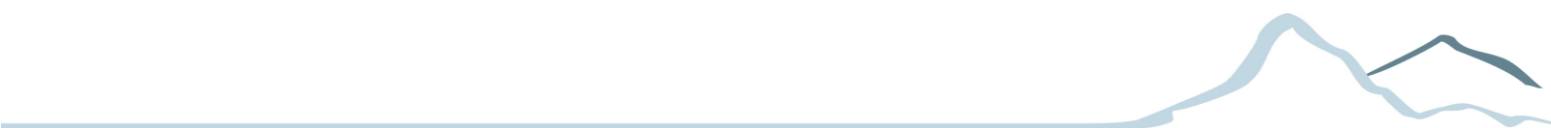
Recent AS licence valuations

Salmon seine prices rose compared to prices in 2020, given the easing of COVID-19 restrictions and that the impacts of the Big Bar landslide have tailed off. However, there is broader structural and policy uncertainty with the announcement of new federal salmon fisheries policy (the Pacific Salmon Strategic Initiative, or PSSI). Interviewees have noted that market participants are in a ‘wait and see’ period as the federal government announces how fisheries policies are implemented in BC and Canada.



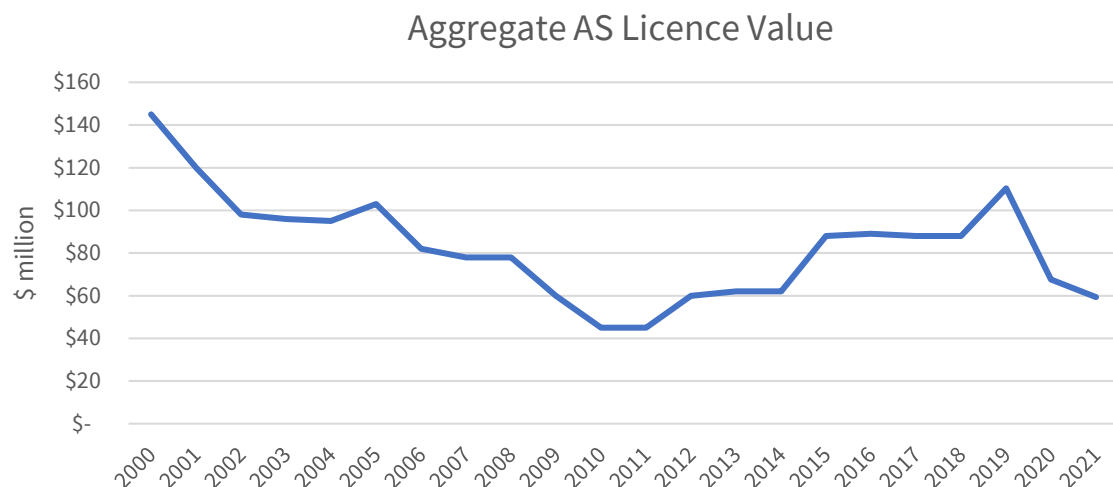
Recent AS Licence lease rates

No lease transactions were uncovered for AS licences for 2021.



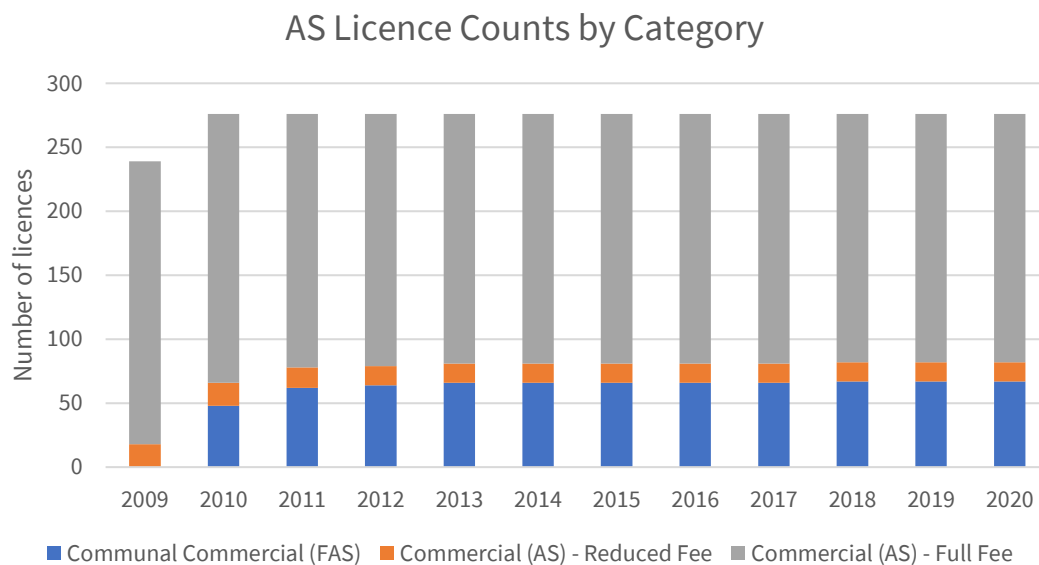
Aggregate value of AS Licences (\$ million by year)

Aggregate licence values have increased by 18% last year, but remain below pre-pandemic levels (approximately \$110 million).



AS licence counts by category

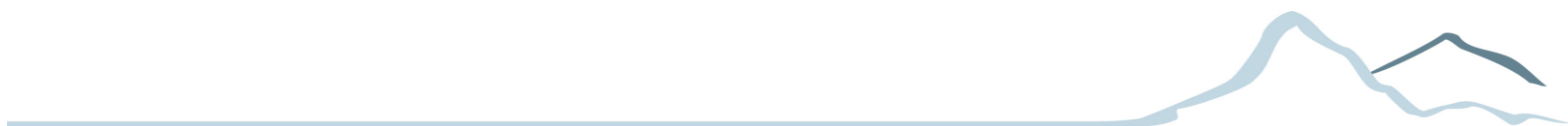
The number of AS licences remained stable over 2021.



Outlook/commentary

The outlook for the salmon seine sector is uncertain given the following observations:

- There is general uncertainty within the industry regarding the policy/regulatory environment of salmon fisheries, which some fear could result in fewer commercial fishing opportunities. This results in a perception that salmon fisheries are at 'high-risk' and reduces the demand for licences.
- There are structural uncertainties related to environmental concerns, including potential and demonstrated impacts of climate change, aquaculture activity, industrialization, and forestry practices. These uncertainties have all impacted the long-term perceived value of the fishery.
- Recent events and management measures have limited fishing opportunities, including low sockeye returns, closures intended to restore chinook populations, and the 2019 Bar Big landslide along the Fraser River near Lillooet, B.C. that blocked salmon runs and forecasted to impact the salmon fisheries for years to come.
- COVID-19 has exacerbated these uncertainties, as with most fisheries. A rebound in demand for salmon is anticipated in 2022 as travel resumes and restaurant patronage increases along with the easing of restrictions.



SALMON – Salmon gillnet (AG)

Background to valuation

General	
Licence designation	AG
Nature of Licence	vessel-based
Number of commercial licences	798
Number of communal commercial licences	334
Area licensing?	3 areas (C, D, E)
Stacking?	yes
Competitive or quota mgmt.?	competitive

Valuation Parameters	
Licence	Per licence
Quota	n/a
Vessels	yes
Amount of trading activity in category this year	high
Number of transactions underlying valuation	~14
Confidence in current year valuation	high

Current valuation

Licence Value as of December 31, 2021

Category	Number of Licences ²	Value/Licence	Total Value
AG - Full fee	693	\$38,200	\$26,472,600
AG - Reduced fee	105	\$35,206	\$12,758,800
FAG - Communal commercial	334	n/a	n/a
All AG (AG + FAG)	798 (1,027)	\$37,178	\$42,928,109

Valuation comments

- Licence values ranged from \$37,500-\$50,000 (full fee) and varied in this range across all fishing areas.
- Most sales occurred in the beginning and middle of the season, with the announcement of PSSI creating a dampening effect on salmon gillnet licence trading.
- No reduced fee licence transactions were uncovered. Reduced fee values have been estimated by applying the 2020-2021 rate of change of the full fee licence value to the 2020 reduced fee licence value.

² In addition to AG and FAG licence eligibilities, there are 254 NAG licences in the gillnet fishery held by the Northern Native Fishing Corporation which are not valued in this study.

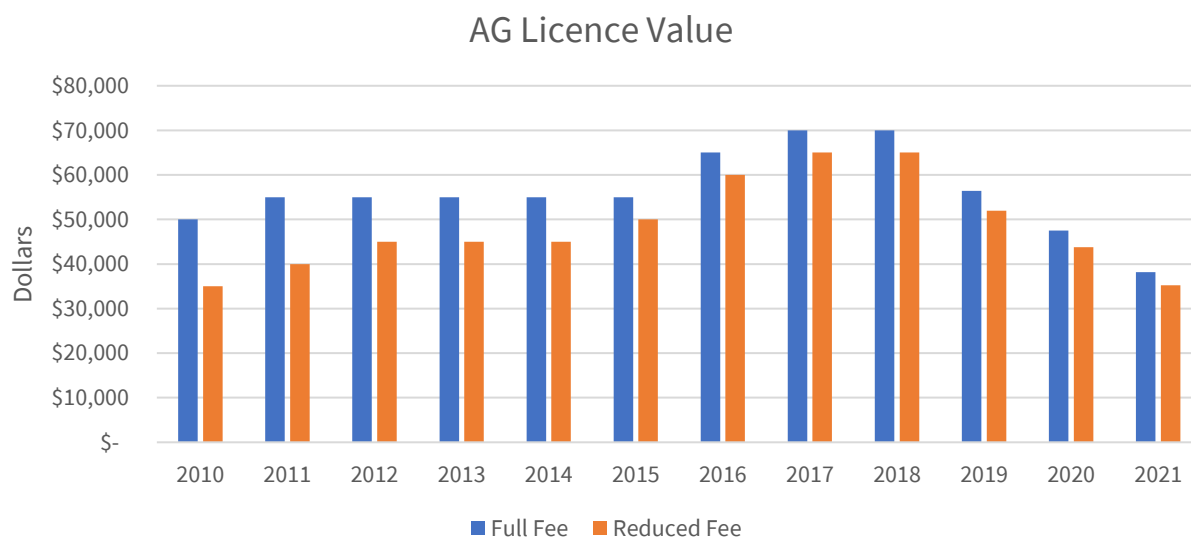
Vessel value

Vessel value is arrived at by using past data for average vessel value as a baseline and increasing the value based on inflation. The number of vessels has been updated based on DFO's *Pacific Region Commercial Fishing Licences Database*. However, this report only includes vessels for which a vessel age was provided. As such, aggregate value represents only a portion of the total fleet. For more information about the limitations of this analysis please refer to the Valuation Methodology.

Salmon Gillnet	Number of Vessels	Avg. Vessel Value	Aggregate Value
Classic	286	77,292	\$22,105,369
Modern	230	171,541	\$39,454,338
Total	516	119,427	\$61,624,332

Licensing trends

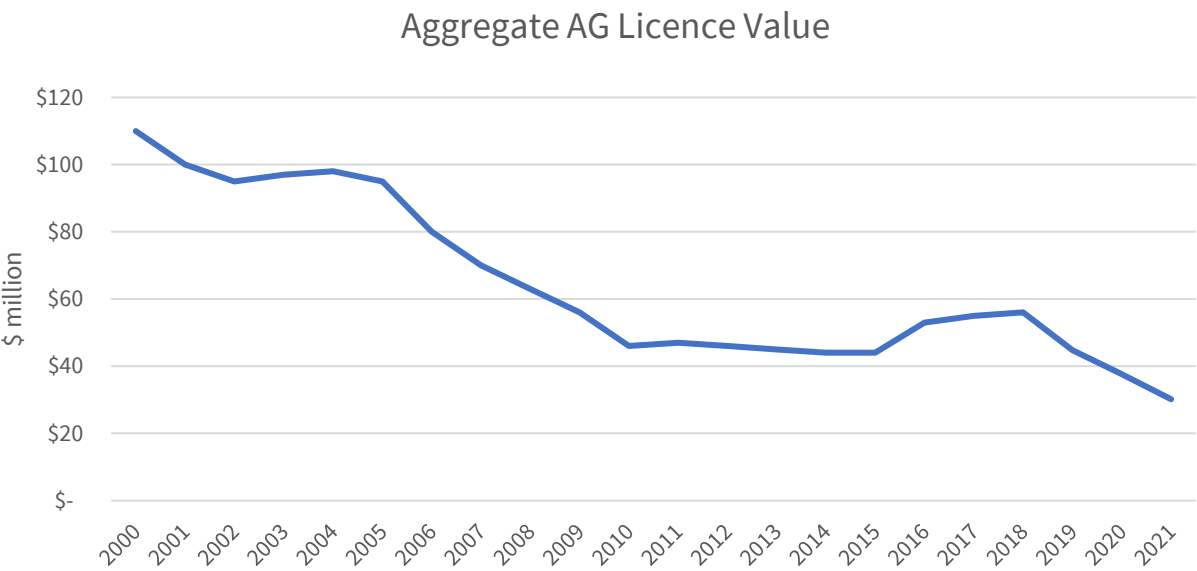
Recent AG licence valuations



Recent AG licence lease rates

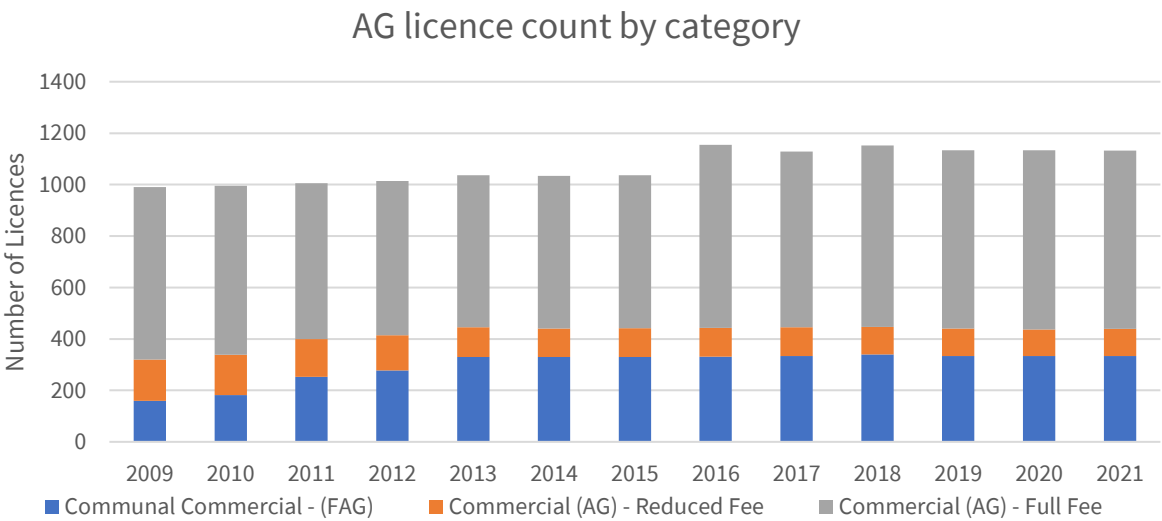
Lease rates in 2021 ranged from \$1,000 to \$2,125 for Area D, with an average lease rate of \$1,340.

Aggregate value of AG licences (\$ millions by year)



AG licence counts by category

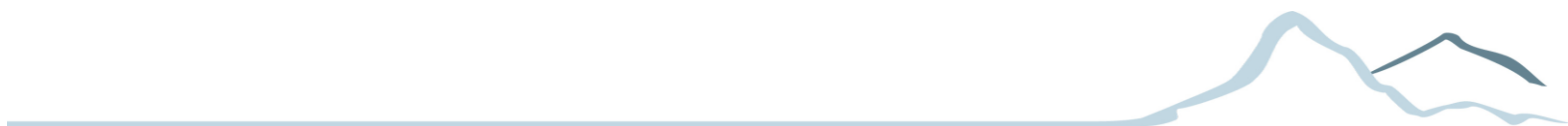
The number of AG licences remained stable over 2021.



Outlook/commentary

The outlook for the salmon gillnet fishery is generally negative given the following observations:

- Low stock abundance, low anticipated returns, and the impact of changes in federal fisheries policies have resulted in reduced prices and weakened expectations for the gillnet fishery.
- Interviewees have commented that they expect the gillnet fishery to be the most impacted by PSSI, given low stock abundance, an aging fleet and the expectation that gillnet fisheries will be the first to be closed as PSSI is implemented.
- COVID-19 continues to exacerbate uncertainties in this fishery.



SALMON – Salmon troll (AT)

Background to valuation

General	
Licence designation	AT
Nature of Licence	vessel-based
Number of commercial licences	283
Number of communal commercial licences	92
Area licensing?	3 areas (F, G, H)
Stacking?	yes
Competitive or quota mgmt.?	competitive

Valuation Parameters	
Licence	per licence
Quota	n/a
Vessels	yes
Amount of trading activity in category this year	Med
Number of transactions underlying valuation	~7
Confidence in current year valuation	med

Current valuation

Licence Value as of December 31, 2021

Category	Number of Licences	Value/Licence	Total Value
AT - Full fee	276	\$152,140	\$41,990,640
AT - Reduced fee	7	\$129,296	\$905,073
FAT - Communal commercial	92	n/a	n/a
All AT (AT + FAT)	283 (375)	\$151,570	\$42,895,712

Valuation comments

- The consultant uncovered transactions ranging from \$135,000-\$170,000.
- No reduced fee licence transactions were uncovered. Reduced fee values have been estimated by applying the 2020-2021 rate of change of the full fee licence value to the 2020 reduced fee licence value.

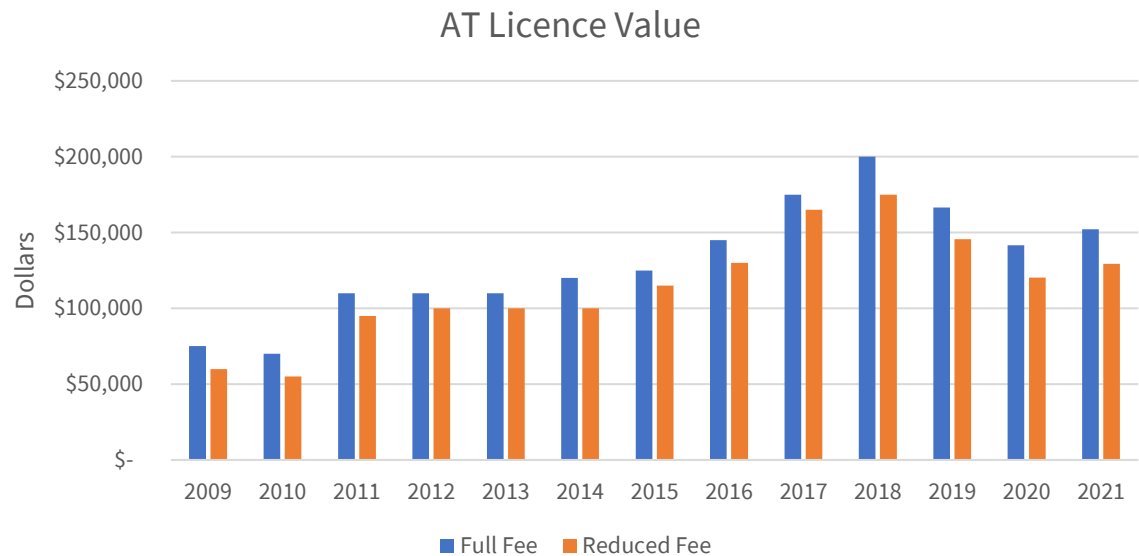
Vessel value

Vessel value is arrived at by using past data for average vessel value as a baseline and increasing the value based on inflation. The number of vessels has been updated based on DFO's *Pacific Region Commercial Fishing Licences Database*. However, this report only includes vessels for which a vessel age was provided. As such, aggregate value represents only a portion of the total fleet. For more information about the limitations of this analysis please refer to the Valuation Methodology.

Salmon Troll	Number of Vessels	Avg. Vessel Value	Aggregate Value
Classic	183	144,036	\$26,358,625
Modern	38	277,422	\$10,542,044
Total	221	168,956	\$37,339,188

Licensing trends

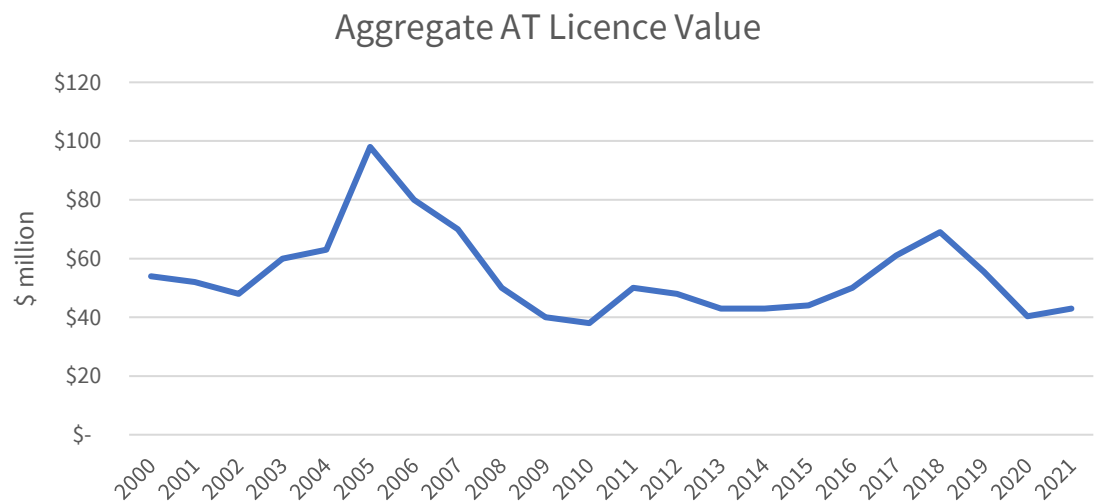
Recent AT licence valuation



Recent AT licence lease rate

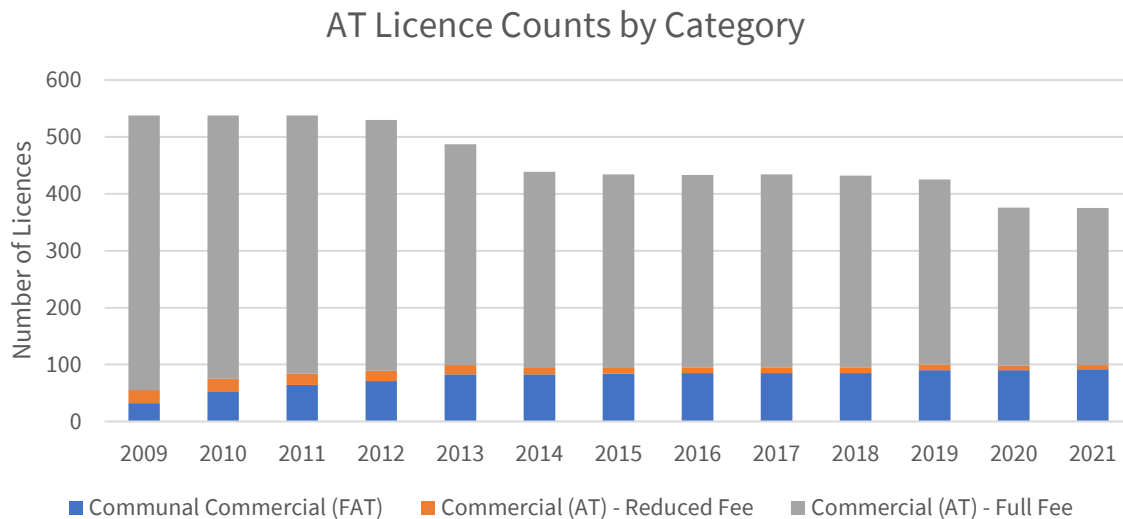
No lease values were uncovered for 2021.

Aggregate value of AT licence (\$ millions by year)



AT licence counts by category

In 2021, there were two additional communal commercial AT licences, two fewer commercial full-fee licences, and one fewer commercial reduced-fee licence.



Outlook/commentary

General outlook and commentary for the salmon troll sector includes the following:

- There were limited sockeye openings in 2021.
- The salmon troll fishery is perceived as high-risk due to low stock abundance and closures.
- Fishing on the coast is perceived as sporadic and high-risk due to threats from climate change, fisheries management decisions limiting fishing opportunities (i.e., marine protected areas, closures), and reduced abundance.
- The salmon troll fishery has been and remains thinly traded, and market uncertainty has exacerbated due to the announcement of PSSI and ongoing impacts of COVID-19.

PELAGICS – Roe herring seine (HS)

Background to valuation

General	
Licence designation	HS
Nature of Licence	party-based
Number of commercial licences	241
Number of communal commercial licences	11
Area licensing?	5 areas
Stacking?	yes (limited)
Competitive or quota mgmt.?	pools (equal sharing)

Valuation Parameters	
Licence	per licence
Quota	n/a
Vessels	yes
Amount of trading activity in category this year	low
Number of transactions underlying valuation	~2
Confidence in current year valuation	low



Current valuation

Licence Value as of December 31, 2021

Category	Number of Licences	Value/Licence	Total Value
HS - Full fee	194	\$85,000	\$16,490,000
HS - Reduced fee	47	\$80,750	\$3,795,250
FHS - Communal commercial	11	n/a	n/a
All HS (HS + FHS)	241 (252)	\$84,170	\$20,285,250

Valuation comments

- Full fee licences ranged from \$70,000-\$100,000, with interviewees noting that the market price was likely around \$90,000 or lower.
- No reduced fee licence transactions were uncovered. Reduced fee values have been estimated by applying the 2020-2021 rate of change of the full fee licence value to the 2020 reduced fee licence value.

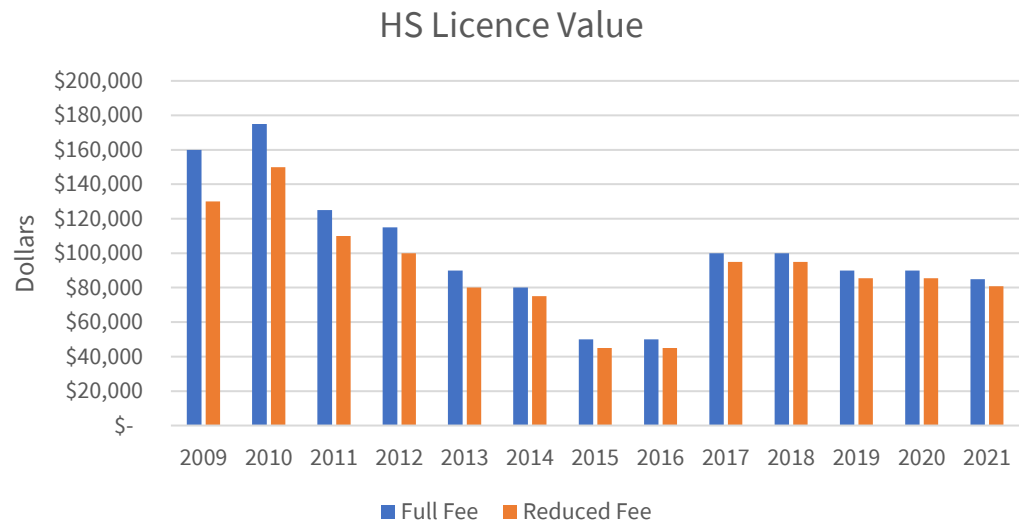
Vessel value

Vessel values were arrived at by using past data for average vessel value as a baseline and increasing the value based on inflation. For this fishery, the consultant not able to update the number of vessels as this information was not available from DFO's *Pacific Region Commercial Fishing Licences Database*. As such, the vessel numbers below have been taken from last year's report. For more information about the limitations of this analysis please refer to the Valuation Methodology.

Herring Seine	Number of Vessels	Avg. Vessel Value	Aggregate Value
Classic	55	185,293	\$10,191,104
Modern	33	776,120	\$25,611,973
Total	88	406,879	\$35,805,352

Licensing trends

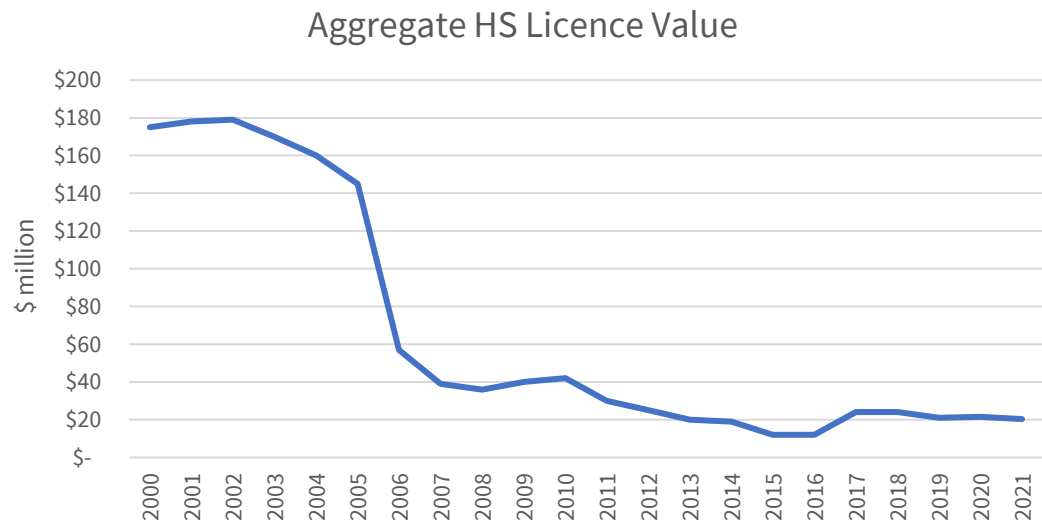
Recent HS licence valuation



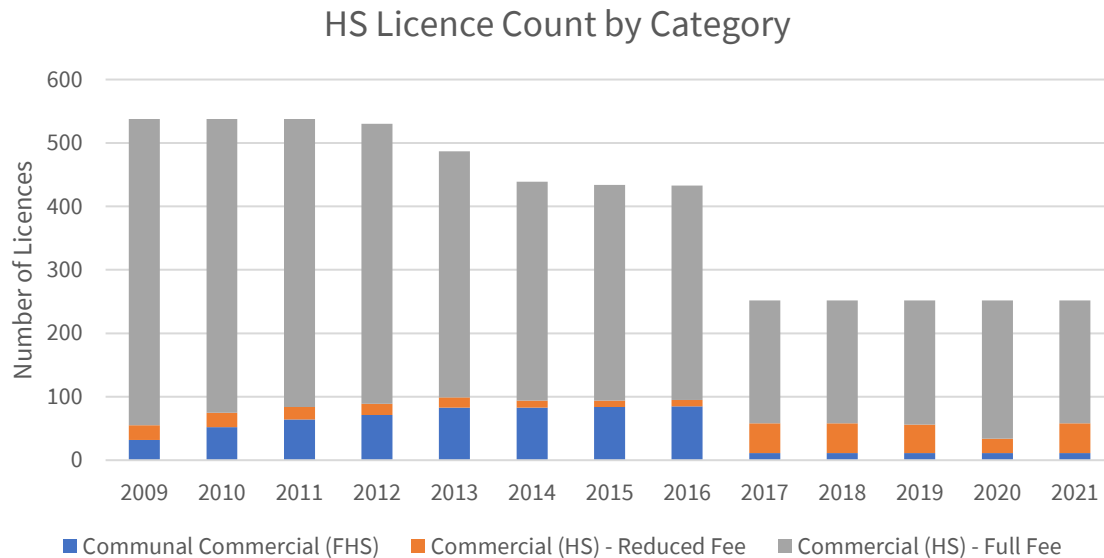
Recent HS licence lease rates

No lease transactions were uncovered for HS licences.

Aggregate value of HS licence (\$ millions by year)



HS Licence counts by category



Outlook/commentary

The following observations summarize the outlook for the roe herring seine fishery:

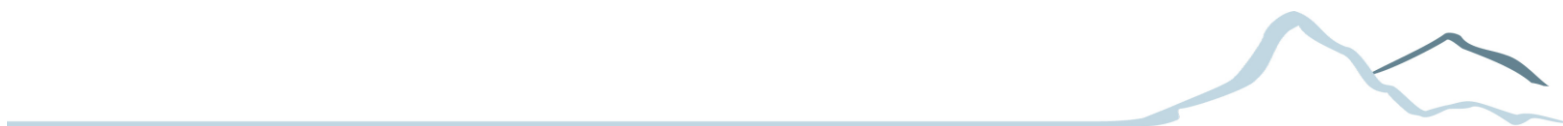
- The announcement of herring fishery closures in BC has severely impacted herring licence values and dampened sentiments in the fishery.
- Interviewees expect the herring fishery the downward trend in herring seine values to continue due to the impacts of closures and an aging roster of herring seine fishers.
- In addition export restrictions in Japan, the main export market, have further dampened market sentiments.
- Despite a change in socio-cultural factors leading to a resurgence of roe herring consumption, experts have noted this may not be enough to bolster an already declining fishery.

PELAGICS – Roe herring gillnet (HG)

Background to valuation

General	
Licence designation	HG
Nature of Licence	party-based
Number of commercial licences	979
Number of communal commercial licences	280
Area licensing?	5 areas
Stacking?	yes
Competitive or quota mgmt.?	pools (equal sharing)

Valuation Parameters	
Licence	per licence
Quota	n/a
Vessels	n/a
Amount of trading activity in category this year	high
Number of transactions underlying valuation	~11
Confidence in current year valuation	med



Current valuation

Licence value as of December 31, 2021

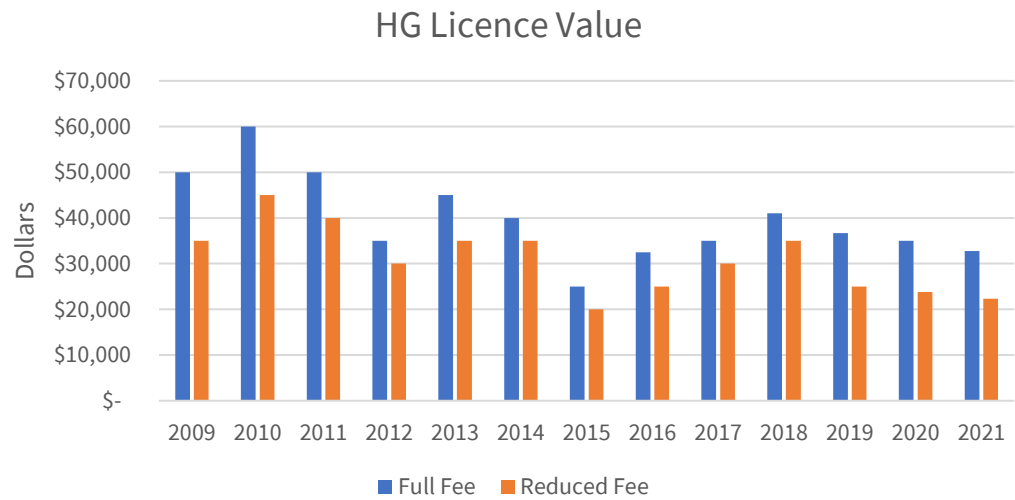
Category	Number of Licences	Value/Licence	Total Value
HG - Full fee	740	\$32,750	\$24,235,000
HG - Reduced fee	239	\$22,300	\$5,329,700
FHG - Communal commercial	280	n/a	n/a
All HG (HG + FHG)	1,079 (1,259)	\$30,200	\$29,564,700

Valuation comments

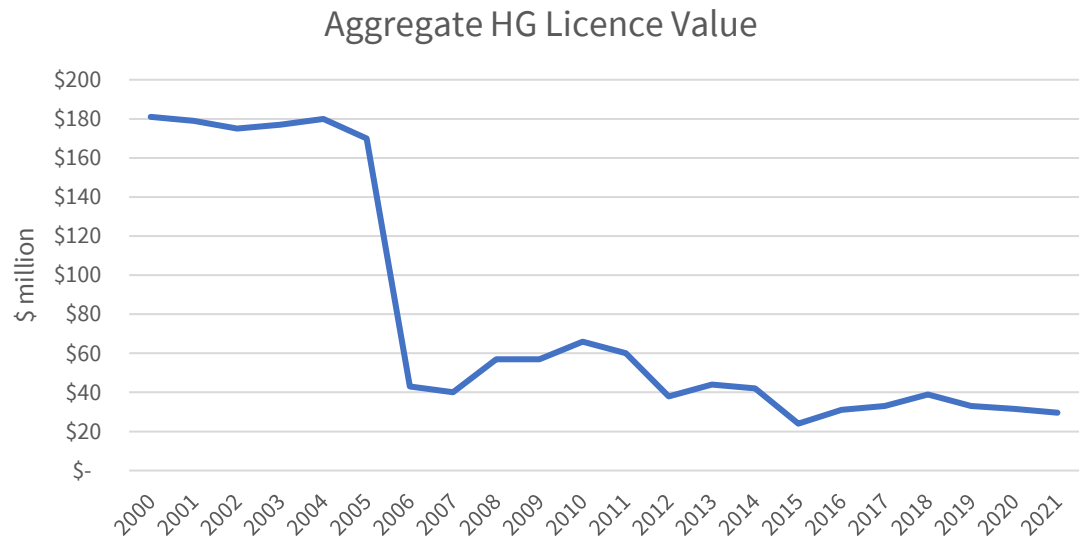
- Licence values ranged from \$20,000-\$45,000.
- No reduced fee licence transactions were uncovered. Reduced fee values have been estimated by applying the 2020-2021 rate of change of the full fee licence value to the 2020 reduced fee licence value.
- Values for full fee licences have decreased since 2018 and interviewees are questioning the future viability of the herring fishery due to total allowable catch and stock abundance declines. This is likely impacting licence values. However, it has been heard that these licences are in high demand and are selling quickly when available.

Licensing trends

Recent HG licence valuation

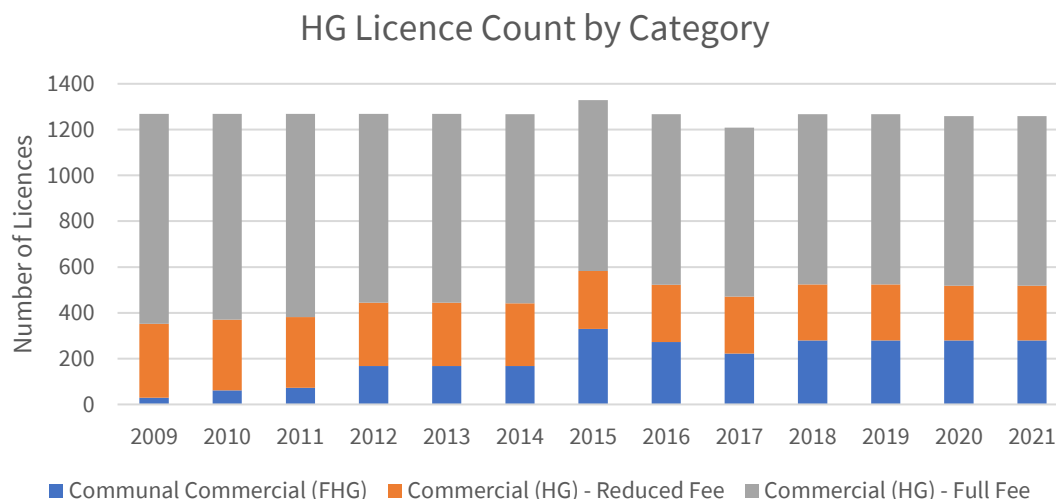


Aggregate value of HG licences (\$ millions by year)



HG licence counts by category

In 2021, there were no changes to the number of HG licences.



Recent HG licence lease rates

HG licences leased on average at \$2,750 in 2021, however only two lease transactions were uncovered.

Outlook/commentary

- The announcement of herring fishery closures in BC has severely impacted herring licence values and dampened sentiments in the fishery.
- Interviewees expect the downward trend in herring gillnet values to continue due to the impacts of closures and an aging roster of herring gillnet fishers.
- The future of the herring fishery is in question and perceived as high-risk for entry due to changes in total allowable catch each season and declining stock abundance.
- As with the herring seine fishery, interviewees have noted that there is a resurgence in demand from Japan due to youth consuming more herring roe, though it remains to be seen if this will be enough to counter the impacts of reduced stock abundance.
- Interviewees have also noted the widening differential between full fee and reduced fee licences, indicating few Indigenous gillnetters wanting to participate in this fishery.

PELAGICS – Tuna (USA 68)

Background to valuation

General	
Licence designation	USA 68
Nature of Licence	vessel-based
Number of commercial licences	45
Number of communal commercial licences	0
Area licensing?	no
Stacking?	no
Competitive or quota mgmt.?	competitive

Licence Parameters	
Licence	per licence
Quota	n/a
Vessels	n/a
Amount of trading activity in category this year	low
Number of transactions underlying valuation	~1
Confidence in current year valuation	Low

Current valuation

Licence value as of December 31, 2021

Category	Number of Licences	Value/Licence	Total Value
USA 68 Licence	45	\$254,600	\$11,457,000

Valuation comments

- Only five transactions were uncovered, with one licence currently on the market.
- Most tuna fishers do not rely on the USA 68 licence, rather they seek a tuna permit under the schedule II privileges with substantive savings.
- On May 26, 2020, Canada and the United States concluded the negotiation on the renewal of the fishing regime under the Pacific Albacore Treaty ³ with the United States, agreeing to renew the regime until December 2022.

³ Treaty Between the Government of Canada and the Government of the United States of America on Pacific Coast Albacore Tuna Vessels and Port Privileges: <https://www.treaty-accord.gc.ca/text-texte.aspx?id=103720>

PELAGICS – Sardine (ZS)

Background to valuation

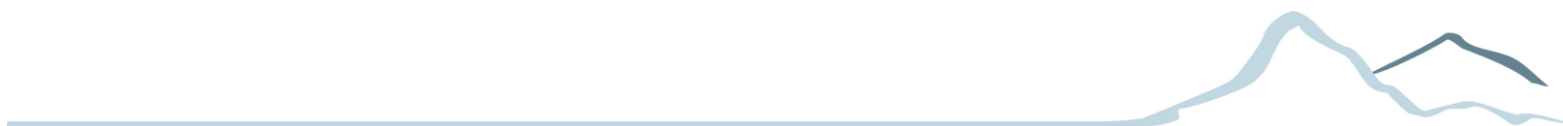
General	
Licence designation	ZS
Nature of Licence	party-based
Number of commercial licences	25
Number of communal commercial licences	25
Area licensing?	no
Stacking?	no
Competitive or quota mgmt..?	quota

Valuation Parameters	
Licence	per licence
Quota	n/a
Vessels	n/a
Amount of trading activity in category this year	none
Number of transactions underlying valuation	none
Confidence in current year valuation	no valuation provided

Current valuation

Licence value as of December 31, 2021

Category	Number of Licences	Value/Licence	Total Value
ZS Licence	25	n/a	n/a

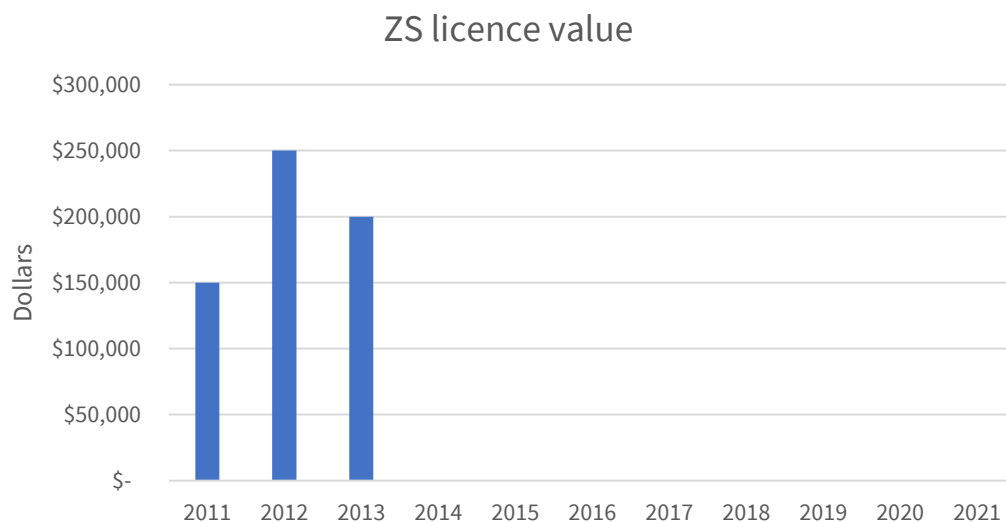


Valuation comments

- 2021 marked the eighth consecutive season that there has been no presence of sardine on the BC coast, resulting in no harvesting for the season.
- No transactions were uncovered for this licence and it is likely no transactions took place.

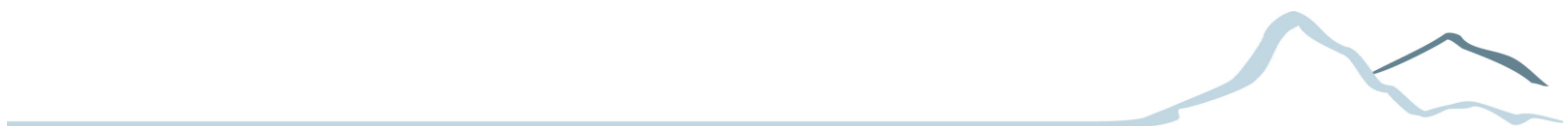
Licensing trends

Recent ZS licence valuation



Outlook/commentary

- For the eighth straight year, sardine numbers remained below the cut-off level to allow the directed fishery to open.
- Sardine presence off the coast of BC directly relates to oceanic conditions and their migration is generally understood to be on a 50-year cycle. There is no predicted sardine fishery in BC coastal waters until sardine stocks rebound.

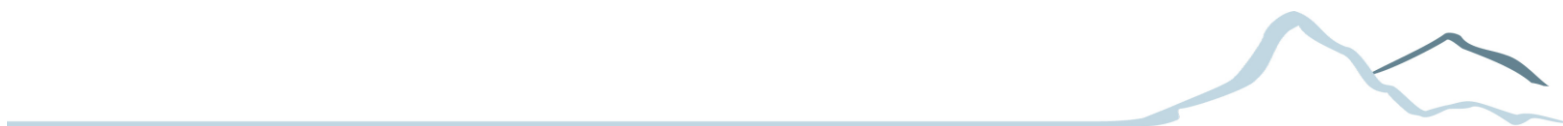


GROUND FISH – Halibut (L)

Background to valuation

General	
Licence designation	L
Nature of Licence	vessel-based
Number of commercial licences	338
Number of communal commercial licences	95
Area licensing?	no
Stacking?	no
Competitive or quota mgmt.?	quota

Valuation Parameters	
Licence	per foot
Quota	per lb (dressed head off)
Vessels	yes
Amount of trading activity in category this year	High
Number of transactions underlying valuation	~ 15 (licences) ~ 23 (quota)
Confidence in current year valuation	high



Current valuation

Category	Number of Licences/ lbs of Quota	Value/Licence Value/Quota	Avg. Licence	Total Value
L Licence - Commercial	338	\$800/ft	\$32,200	\$10,883,600
FL Licence - Communal commercial	95	n/a	n/a	n/a
Halibut Quota	5,180,863 lbs	\$96/lb	n/a	\$497,362,848
Total Value (Licences and Quota)	n/a	n/a	n/a	\$508,246,448

Valuation comments

- Average licence value based on \$800 per foot and a 40.25 ft average vessel length is \$32,200.
- Market value of halibut quota ranged from \$90-\$100/lb.
- Interviewees have noted that halibut was highly traded over 2021.
- There are a limited number of grandfathered licences that are attached to a larger portion of the TAC. These usually sell for higher values, while married licences trade for lower values.

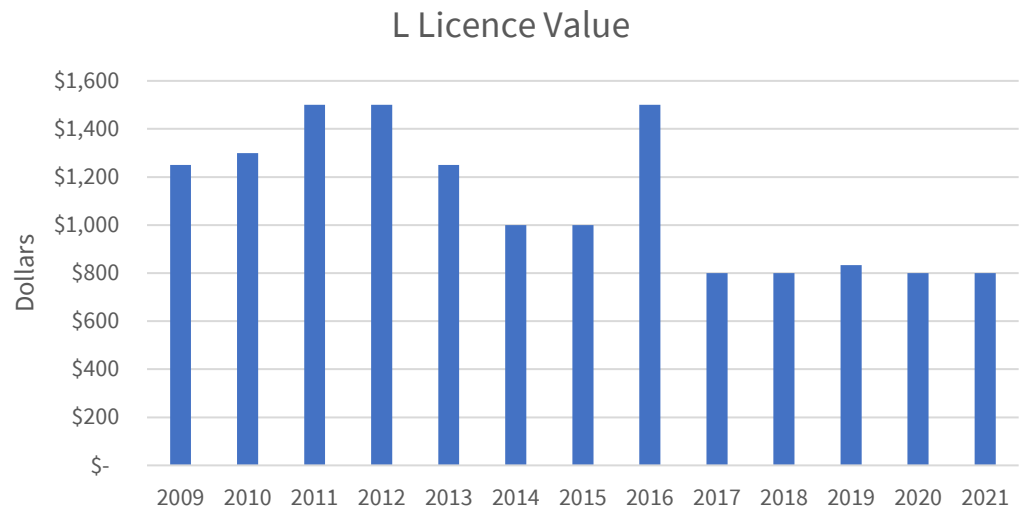
Vessel value

Vessel value is arrived at by using past data for average vessel value as a baseline and increasing the value based on inflation. The number of vessels has been updated based on DFO's *Pacific Region Commercial Fishing Licences Database*. However, this report only includes vessels for which a vessel age was provided. As such, aggregate value represents only a portion of the total fleet. For more information about the limitations of this analysis please refer to the Valuation Methodology.

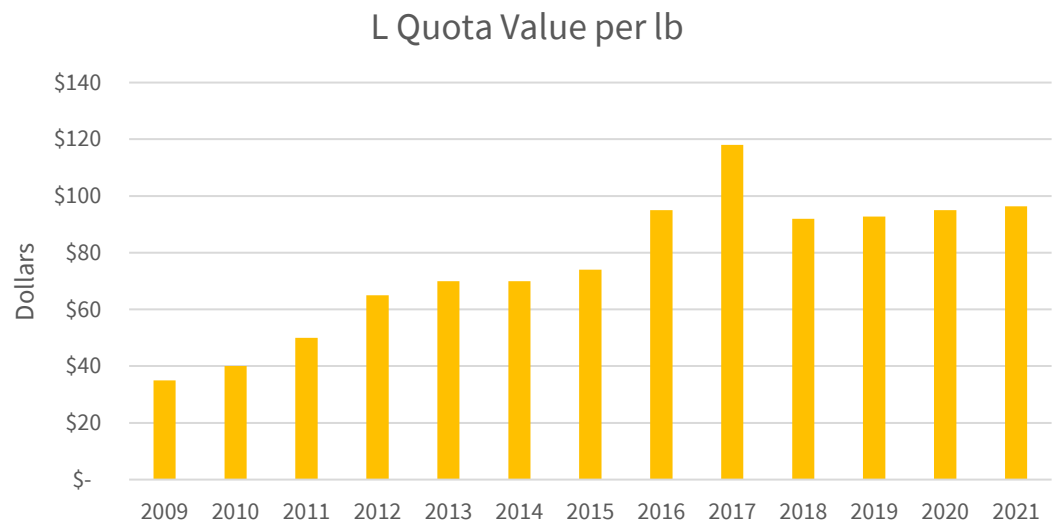
Halibut	Number of Vessels	Avg. Vessel Value	Aggregate Value
Classic	177	155,617	\$27,544,209
Modern	86	283,730	\$24,400,746
Total	263	197,391	\$51,913,728

Licensing trends

Recent L licence valuation



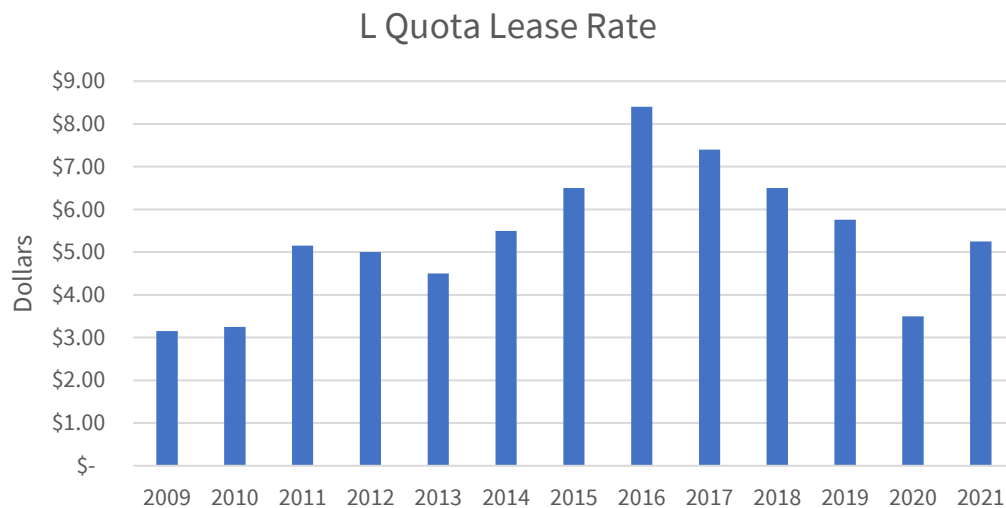
Recent L quota valuation



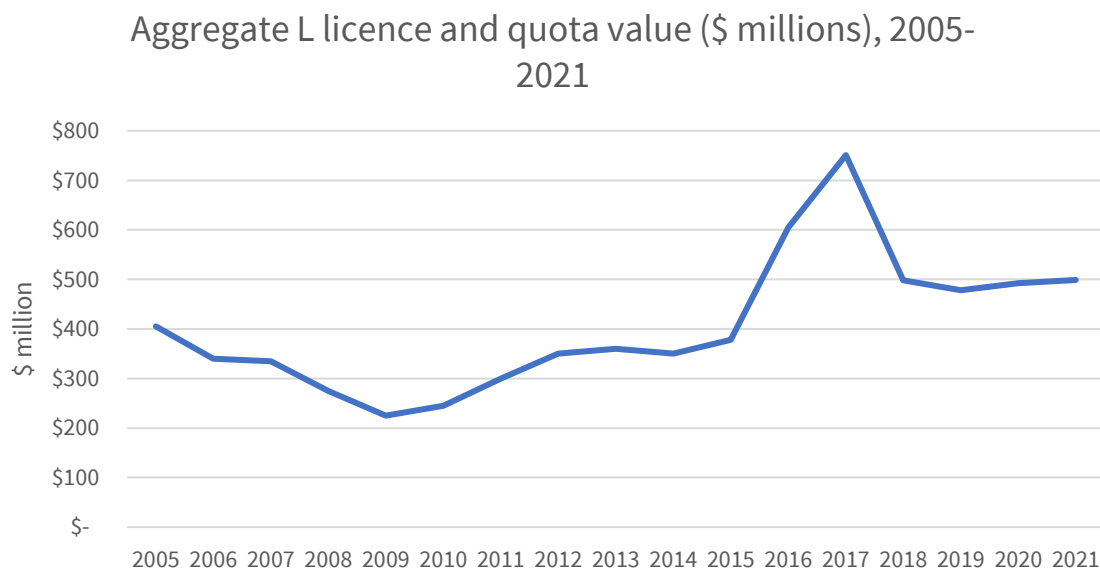
Recent halibut quota lease rates

Halibut quota lease transactions were minimal over 2021, with only two lease transactions uncovered. The average lease price was \$5.25/lb.



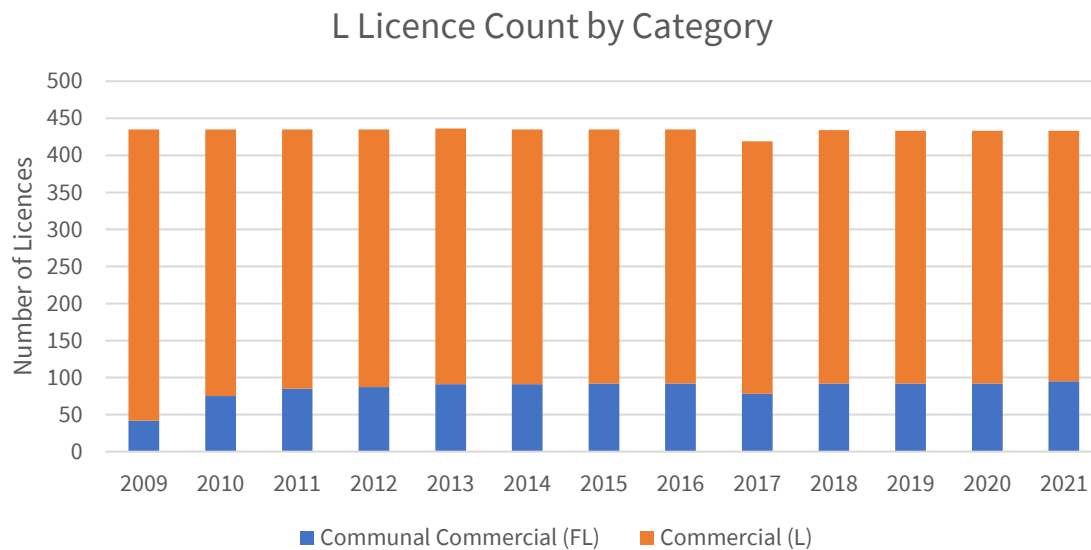


Aggregate value of L licences and halibut quota (\$ million by year)



L licence counts by category

In 2021 there was a shift of three licences from the commercial designation to the communal commercial designation.



Outlook/commentary

The outlook for halibut licence and quota value is summarized as follows:

- Halibut was one of the most highly traded licence and quota in BC commercial fisheries over 2021 as the fishery has strong fundamentals, high demand, and fewer perceived uncertainties from the changes in fisheries policy.
- Interviewees commented that value of halibut quota peaked in 2017 at \$120-\$130/lb and has since stabilized in the range of \$90-\$95/lb.
- Halibut quota prices rallied this year despite volatile prices over 2020, with prices in the range of \$92-\$95/lb in the start of the season, and \$96/lb toward the end of the season.
- Halibut was viewed as a resilient fishery due to the low cost of capital and a solid rate of return (5.45%). It was perceived to be a success story during COVID-19.
- The direct-to-consumer market opened new avenues to sell popular fish such as halibut, but reaching this market still requires significant value-adding to make the product consumer friendly. Prior to COVID-19, as much as 80% of halibut went to restaurants and food service industries, meaning that buyers and processors faced a large challenge of creating new markets for their products.

GROUND FISH – Sablefish (K)

Background to valuation

General	
Licence designation	K
Nature of Licence	vessel-based
Number of commercial licences	41
Number of communal commercial licences	7
Area licensing?	no
Stacking?	no
Competitive or quota mgmt.?	quota

Valuation Parameters	
Licence	per foot
Quota	per lb (j-cut)
Vessels	yes
Amount of trading activity in category this year	med
Number of transactions underlying valuation	~ 11 (quota) ~ 0 (licence)
Confidence in current year valuation	Med

Current valuation

Licence and quota value as of December 31, 2021

Category	Number of Licences / lbs of Quota (j-cut)	Value/Licence Value/Quota (j-cut)	Value/Licence	Total Value
K Licence - Commercial	41	\$6,768/ft	\$400,000	\$16,400,000
FK Licence - Communal commercial	7	n/a	n/a	n/a
Sablefish Quota (J-cut)	3,738,921 lbs	\$78/lb	n/a	\$291,635,838
Total Value (Licences and Quota)	n/a	n/a	n/a	\$308,035,838

Valuation comments

- Average licence value per foot is based on a \$400,000 value per licence and an average vessel length of 59.1 feet.
- No licence transactions were uncovered in 2021 so the past year's licence value of \$400,000 was used. One interviewee noted that the market price is likely close to past year's value.
- Quota prices ranged from \$70-\$82/lb (J-cut), with an average market price in the range of \$78/lb.

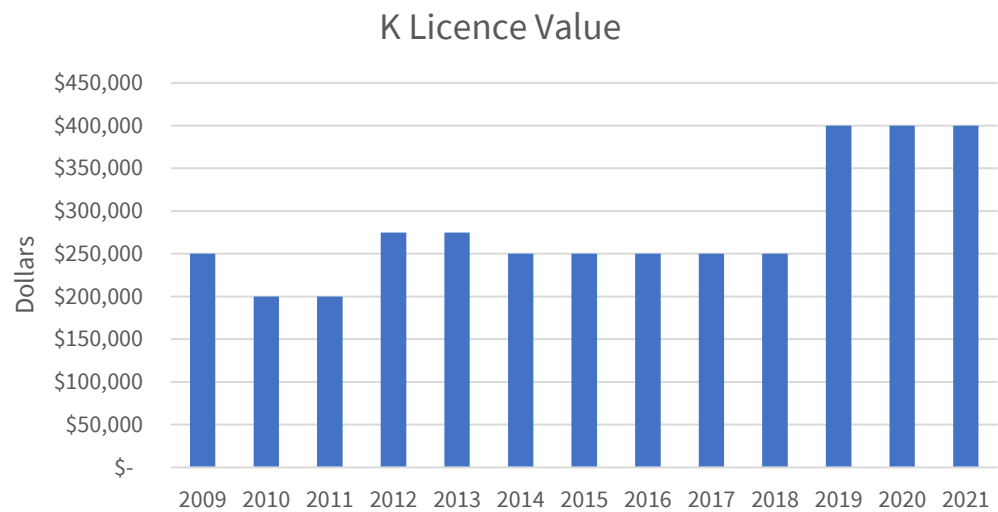
Vessel value

Vessel value is arrived at by using past data for average vessel value as a baseline and increasing the value based on inflation. The number of vessels has been updated based on DFO's *Pacific Region Commercial Fishing Licences Database*. However, this report only includes vessels for which a vessel age was provided. As such, aggregate value represents only a portion of the total fleet. For more information about the limitations of this analysis please refer to the Valuation Methodology.

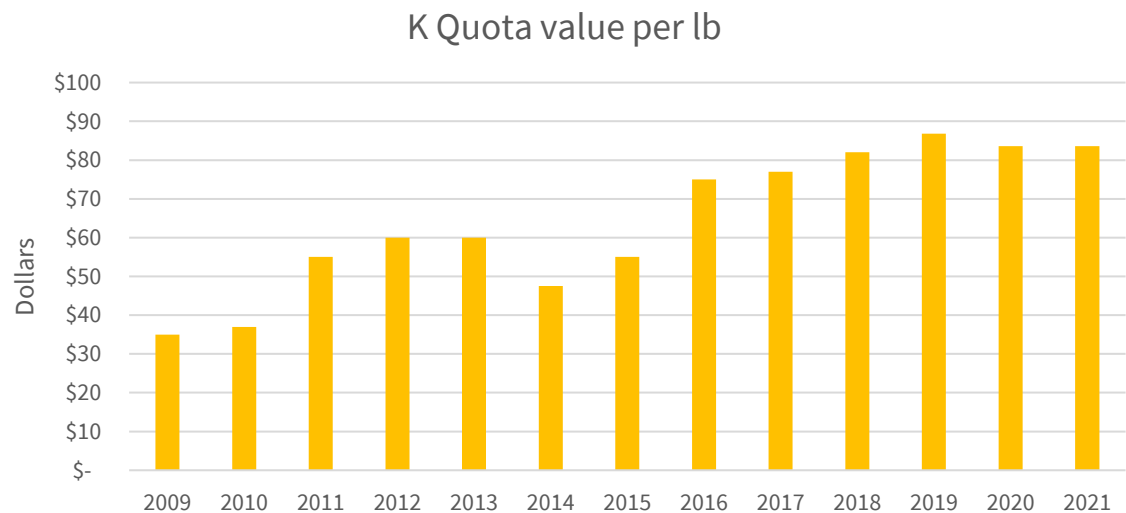
Sablefish	Number of Vessels	Avg. Vessel Value	Aggregate Value
Classic	26	211,763	\$5,505,843
Modern	11	688,230	\$7,570,534
Total	37	387,336	\$14,331,447

Licence and quota trends

Recent K licence valuation

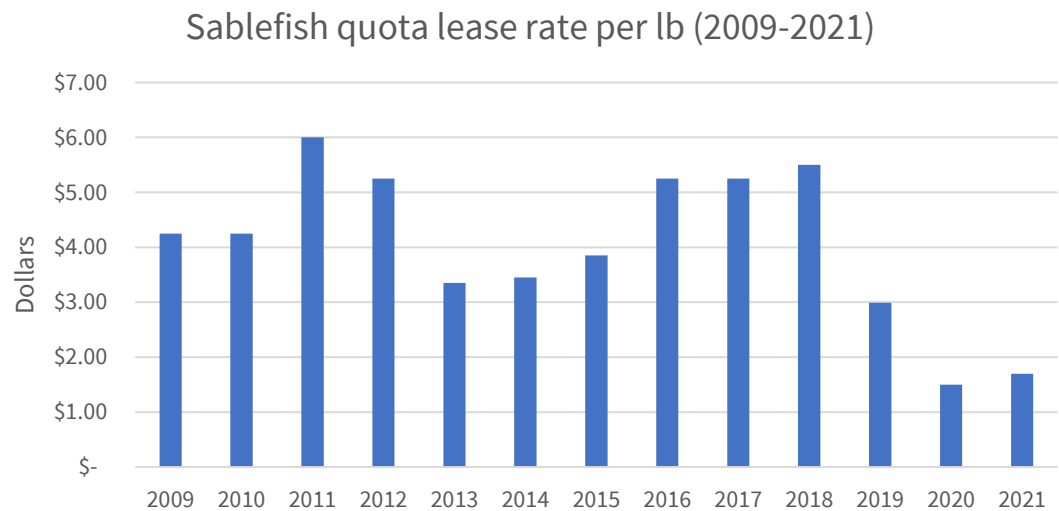


Recent K quota valuation (J-cut)

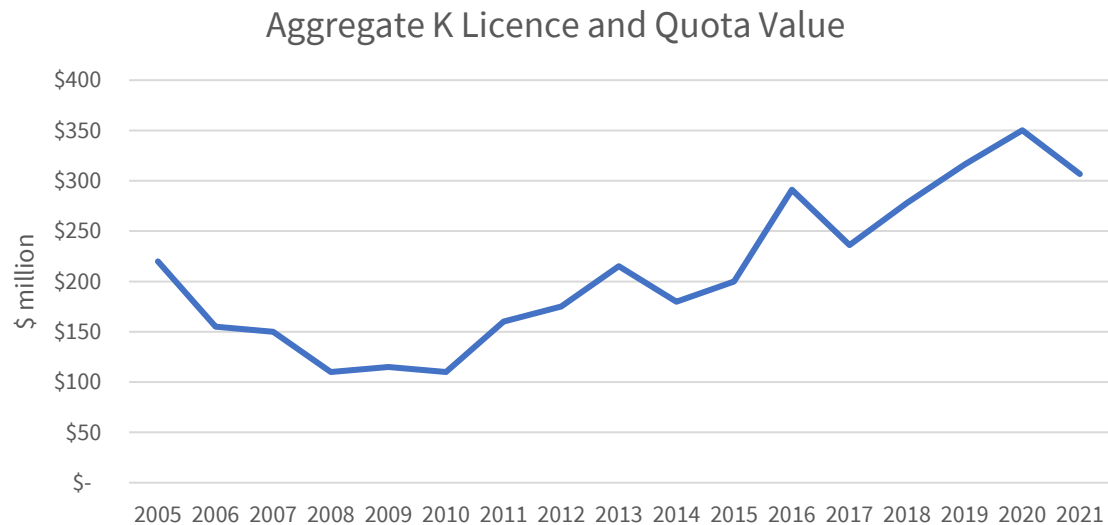


Recent K quota lease rates

The average quota lease price was \$1.70/lb (J-cut), however there were minimal lease transactions over 2021. Interviewees commented that lease prices rise and fall with the ex-vessel price of the fish. Ex-vessel prices fluctuated throughout the year as buyers and processors adjusted to restaurant closures and cruise ship bans, previously key markets for sablefish.

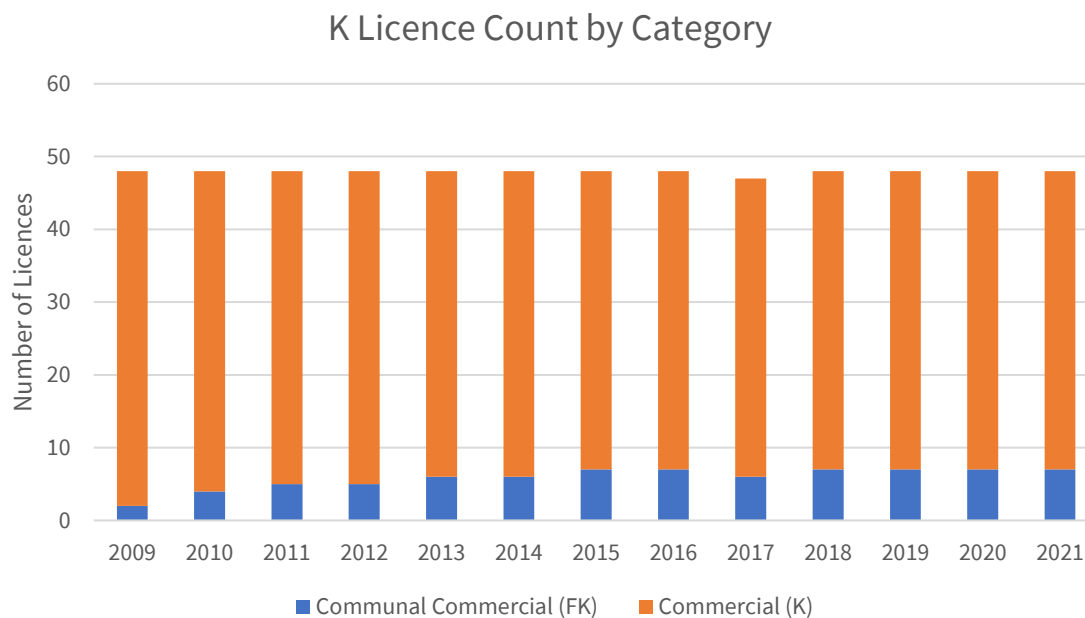


Aggregate value of K licence and quota (J-cut, \$ millions by year)



K licence counts by category

In 2021 there was no change to the number of K licences.



Outlook/commentary

General outlook for sablefish licence and quota values is summarized below:

- There was a slight uptick in transaction activity for sablefish including licences over the past year, but the activity is still relatively muted. Interviewees suggested that this is partly due to licence holders wanting to retain them because there are only 42 licences available.
- Sablefish quota is perceived to have good fundamentals (due to a good stock of fish, good product, and a diversified, international market)
- However, due to the high cost of capital and difficulty in catching the fish, quota values were depressed in the immediate aftermath of the pandemic in 2020, but have recovered in 2021.
- There is an active price discovery process underway, which partly explained the volatility of sablefish quota prices over the past few years. This has also meant that actual transaction values may still be inflated, and are anticipated to fall to a level that reflects the fundamentals.
- Sablefish markets were significantly impacted by COVID because it is generally a fish consumed in restaurants rather than at home. COVID also brought a shift in buyer preferences as smaller fish became more popular, rather than larger fish, which have been historically more popular.

GROUND FISH – Groundfish trawl (T)

Background to valuation

General	
Licence designation	T
Nature of Licence	vessel-based
Number of commercial licences	135
Number of communal commercial licences	4
Area licensing?	no
Stacking?	no
Competitive or quota mgmt.?	quota

Valuation Parameters	
Licence	per foot
Quota	per lb
Vessels	yes
Amount of trading activity in category this year	low
Number of transactions underlying valuation	~ 0 (licence) ~ 0 (quota)
Confidence in current year valuation	low

Current valuation

Licence and quota value as of December 31, 2021*

Category	Number of Licences / lbs of Quota	Value/Licence Value/Quota	Avg. Licence	Total Value
T Licence – Commercial	135	\$672/ft	\$41,000	\$5,535,000
FT Licence- Communal commercial	4	n/a	n/a	n/a
Uncut quota	93,279,778 lbs	\$1.70/lb	n/a	\$158,575,623
Hake (gulf and offshore)	200,869,542 lbs	\$0.20/lb	n/a	\$40,173,908
Total value	n/a	n/a	n/a	\$204,284,531

Valuation comments

- The valuation assumes the same values for uncut and hake quota as 2020 as the TAC is yet to be updated for 2021.*
- The average licence value per foot is based on a \$41,000 average licence value and an average vessel length of 61 feet, equalling \$672 per foot. No transactions were uncovered for uncut or hake quota, and the value from the previous year was used.
- Smaller T licences in the \$40,000-\$50,000 range are often purchased just to hold quota whereas larger ones in the \$200,000-\$400,000 range are sought after for larger holding caps and sold at a premium. Industry informants expressed that there is currently a low demand for T licences, which makes it difficult to estimate the market price.

Vessel value

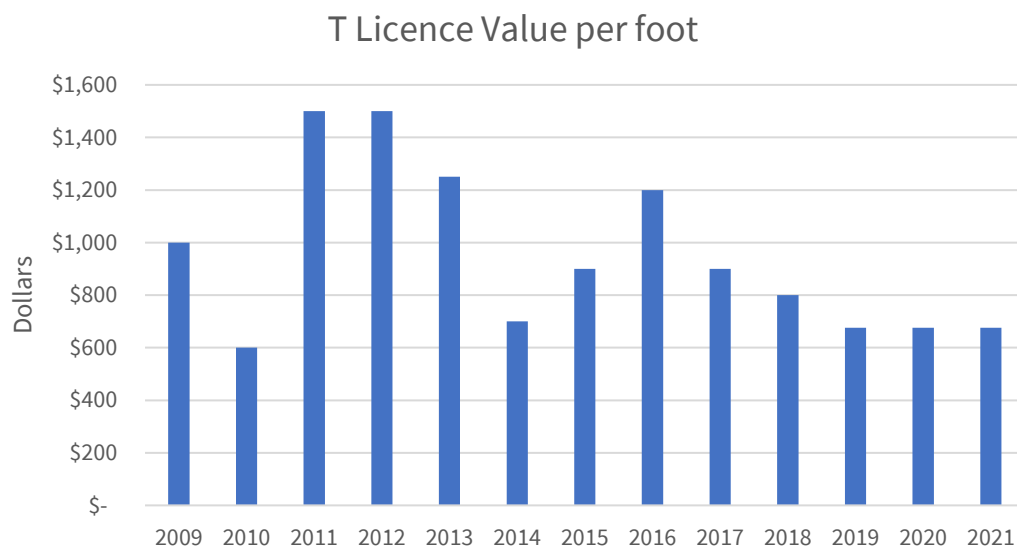
Vessel value is arrived at by using past data for average vessel value as a baseline and increasing the value based on inflation. The number of vessels has been updated based on DFO's *Pacific Region Commercial Fishing Licences Database*. However, this report only includes vessels for which a vessel age was provided. As such, aggregate value represents only a portion of the total fleet. For more information about the limitations of this analysis please refer to the Valuation Methodology.

Groundfish trawl	Number of Vessels	Avg. Vessel Value	Aggregate Value
Classic	69	465,817	\$32,141,373

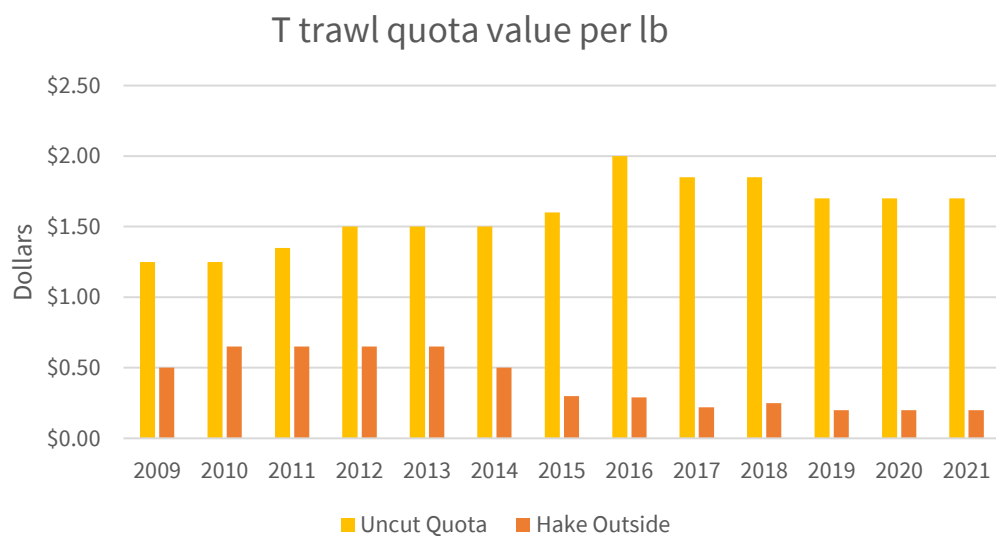
Modern	36	1,455,872	\$52,411,392
Total	105	805,279	\$84,554,316

Licence and quota trends

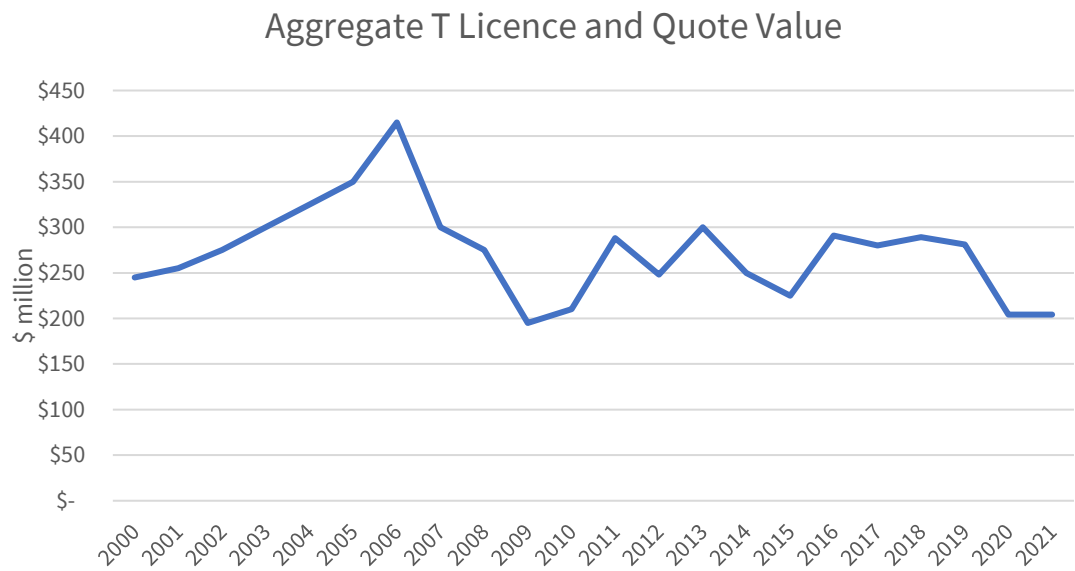
Recent T licence and trawl quota valuation



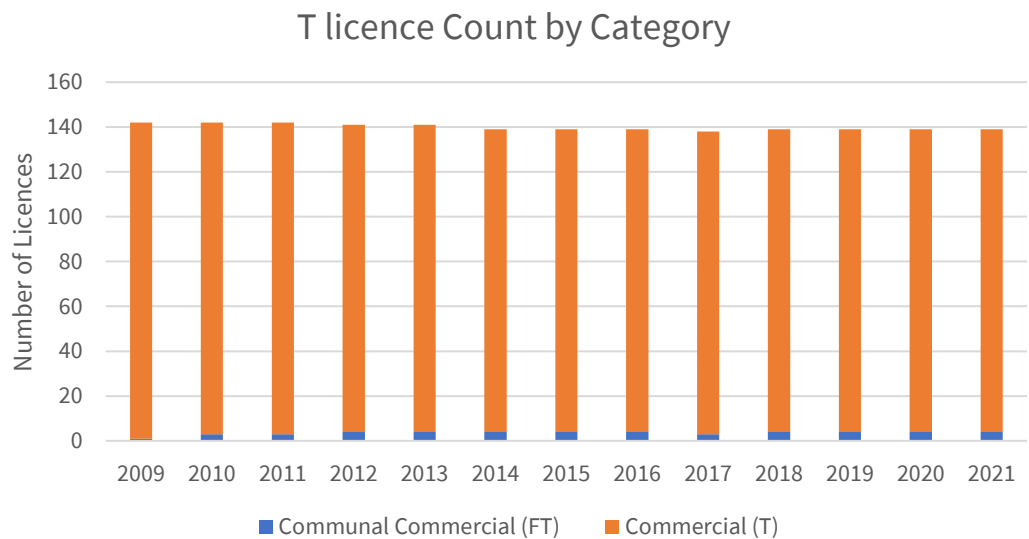
Recent T trawl quota valuations



Aggregate value of T licence and trawl quota (\$ millions by year)



T licence counts by category



Recent T licence and quota lease rates

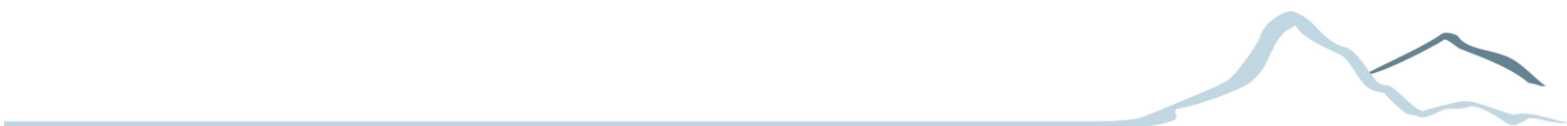
No licence or quota lease transactions were uncovered.



Outlook/commentary

General outlook regarding groundfish trawl valuation is summarized below:

- The specific holding cap assigned to each T licence greatly affected its value.
- Larger vessels that also hold schedule II licences tend to trade higher because of the opportunity to fish tuna.
- Large licences on large vessels are rare because they are on vessels that cannot easily serve other purposes. These licences are difficult to evaluate because there are no new licences being created and they already hold a large portion of the TAC.



GROUND FISH – Rockfish hook and line (ZN)

Background to valuation

General	
Licence designation	ZN
Nature of Licence	party-based
Number of commercial licences	210
Number of communal commercial licences	51
Area licensing?	yes
Stacking?	no
Competitive or quota mgmt.?	quota

Valuation Parameters	
Licence	per licence
Quota	n/a
Vessels	Yes
Amount of trading activity in category this year	Low
Number of transactions underlying valuation	~ 0 (inside) ~ 3 (outside)
Confidence in current year valuation	low



Current valuation

Licence Value as of December 31, 2021

Category	Number of Licences	Value/Licence	Total Value
ZN inside licence – commercial	52	\$37,500	\$1,950,000
ZN outside licence – commercial	158	\$243,000	\$38,394,000
FZN Licence - communal commercial	51	n/a	n/a
Total ZN (FZN + ZN)	210 (261)	n/a	\$40,344,000

Valuation comments

- There tends to be minimal movement of ZN licences.
- ZN Outside licence values ranged from \$250,000-\$260,000.
- No ZN Inside licence values were uncovered, and previous year's values were used for 2021.

Vessel value ZN outside

Vessel value is arrived at by using past data for average vessel value as a baseline and increasing the value based on inflation. For this fishery, the consultant was not able to update the number of vessels as this information was not available from DFO's *Pacific Region Commercial Fishing Licences Database*. As such, the vessel numbers below have been taken from last year's report. For more information about the limitations of this analysis please refer to the Valuation Methodology.

ZN Outside	Number of Vessels	Avg. Vessel Value	Aggregate Value
Classic	80	144,036	\$11,522,896
Modern	44	302,859	\$13,325,778
Total	124	200,389	\$24,848,261

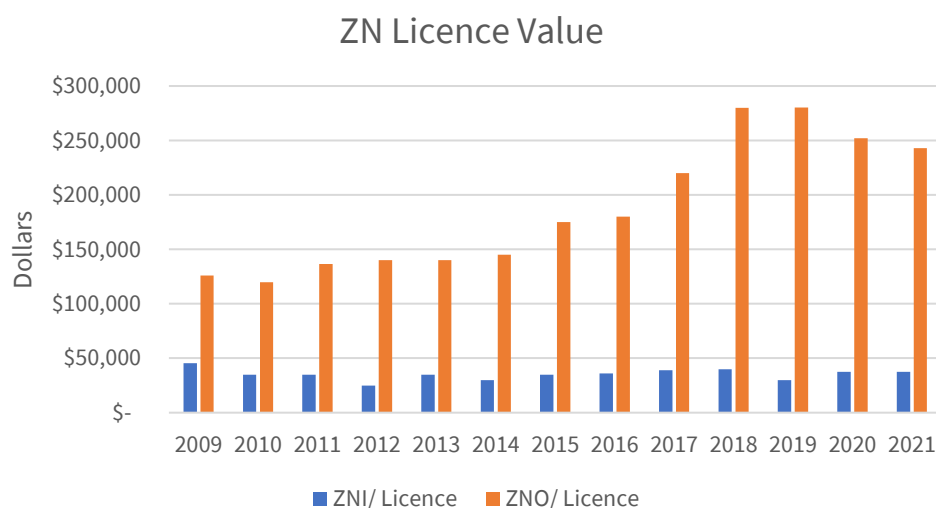
Vessel value ZN inside

Vessel value is arrived at by using past data for average vessel value as a baseline and increasing the value based on inflation. For this fishery, the consultant was not able to update the number of vessels as this information was not available from DFO's *Pacific Region Commercial Fishing Licences Database*. As such, the vessel numbers below have been taken from last year's report. For more information about the limitations of this analysis please refer to the Valuation Methodology.

ZN Inside	Number of Vessels	Avg. Vessel Value	Aggregate Value
Classic	3	79,411	\$238,234
Modern	5	207,524	\$1,037,619
Total	8	159,443	\$1,275,542

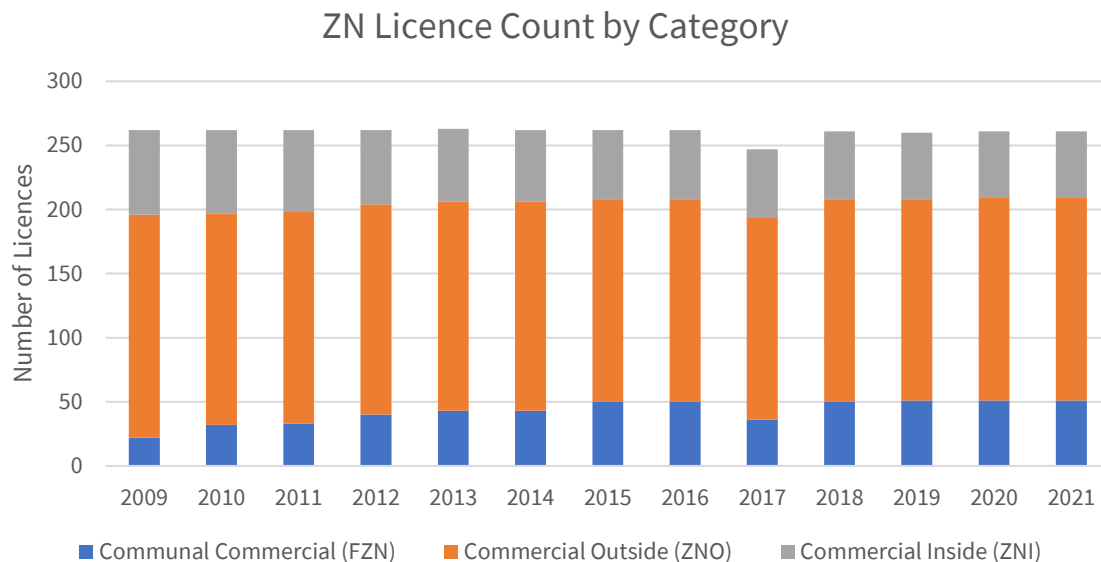
Licensing trends

Recent ZN licence valuations



ZN licence counts by category

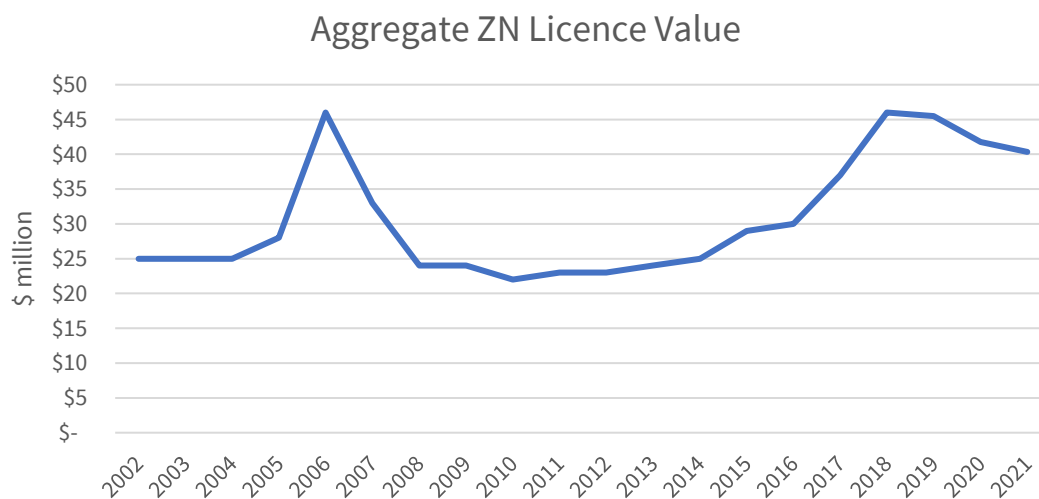
In 2021 there was no change to the number of inside or outside ZN licences.



Recent ZN lease rates

Lease prices for ZN Inside licences were approximately \$2,200. Lease prices for ZN Outside licences were approximately \$4,100.

Aggregate value of ZN licences (\$ millions by year)



Outlook/commentary

Rockfish is viewed as valuable due to its role as an enabler for directed fisheries (particularly halibut). Given the potential rockfish by-catch in other groundfish fisheries, it is essential to have access to rockfish quota to fish directed species. Given this, it is viewed as a licence with many advantages and few downsides.



GROUND FISH – Lingcod and dogfish

The lingcod and dogfish fisheries are managed under an IVQ program and do not have dedicated licence categories. However, they can be executed under the authority of any vessel-based licence. This makes the value of quota in these fisheries difficult to estimate for valuation purposes.

Lingcod

Nine lingcod quota transactions were uncovered for this report with values averaging around \$9.75/lb.

Quota value as of December 31, 2021

Category	Lbs of quota	Value	Total Value
Lingcod quota (H & L)	2,574,996	\$9.75/lb	\$25,106,211

- Lingcod leases in the hook and line fishery were approximately \$0.34/lb.
- Quota prices have declined from a high of \$15/lb a few years ago to current prices in the range of \$9-\$10/lb. Because some of the quota is still unfished, it may still be overvalued.

Dogfish

Three dogfish quota transactions were uncovered for this report with values averaging around \$0.23/lb.

Quota value as of December 31, 2021

Category	Lbs of quota	Value	Total Value
Dogfish quota (H & L)	20,987,982	\$0.24/lb	\$5,037,115

- Dogfish continues to see low interest from fishers and there does not appear to be a thriving market for the quota. Dogfish is usually caught as bycatch in the halibut and hake fisheries.
- Only one quota lease transaction was uncovered for \$0.01/lb

SHELLFISH – Prawn trap (W)

Background to valuation

General	
Licence designation	W
Nature of Licence	vessel-based
Number of commercial licences	185
Number of communal commercial licences	62
Area licensing?	no
Stacking?	yes
Competitive or quota mgmt.?	competitive

Valuation Parameters	
Licence	per foot
Quota	n/a
Vessels	yes
Amount of trading activity in category this year	med
Number of transactions underlying valuation	~7
Confidence in current year valuation	med

Current valuation

Licence value as of December 31, 2021

Category	Number of Licences	Value/Foot	Avg Value/Licence	Total Value
W Licence	185	\$21,210	\$778,570	\$144,035,450
FW Licence - Communal commercial	62	n/a	n/a	n/a

Valuation comments

- Average licence value per foot is based on information from interviewees. Average licence value is based on an average vessel length of 36.7 feet.
- Smaller licences are often leased and stacked on larger vessels, which allows the vessel to fish an additional 200 traps on top of the 300 traps allocated to the first (non-stacked) prawn licence.
- When smaller licences are sold and stacked onto larger vessels, the licences become married and cannot be sold and put on smaller vessels.
- Historically, licences have been valued by vessel length; however, interviewees have stated that with smaller, more efficient speedboats, vessel length is becoming less of a determinant of price. These boats are able to transport live product faster than longer, bulkier vessels and typically target local and dock sales.
- There remains a perception that the market remains frothy, and prices have fallen from previous years.

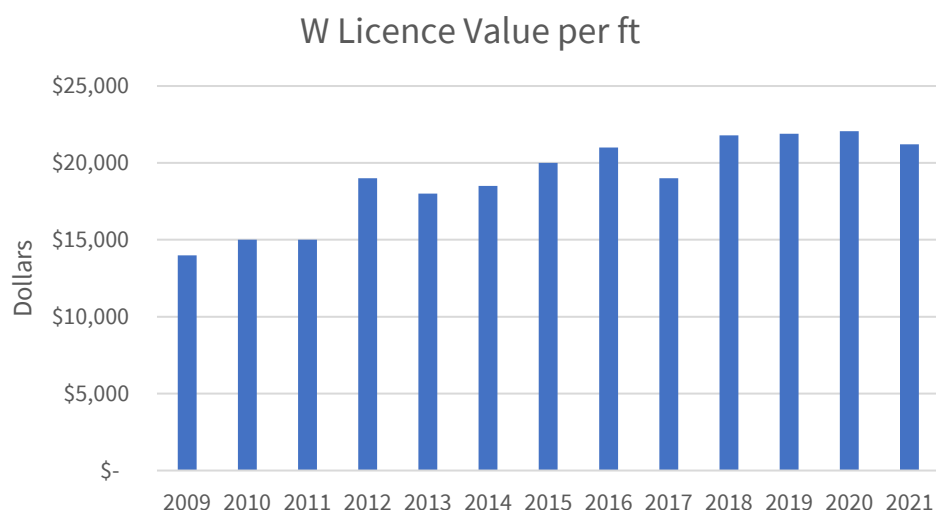
Vessel value

Vessel value is arrived at by using past data for average vessel value as a baseline and increasing the value based on inflation. The number of vessels has been updated based on DFO's *Pacific Region Commercial Fishing Licences Database*. However, this report only includes vessels for which a vessel age was provided. As such, aggregate value represents only a portion of the total fleet. For more information about the limitations of this analysis please refer to the Valuation Methodology.

Prawn by trap	Number of Vessels	Avg. Vessel Value	Aggregate Value
Classic	56	171,541	\$9,606,274
Modern	74	344,115	\$25,464,525
Total	130	267,703	\$34,801,338

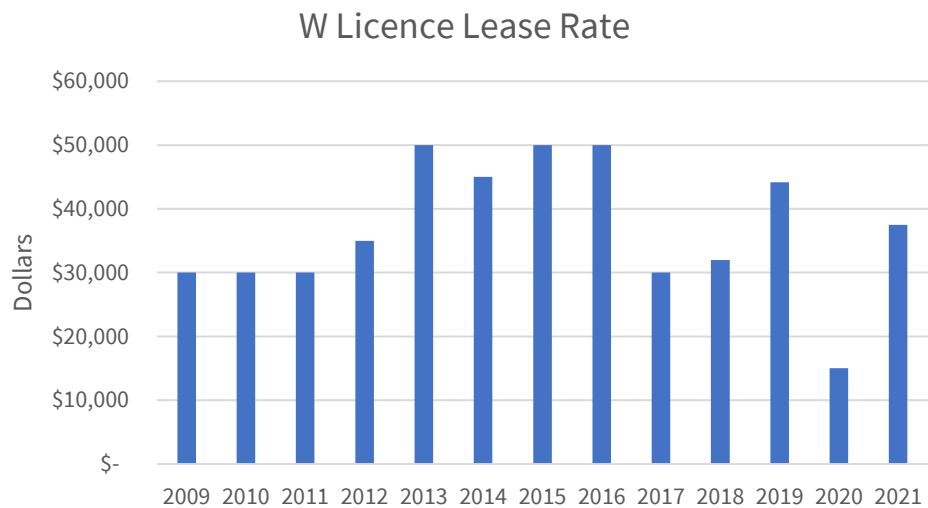
Licensing trends

Recent W licence valuation

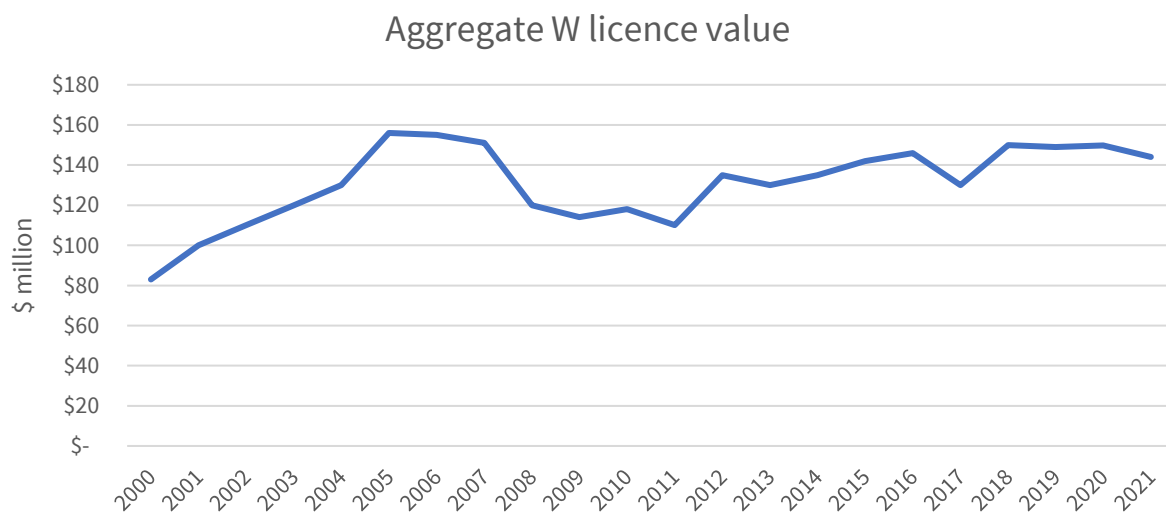


Recent W licence lease rates

The average lease price for a W licence was approximately \$37,500 and is based on 15 transactions. Lease rates have recovered substantially from the dip in 2020 that was caused by COVID-19.

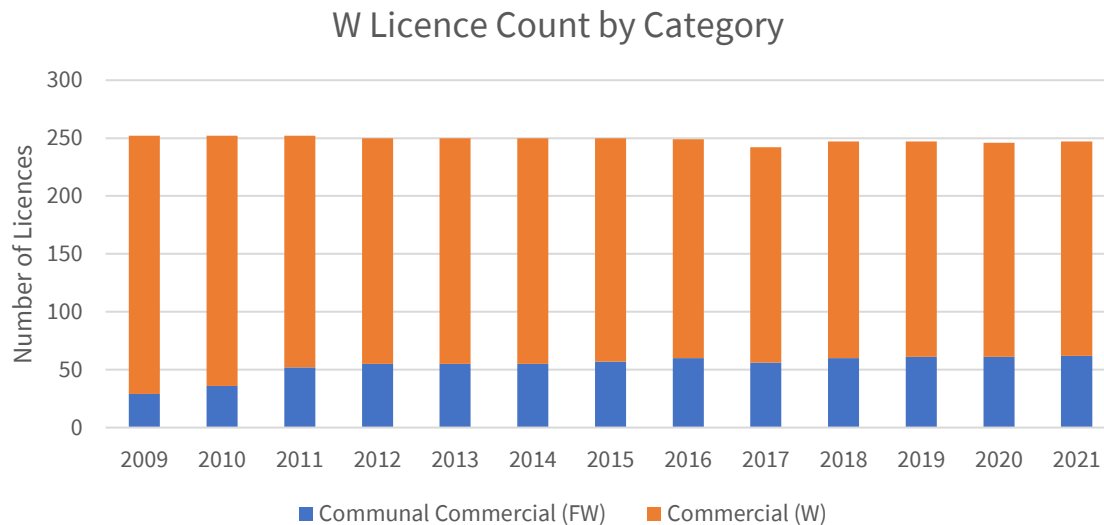


Aggregate value of W licences (\$ millions by year)



W licence count by category

The number of communal commercial W licences increased by one in 2021.



Outlook/commentary

- Licence values in the prawn trap fishery have declined slightly over the past year.
- More nimble, high-speed boats are able to catch and transport live prawns more quickly, though the size of the catch per year is smaller. Interviewees have noted these high-speed, modern boats have driven up licence prices at shorter vessel lengths – although there still remains a premium on longer vessel lengths
- This shift is changing the long-term dynamics of the industry, as the live fishery is now eating into the frozen/export market, the average age of fishers is going down, and boats are getting faster
- Despite decreased demand from Asian markets, domestic demand for the live fishery has picked up and is expected to become a larger part of the market share.

SHELLFISH – Crab (R)

Background to valuation

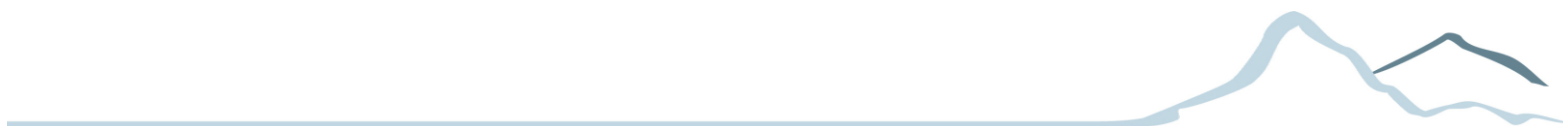
General	
Licence designation	R
Nature of Licence	vessel-based
Number of commercial licences	186
Number of communal commercial licences	34
Area licensing?	7 areas
Stacking?	no
Competitive or quota mgmt.?	competitive

Valuation Parameters	
Licence	per foot
Quota	n/a
Vessels	yes
Amount of trading activity in category this year	low
Number of transactions underlying valuation	~2
Confidence in current year valuation	Low

Current valuation

Licence value as of December 31, 2021

Category	Number of Licences	Value/Foot	Avg Value/Licence	Total Value
R Licence - Commercial	186	\$43,584	\$1,362,000	\$253,332,000
FR Licence - Communal commercial	34	n/a	n/a	n/a



Valuation comments

- Average licence value per foot is based on an average vessel length of 31.25 feet.
- Licences vary by length with longer licences holding a higher total value but a lower value per foot.

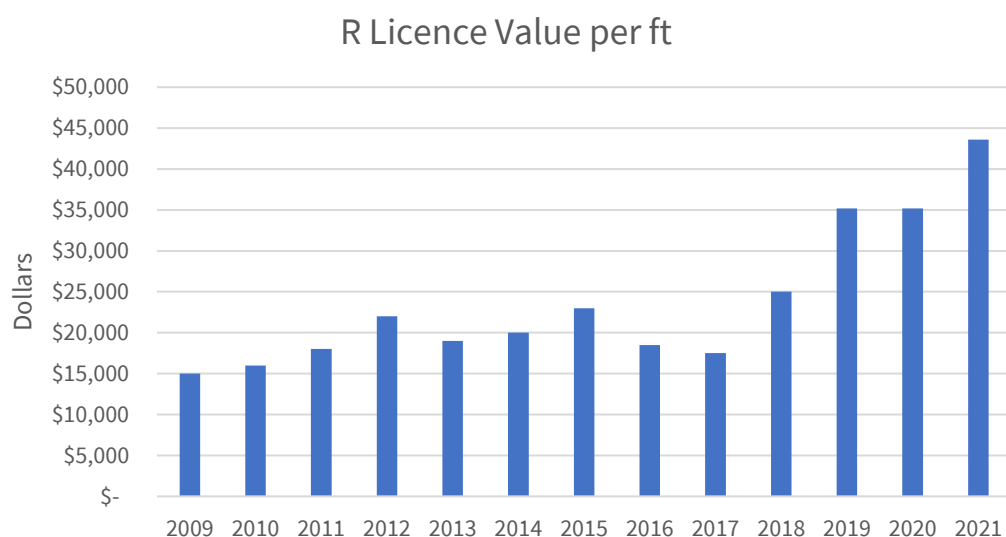
Vessel value

Vessel value is arrived at by using past data for average vessel value as a baseline and increasing the value based on inflation. The number of vessels has been updated based on DFO's *Pacific Region Commercial Fishing Licences Database*. However, this report only includes vessels for which a vessel age was provided. As such, aggregate value represents only a portion of the total fleet. For more information about the limitations of this analysis please refer to the Valuation Methodology.

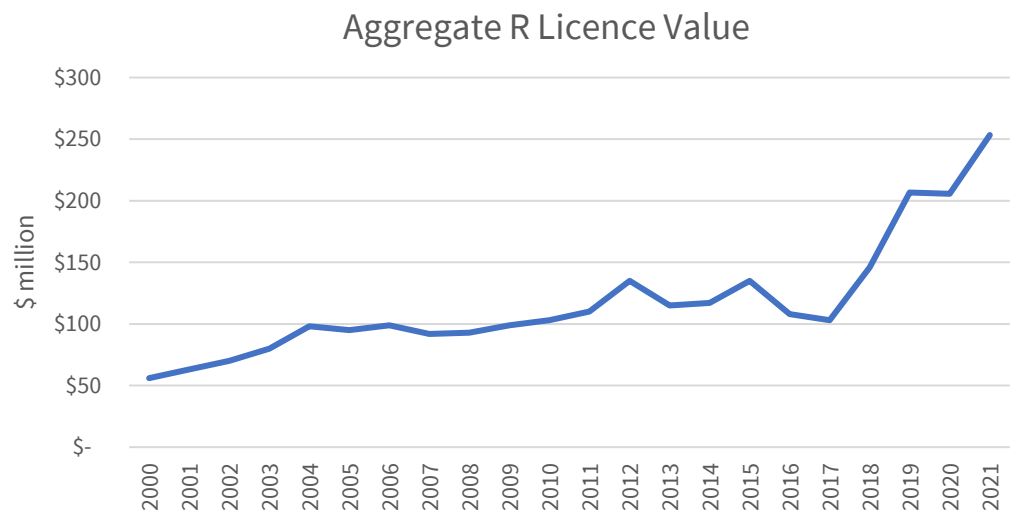
Category	Number of Vessels	Avg. Vessel Value	Aggregate Value
Classic	22	152,515	\$ 3,355,330
Modern	100	370,586	\$37,058,560
Total	122	327,675	\$39,976,301

Licensing trends

Recent R licence valuation

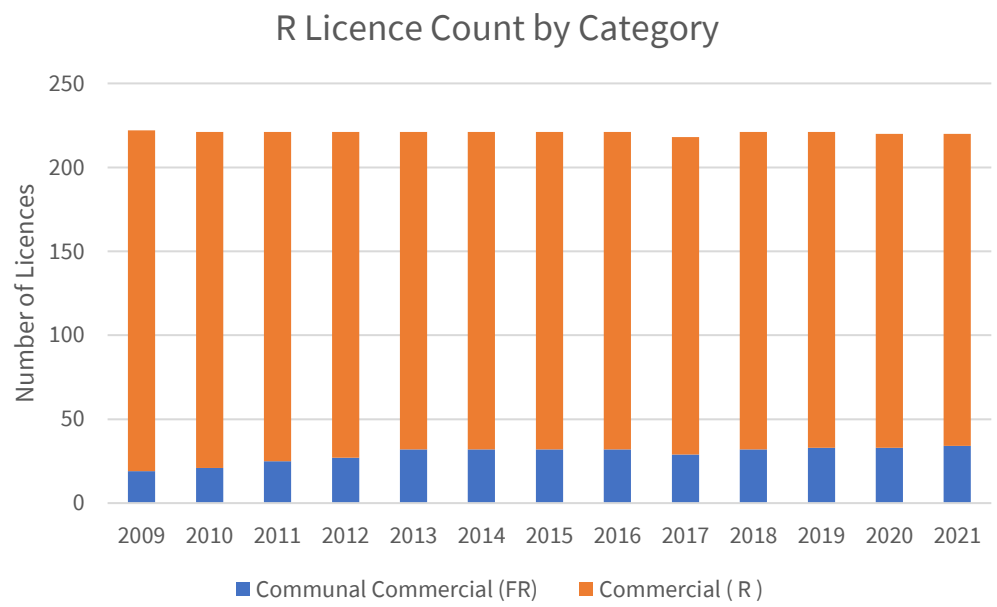


Aggregate value of R licences (\$ millions by year)



R licence counts by category

In 2021 there was a shift of one licence from the commercial designation to the communal commercial designation.



Recent R licence lease rates

No lease transactions were uncovered this year. In 2020, R licences are leased in the range of \$23,750 per licence, or \$760 per foot (assuming a 31.25 ft vessel).

Outlook/commentary

General outlook for crab fishery includes the following observations:

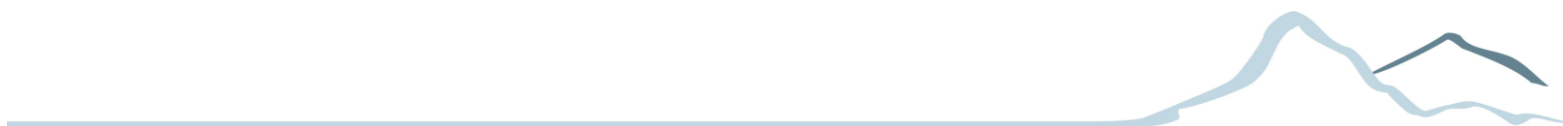
- There were few transactions uncovered in our research, which is likely because R licences are difficult to come by. Most people who own them are fishing them.
- Anecdotal information indicates that North Coast R licences are valued at the range of \$2 million – particularly due to higher than anticipated returns.
- Interviewees have noted that COVID-19 impacts persist but have tailed off, particularly live sales to China. This was compounded by the fact that crab is sold live and cannot keep for long without the product being discarded.

SHELLFISH – Shrimp trawl (S)

Background to valuation

General	
Licence designation	S
Nature of Licence	vessel-based
Number of commercial licences	209
Number of communal commercial licences	26
Area licensing?	no
Stacking?	no
Competitive or quota mgmt.?	competitive

Valuation Parameters	
Licence	per foot
Quota	n/a



Vessels	yes
Amount of trading activity in category this year	low
Number of transactions underlying valuation	~4
Confidence in current year valuation	med

Current valuation

Licence value as of December 31, 2021

Category	Number of Licences	Value/Foot	Avg Value/Licence	Total Value
S Licence - Commercial	209	\$774	\$32,500	\$6,792,500
FS licence - Communal commercial	26	n/a	n/a	n/a

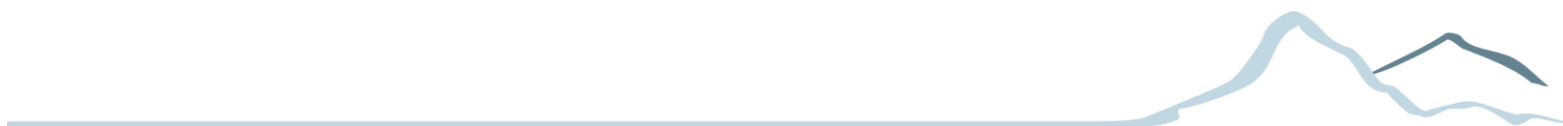
Valuation comments

- Average licence value is based on a valuation of \$774 per foot and an average vessel length of 42 feet. Prices fell sharply in 2020, however there were few transactions underlying this valuation and it is difficult to anticipate if prices will rebound in future years. This fishery faced some challenges related to at-sea observation, as some fishers did not have enough room on their vessels to have observers on board and maintain social distancing and did not have access to cameras for remote monitoring. This was noted as the reason why some fishers opted to not fish.

Vessel value

Vessel value is arrived at by using past data for average vessel value as a baseline and increasing the value based on inflation. The number of vessels has been updated based on DFO's *Pacific Region Commercial Fishing Licences Database*. However, this report only includes vessels for which a vessel age was provided. As such, aggregate value represents only a portion of the total fleet. For more information about the limitations of this analysis please refer to the Valuation Methodology.

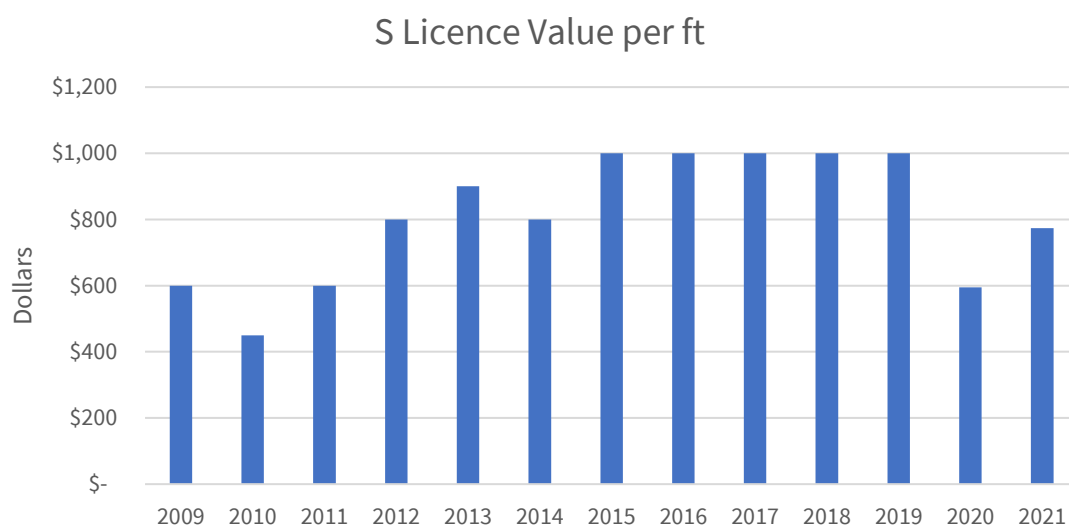
Shrimp Trawl	Number of Vessels	Avg. Vessel Value	Aggregate Value
Classic	119	87,869	\$10,456,449



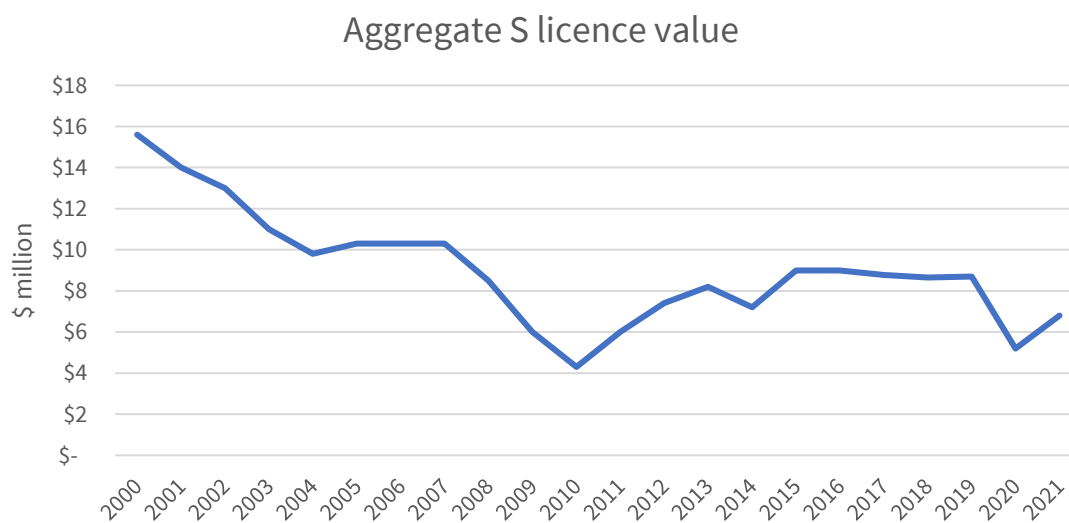
Modern	60	176,814	\$10,608,840
Total	179	117,049	\$20,951,735

Licensing trends

Recent S licence valuation

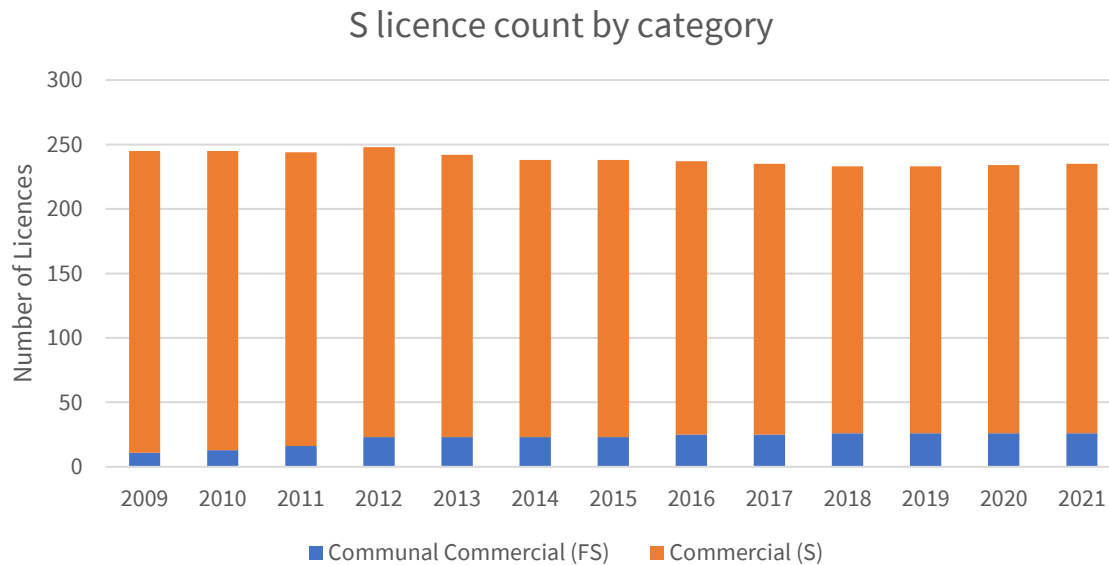


Aggregate value of S licence (\$ millions by year)



S licence counts by category

In 2021 there was an increase in one commercial S licence.



Recent S licence lease rates

- No lease transactions were uncovered for S licences.

Outlook/commentary

Shrimp licences are thinly traded and the market was illiquid over the past year. Prices in 2021 recovered from a significant collapse in 2020 by 17% (prices fell by 60% from 2019 to 2020). No significant COVID-19 or other impacts on the fishery were identified.

SHELLFISH – Geoduck (G)

Background to valuation

General	
Licence designation	G
Nature of Licence	vessel-based
Number of commercial licences	50
Number of communal commercial licences	5
Area licensing?	3 areas
Stacking?	yes
Competitive or quota mgmt.?	quota

Valuation Parameters	
Licence	per licence
Quota	per block
Vessels	yes
Amount of trading activity in category this year	low
Number of transactions underlying valuation	~ 3 (quota blocks) ~ 0 (licence, without quota block)
Confidence in current year valuation	low

Current valuation

Licence and quota value as of December 31, 2021

Category	Number of Licences/Quota Blocks	Value/Licence Value/Block	Total Value
G Licence - commercial	50	\$250,000/licence	\$12,500,000
FG Licence - communal commercial	5	n/a	n/a
Quota blocks	500	\$803,400/block	\$401,700,000
Total (G Licences + Quota Blocks)	50 Licences + 500 Quota Blocks	n/a	\$414,200,000

Valuation comments

- No transactions for G tabs (licence only) were uncovered in the valuation, therefore values from the previous year were used. Interviewees and anecdotal reports indicate the value has likely not changed significantly.
- The value of a quota block rose slightly from \$800,000 in 2020 to \$803,400 in 2021.

Vessel value

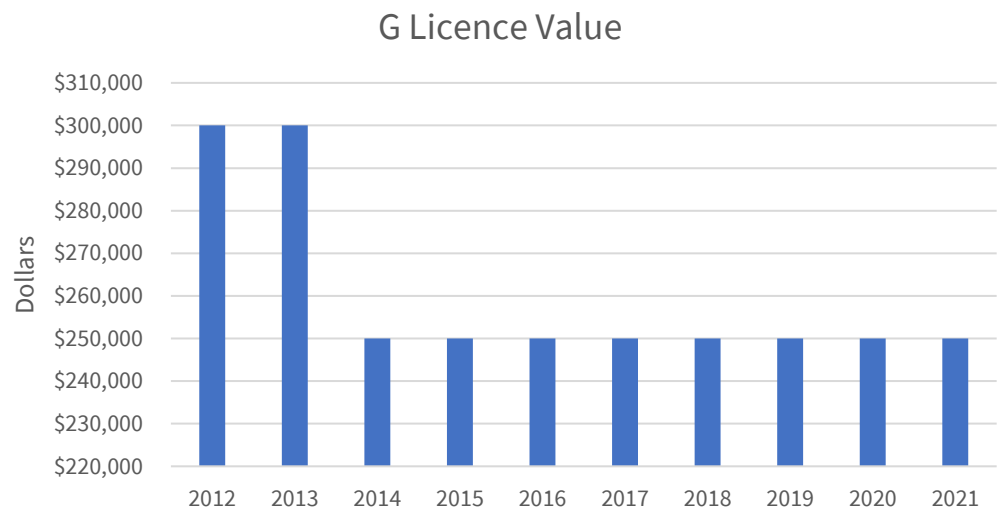
Vessel value is arrived at by using past data for average vessel value as a baseline and increasing the value based on inflation. The number of vessels has been updated based on DFO's *Pacific Region Commercial Fishing Licences Database*. However, this report only includes vessels for which a vessel age was provided. As such, aggregate value represents only a portion of the total fleet. For more information about the limitations of this analysis please refer to the Valuation Methodology.

Geoduck	Number of Vessels	Avg. Vessel Value	Aggregate Value
Classic	14	114,360	\$1,601,046
Modern	19	279,490	\$5,310,314
Total	33	161,304	\$5,323,032

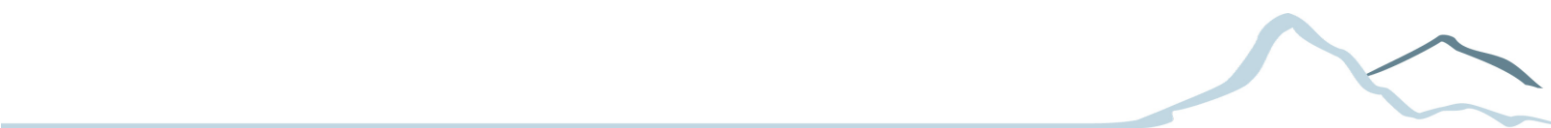
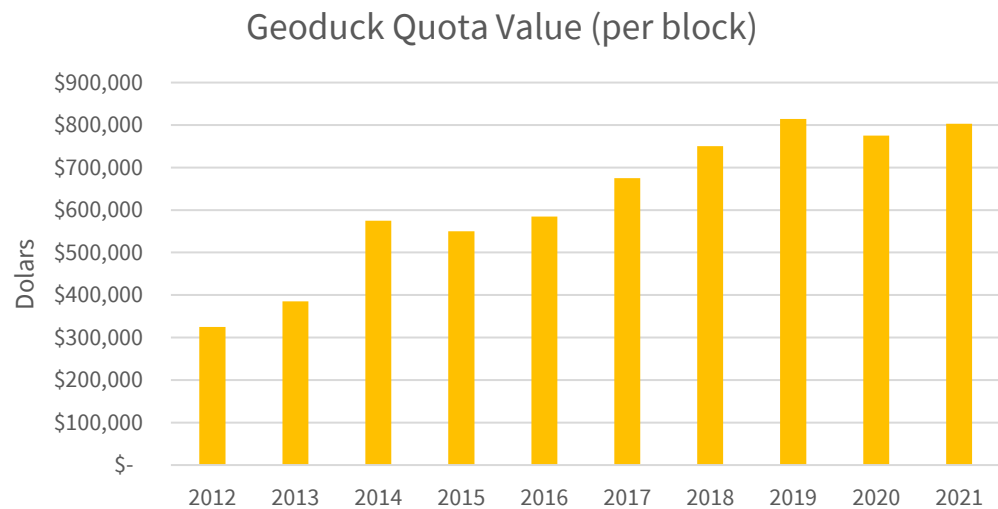


Licensing trends

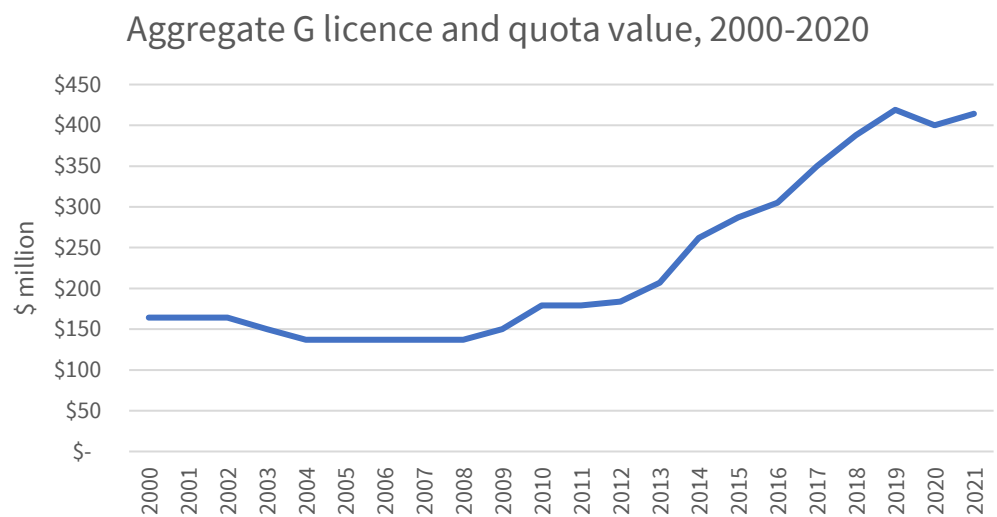
Recent G licence valuation



Recent geoduck quota valuation

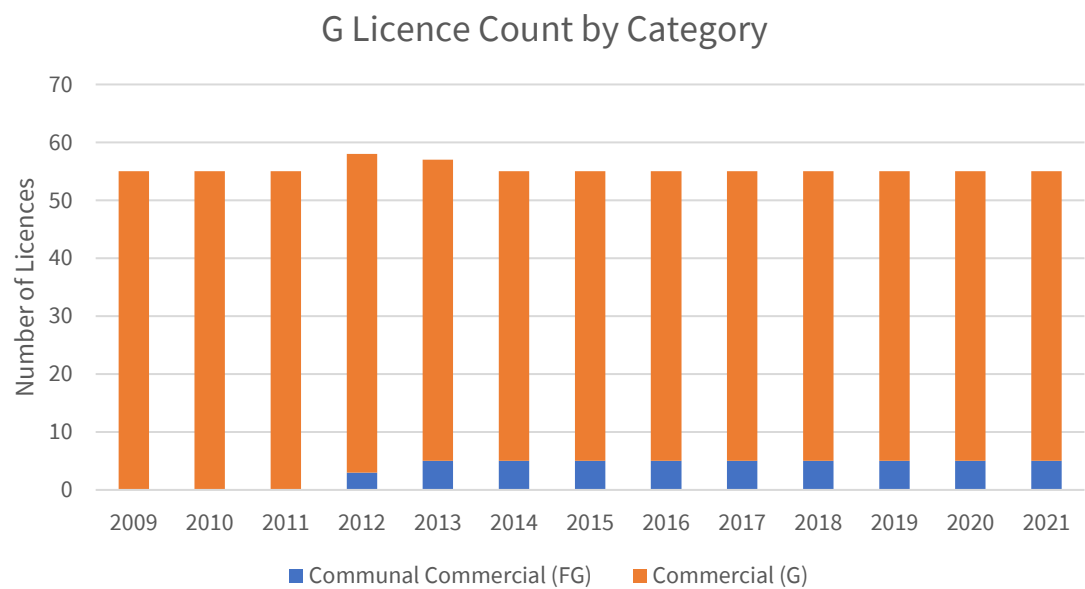


Aggregate value of G licence (\$ millions by year)



G licence counts by category

In 2021 there was no change to the number of G licences.



Recent G licence lease rates

No geoduck lease transactions were uncovered. Geoduck quota leased for approximately \$12/lb (\$66,000/block) in 2020, which was a reduction from \$18-\$19/lb in previous years.

Outlook/commentary

In general, interviewees report that the geoduck fishery remains stable, based on the following observations:

- Demand remains high for licences and quota access, but the market is very tight as not many people are willing to sell licences or quota blocks.
- Interviewees have noted that the majority of geoduck is exported live to Asia, the market was heavily impacted by COVID-19 as supply chains and transport/logistics systems were impacted.
- Prices have since recovered and the geoduck fishery is continued to be viewed as lucrative by interviewees and fishers.

SHELLFISH – Sea cucumber (ZD)

Background to valuation

General	
Licence designation	ZD
Nature of Licence	party-based
Number of commercial licences	82
Number of communal commercial licences	3
Area licensing?	4 areas
Stacking?	yes
Competitive or quota mgmt.?	quota

Valuation Parameters	
Licence	per licence
Quota	n/a
Vessels	yes
Amount of trading activity in category this year	low
Number of transactions underlying valuation	~3
Confidence in current year valuation	med

Current valuation

Licence value as of December 31, 2021

Category	Number of Licences	Value/Licence	Total Value
ZD	84	\$1,462,500	\$119,925,000

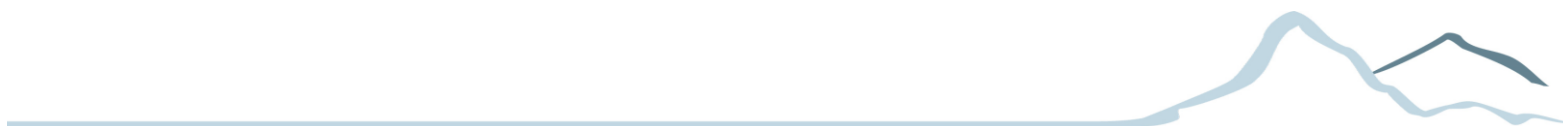
Valuation comments

- Three sea cucumber licence transactions were uncovered – however, this fishery is thinly traded as there are very few sellers even though there are a number of individuals looking to purchase them

Vessel value

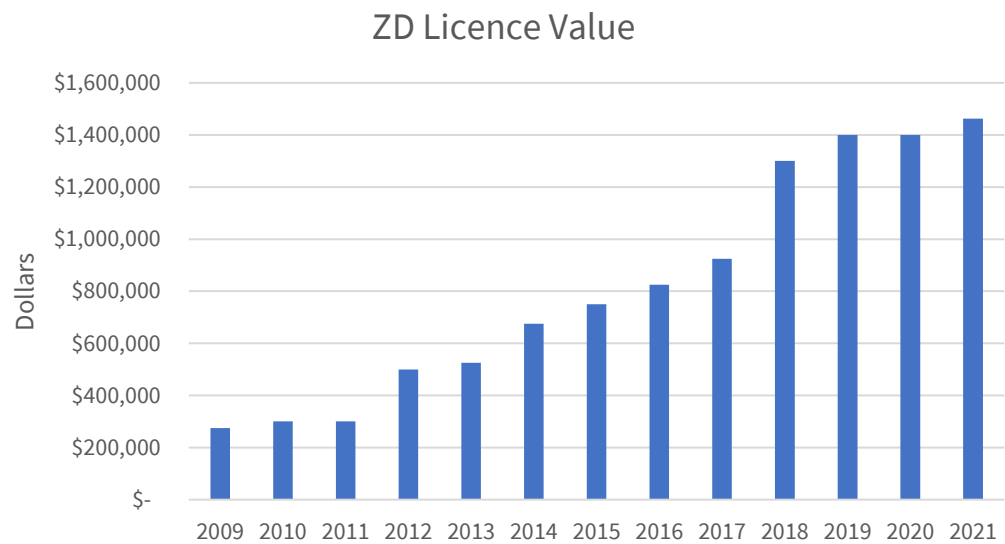
Vessel value is arrived at by using past data for average vessel value as a baseline and increasing the value based on inflation. For this fishery, the consultant was not able to update the number of vessels as this information was not available from DFO's *Pacific Region Commercial Fishing Licences Database*. As such, the vessel numbers below have been taken from last year's report. For more information about the limitations of this analysis please refer to the Valuation Methodology.

Sea Cucumber	Number of Vessels	Avg. Vessel Value	Aggregate Value
Classic	8	114,360	\$914,883
Modern	17	279,490	\$4,751,333
Total	25	226,653	\$5,666,320

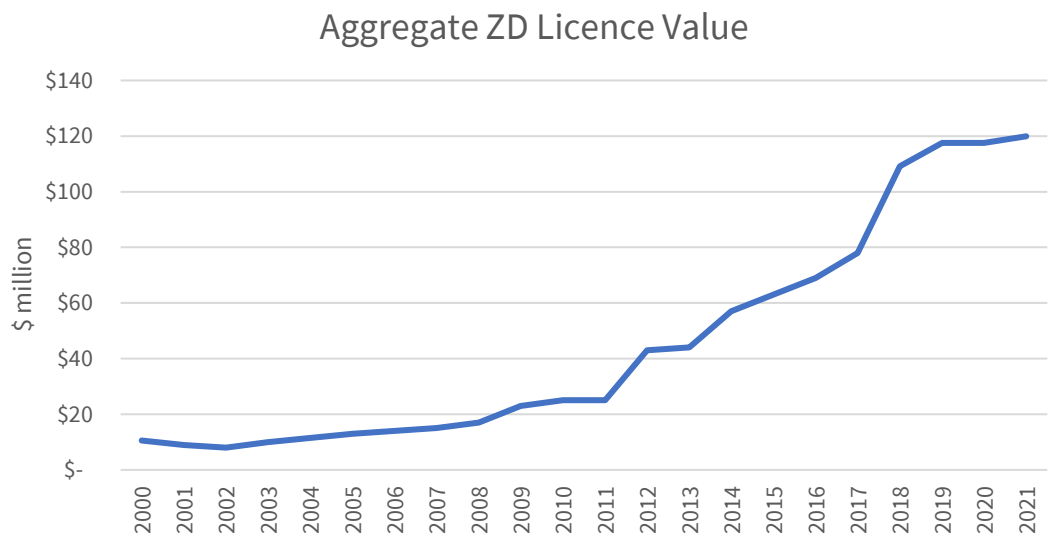


Licensing trends

Recent ZD licence valuations

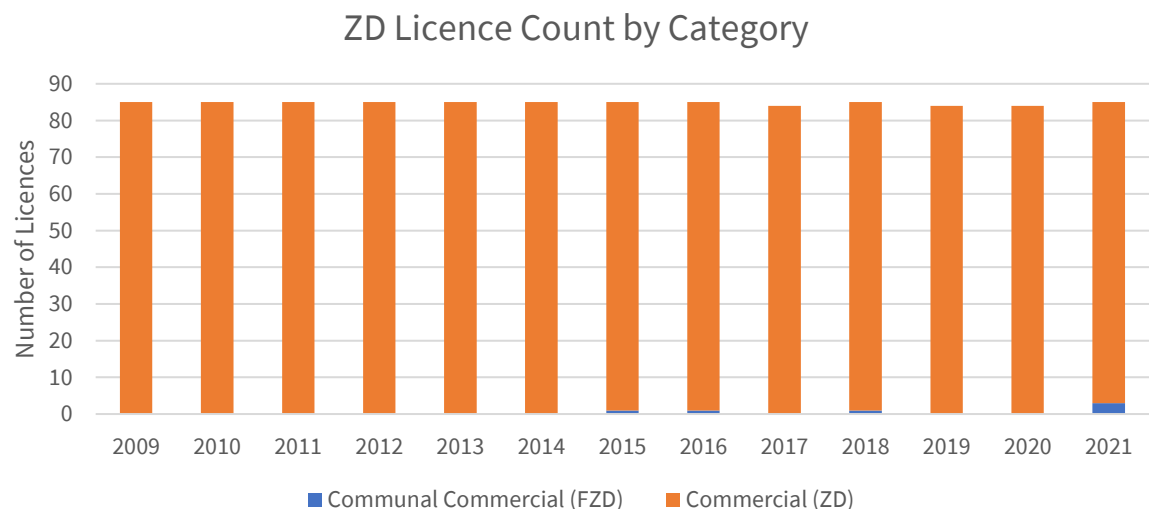


Aggregate value of ZD licences (\$ millions by year)



ZD licence counts by category

Three communal commercial ZD licences were added in 2021 and two commercial licences were removed.



Recent ZD lease rates

No lease transactions were uncovered for ZD licences, but anecdotal information from 2020 indicated a lease price between \$70,000 and \$80,000.

Outlook/commentary

Interviewees made the following general observations on the sea cucumber fishery:

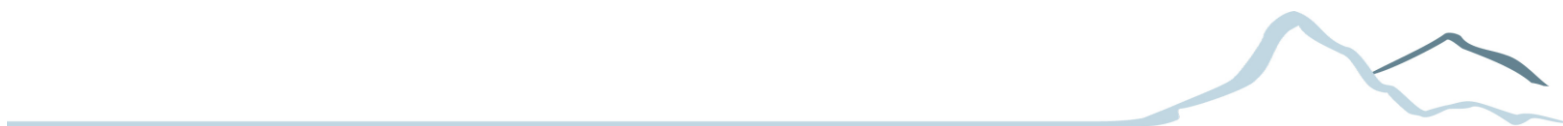
- There was more activity in sea cucumber licence sales in 2021 compared to 2020, but the market remains thinly traded.
- Interviewees have noted that the market for commercial access to sea cucumbers is notoriously tight and there are many interested buyers but few sellers.
- Consumer market demand for sea cucumber is almost exclusively in Asia.

SHELLFISH – Red sea urchin (ZC)

Background to valuation

General	
Licence designation	ZC
Nature of Licence	party-based
Number of commercial licences	80
Number of communal commercial licences	30
Area licensing?	2 areas
Stacking?	yes
Competitive or quota mgmt.?	quota

Valuation Parameters	
Licence	per licence
Quota	n/a
Vessels	yes
Amount of trading activity in category this year	low
Number of transactions underlying valuation	0
Confidence in current year valuation	low



Current valuation

Licence value as of December 31, 2021

Category	Number of Licences	Value/Licence	Total Value
ZC Licence – Commercial	80	\$325,000	\$26,000,000
FZC Licence – Communal Commercial	30	n/a	n/a

Valuation comments

The consultant unable to confirm any red sea urchin transactions in 2021, and there was no anecdotal or brokerage information on red sea urchin. As such, 2020 licence values have been used.

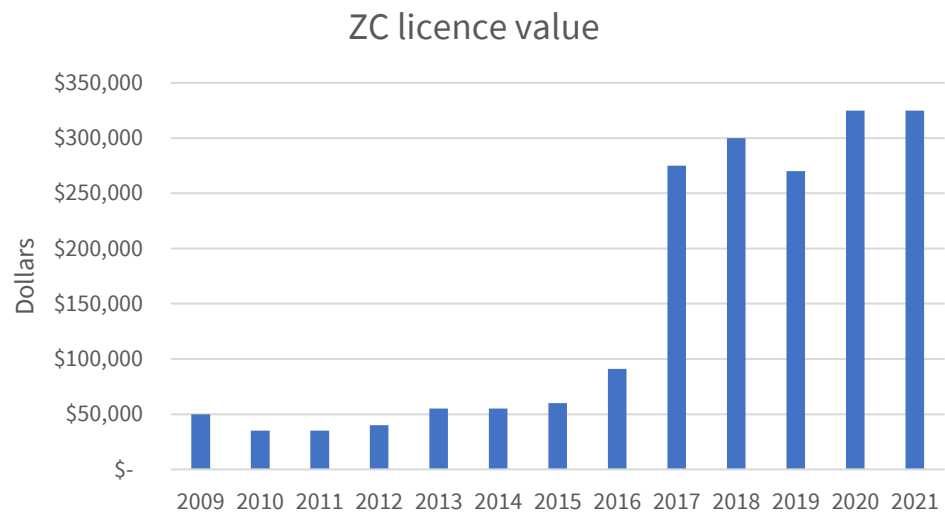
Vessel value

Vessel value is arrived at by using past data for average vessel value as a baseline and increasing the value based on inflation. For this fishery, the consultant was not able to update the number of vessels as this information was not available from DFO's *Pacific Region Commercial Fishing Licences Database*. As such, the vessel numbers below have been taken from last year's report. For more information about the limitations of this analysis please refer to the Valuation Methodology.

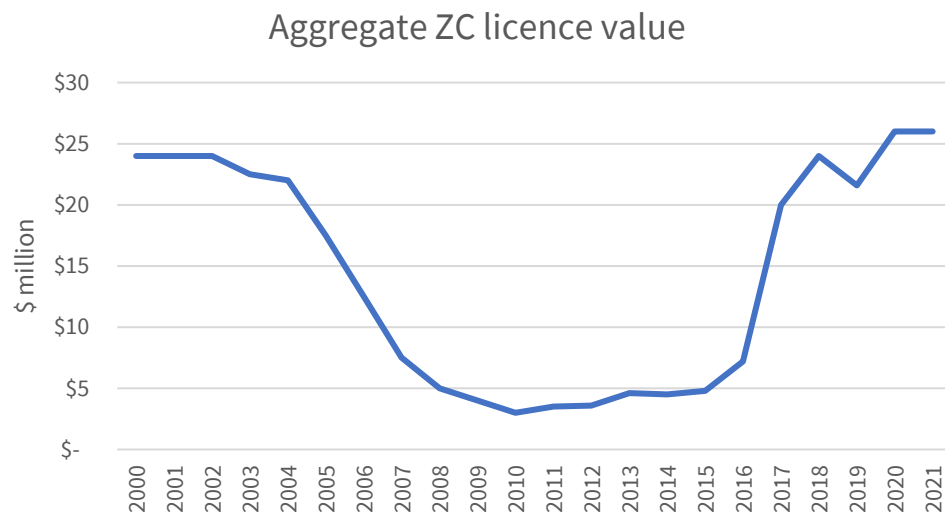
Red Sea Urchin	Number of Vessels	Avg. Vessel Value	Aggregate Value
Classic	13	85,719	\$1,114,342
Modern	20	211,763	\$4,235,264
Total	33	162,131	\$5,350,330

Licensing trends

Recent ZC licence valuation

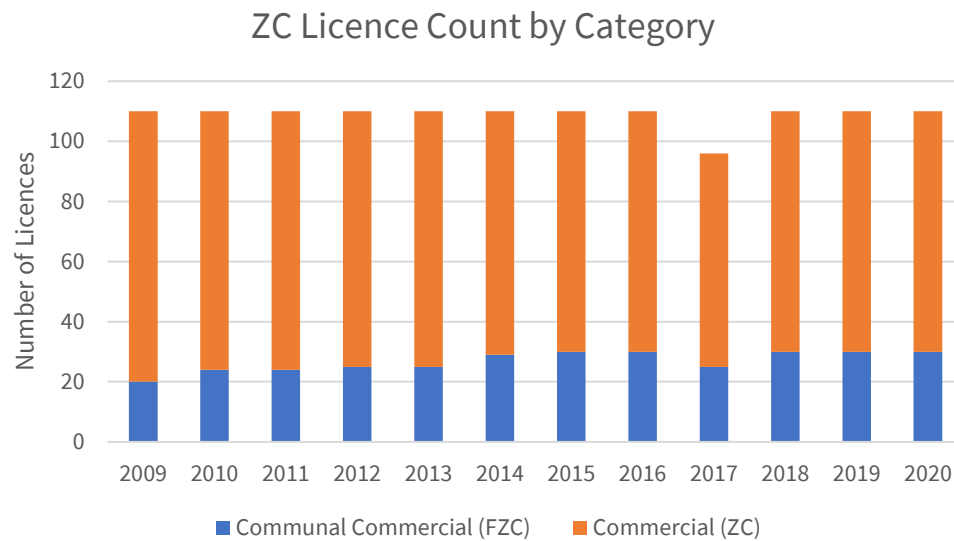


Aggregate value of ZC licences (\$ millions by year)



ZC licence counts by category

There was no change in the number of ZC licences in 2021.



Recent ZC lease rates

No lease transactions for red sea urchin were uncovered.

Outlook/commentary

- ZC licences are thinly traded and the market is relatively illiquid.
- In the previous year, the majority of the quota remained unfished due to supply chain disruptions due to COVID-19.
- The medium-term viability of the fishery is at risk due to sea otters, a protected species, consuming many urchins.

SHELLFISH – Green sea urchin (ZA)

Background to valuation

General	
Licence designation	ZA
Nature of Licence	party-based
Number of commercial licences	48
Number of communal commercial licences	1
Area licensing?	2 areas
Stacking?	yes
Competitive or quota mgmt.?	quota

Valuation Parameters	
Licence	per licence
Quota	n/a
Vessels	yes
Amount of trading activity in category this year	low
Number of transactions underlying valuation	0
Confidence in current year valuation	low

Current valuation

Licence value as of December 31, 2021

Category	Number of Licences	Value/Licence \$	Total Value \$
ZA Licence - Commercial	48	\$80,000	\$3,840,000
FZA Licence - Communal commercial	1	n/a	n/a



Valuation comments

- There are few sales of green sea urchin licences and the consultant was unable to confirm a transaction in 2021. As such, the previous year's licence value has been used.

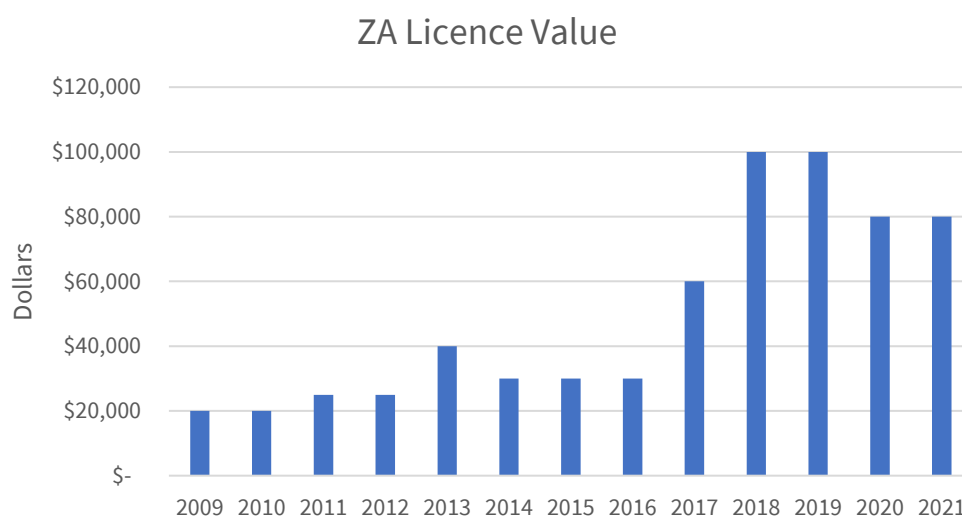
Vessel value

Vessel value is arrived at by using past data for average vessel value as a baseline and increasing the value based on inflation. For this fishery, the consultant was not able to update the number of vessels as this information was not available from DFO's *Pacific Region Commercial Fishing Licences Database*. As such, the vessel numbers below have been taken from last year's report. For more information about the limitations of this analysis please refer to the Valuation Methodology.

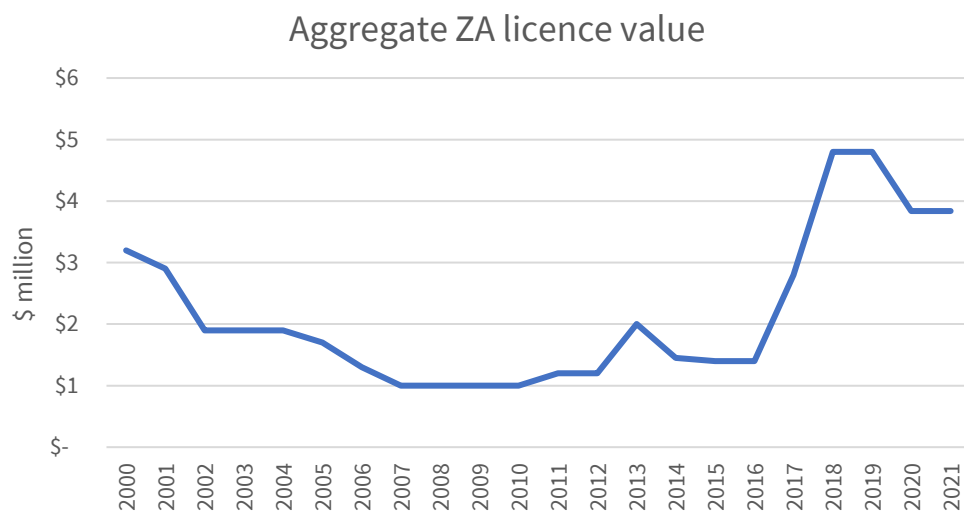
Green Sea Urchin	Number of Vessels	Avg. Vessel Value	Aggregate Value
Classic	3	85,719	\$257,156
Modern	6	211,763	\$1,270,579
Total	9	169,783	\$1,528,045

Licensing trends

Recent ZA licence valuation

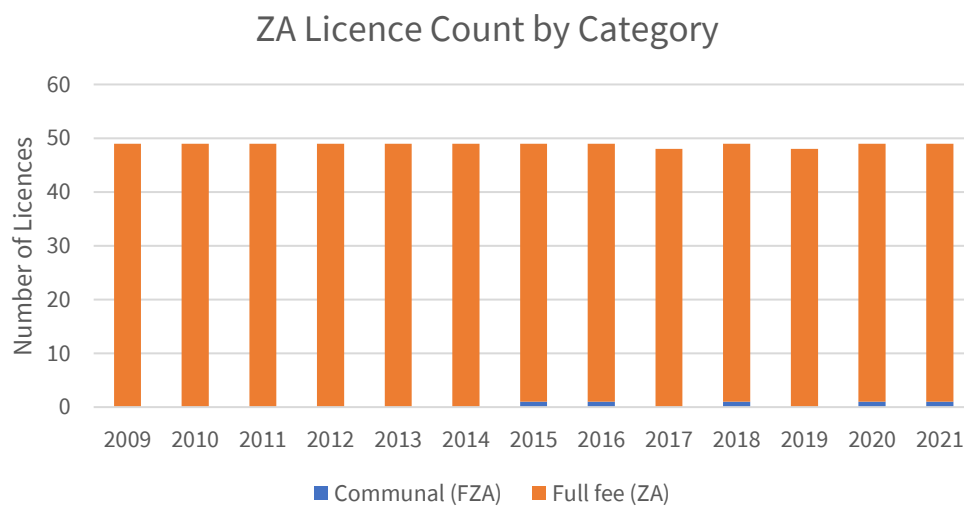


Aggregate value of ZA licences (\$ millions by year)



ZA licence counts by category

The number of ZA licences remained unchanged in 2021.



Recent ZA lease rates

- No lease transactions were uncovered

Outlook/commentary

General observations on the outlook for the green sea urchin fishery include:

- Interviewees have noted that the fishery has declined in value in Canada over the past few years since the Russian fishery opened and created competition. This may change in 2022 due to the ongoing war in Ukraine and growing economic and trade sanctions on Russian goods.⁴
- Interviewees have seen little movement over the last few years and expect the licence holders are retaining them with the hopes that the fishery will become profitable again.

⁴ Integrated Fisheries Management Plan Green Sea Urchin: <https://www.pac.dfo-mpo.gc.ca/fm-gp/mplans/urchin-oursin-green-vert-ifmp-pgip-sm-eng.html>

SHELLFISH – Euphausiid (ZF)

Background to valuation

General	
Licence designation	ZF
Nature of Licence	party-based
Number of commercial licences	16
Number of communal commercial licences	1
Area licensing?	no
Stacking?	no
Competitive or quota mgmt.?	quota

Valuation Parameters	
Licence	per licence
Quota	n/a
Vessels	yes
Amount of trading activity in category this year	low
Number of transactions underlying valuation	~0
Confidence in current year valuation	Very low

Current valuation

*Licence value as of December 31, 2021**

Category	Number of Licences	Value/Licence \$	Total Value \$
ZF Licence – Commercial	16	\$40,000	\$640,000



Valuation comments

- Valuation is based on 2020 licence values as no 2021 licence transactions were uncovered.*
- No transaction activity has been recorded since 2015. Anecdotal information from 2015 indicated values in the \$40,000-\$50,000 range.
- Value per licence has remained the same but market capitalization has decreased due to relinquished licences.

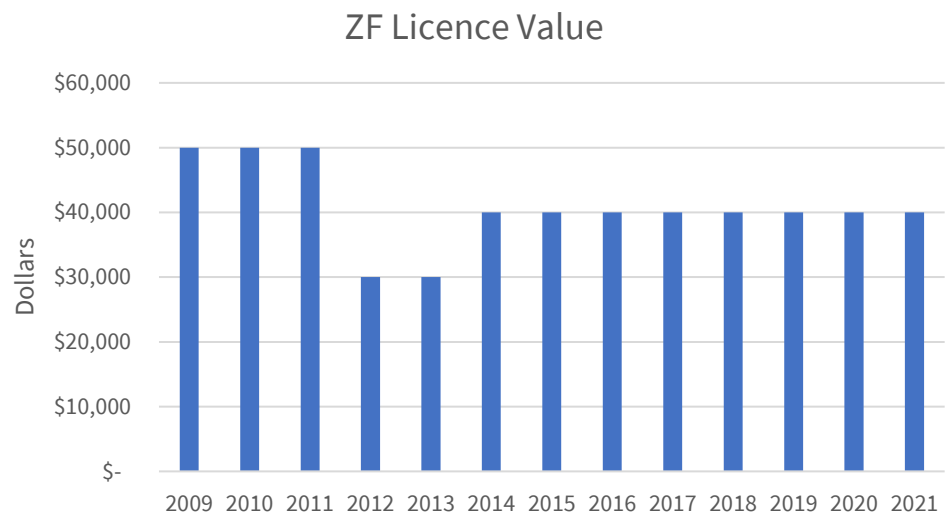
Vessel value

Vessel value is arrived at by using past data for average vessel value as a baseline and increasing the value based on inflation. For this fishery, the consultant was not able to update the number of vessels as this information was not available from DFO's *Pacific Region Commercial Fishing Licences Database*. As such, the vessel numbers below have been taken from last year's report. For more information about the limitations of this analysis please refer to the Valuation Methodology.

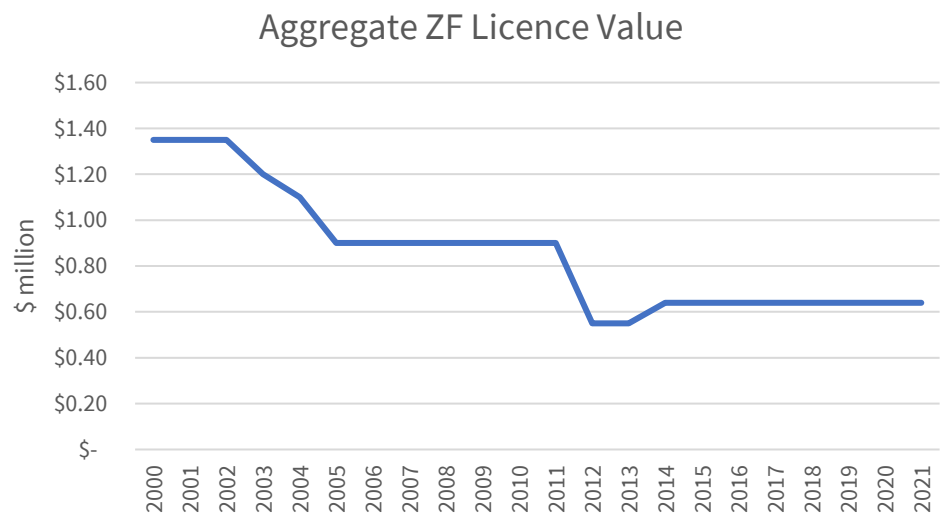
Euphausiid	Number of Vessels	Avg. Vessel Value	Aggregate Value
Classic	3	190,256	\$570,768
Modern	0	683,991	\$ -
Total	3	194,806	\$584,417

Licensing trends

Recent ZF licence valuation

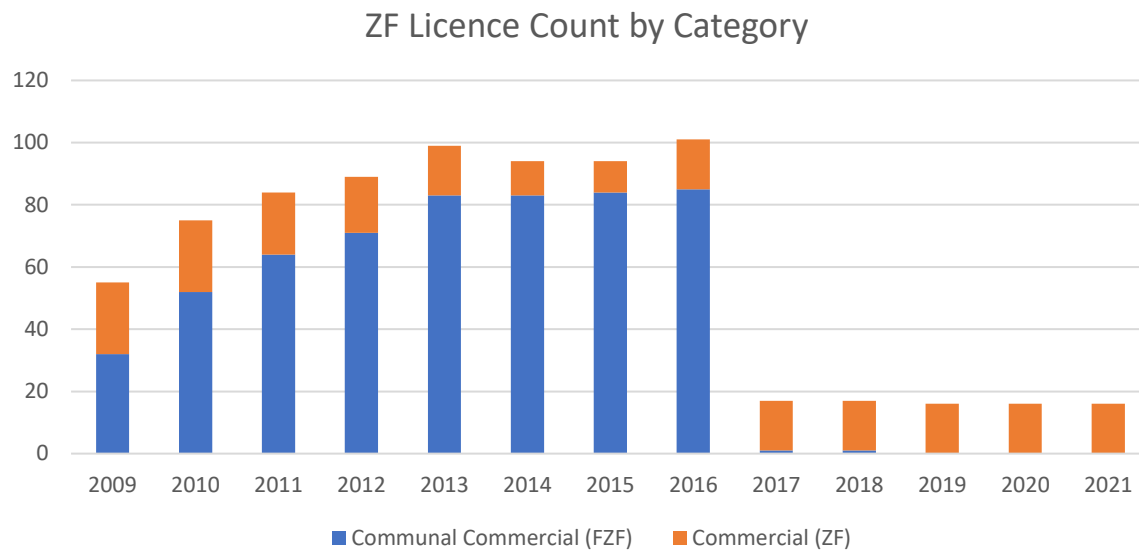


Aggregate value of ZF licences (\$ millions by year)



ZF licence counts by category

The number of ZF licences remained unchanged in 2021.



Outlook/commentary

General outlook for the euphausiid fishery is summarized below:

- This is a very small-scale fishery with low participation and low profitability.
- Outlook is uncertain as little information could be provided by interviewees.

Schedule II species (C)

Background to valuation

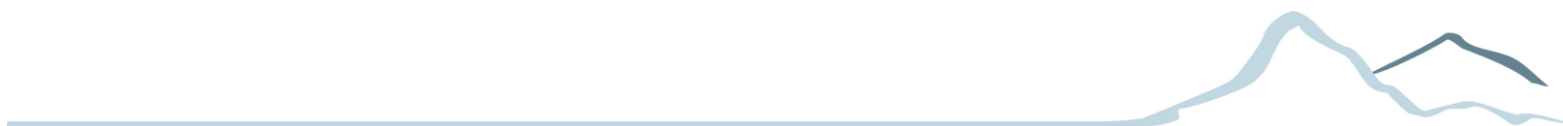
General	
Licence designation	C
Nature of Licence	vessel-based
Number of commercial licences	308
Number of communal commercial licences	14
Area licensing?	No
Stacking?	No
Competitive or quota mgmt.?	Various

Valuation parameters	
Licence	per foot
Quota	n/a
Vessels	no
Amount of trading activity in category this year	Med
Number of transactions underlying valuation	~ 9
Confidence in current year valuation	med

Current valuation

Licence value as of December 31, 2021

Category	Number of Licences	Value/Licence	Avg. Licence	Total Value
C Licence – Commercial	308	\$587/ft	\$18,500	\$5,698,000
FC Licence – Communal commercial	14	n/a	n/a	n/a



Valuation comments

- Nine transactions were identified for Schedule II species licences in 2021.
- Total licence value is based on an average licence price of ~\$18,500 and average vessel length of ~31.5 feet, which is unchanged from 2020.

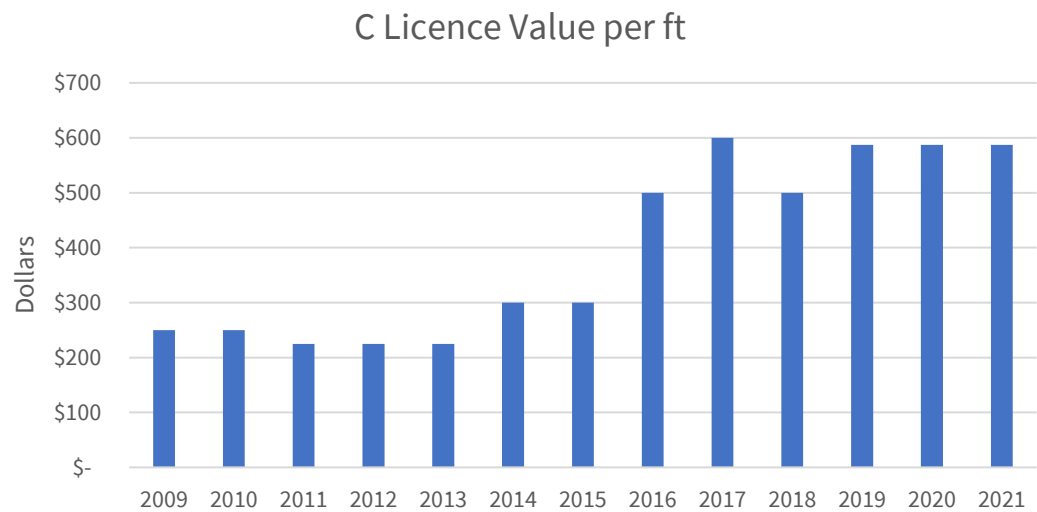
Vessel value

Vessel value is arrived at by using past data for average vessel value as a baseline and increasing the value based on inflation. The number of vessels has been updated based on DFO's *Pacific Region Commercial Fishing Licences Database*. However, this report only includes vessels for which a vessel age was provided. As such, aggregate value represents only a portion of the total fleet. For more information about the limitations of this analysis please refer to the Valuation Methodology.

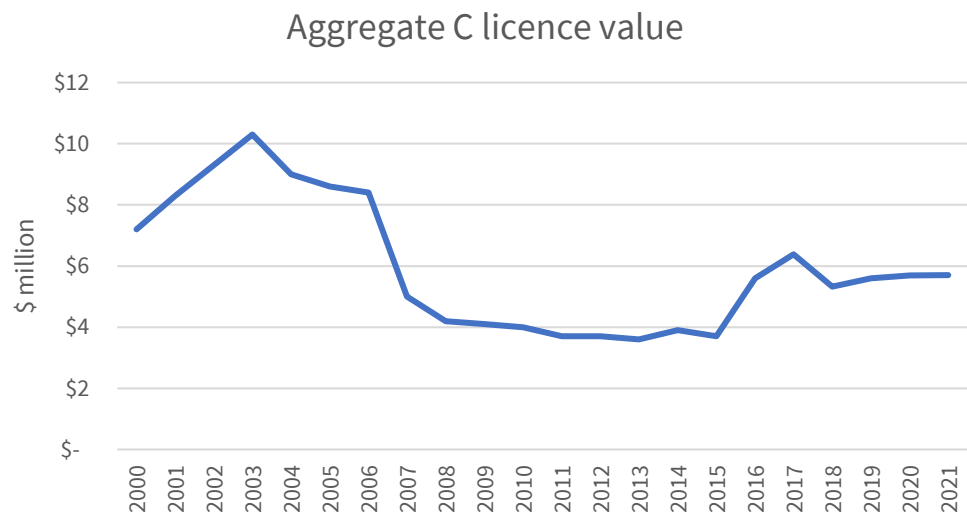
Schedule II	Number of Vessels	Avg. Vessel Value	Aggregate Value
Classic	151	\$42,394	\$6,401,494
Modern	101	\$151,378	\$15,289,138
Total	252	\$84,168	\$21,210,235

Licensing trends

Recent C licence valuations

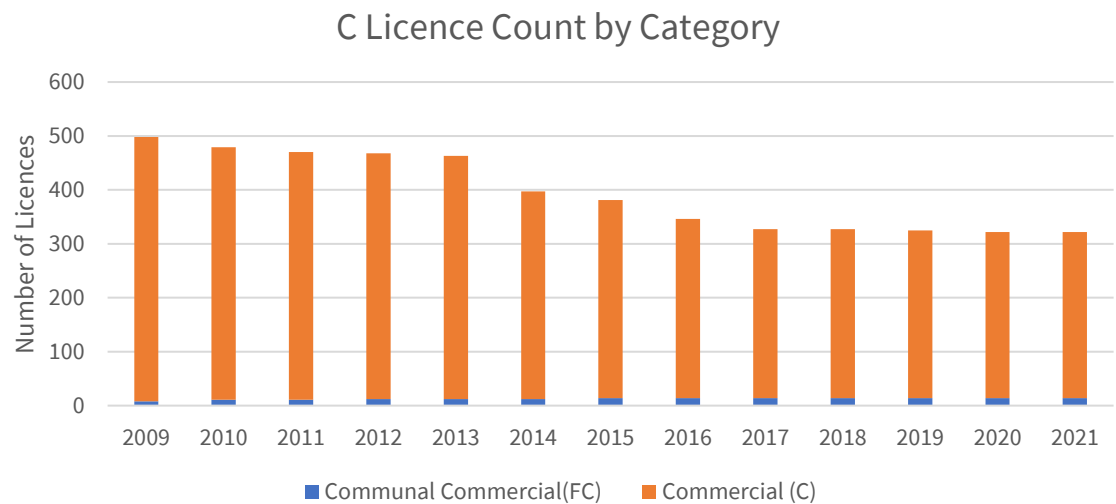


Aggregate value of C licences (\$ millions by year)



C licence counts by category

The number of C licences was unchanged in 2021.



Outlook/commentary

Larger vessels are perceived to be more valuable as they can be used along with the USA 68 privileges to fish tuna. Smaller vessels may only be used as moorage unless the owner/operator also has another licence, such as an L-tab (halibut).

Conclusion

2021 has seen a rebound in commercial fisheries in BC after the most significant impacts of the COVID-19 pandemic attenuated. Many fisheries saw a dip in licence and quota values due to lowered demand, export restrictions and supply chain constraints caused by COVID-19. As restrictions ease with the rollout of vaccines, these impacts are much more muted, but still present due to the potential flare-up of COVID-19 variants.

Interviewees noted that the announcements regarding changes in government policy with the salmon and herring fisheries will influence the trajectory of commercial fisheries the most in 2022. Despite the relatively small size of both of these fisheries, interviewees noted that it may have a general dampening impact on market sentiment as market participants may be wary of entering new fisheries if they foresee loss of access. In particular, these changes are seen to create greater consolidation in the industry as more licences are held by fewer owners, and potential knock-on effect e.g. greater retirements, or vessel repair stores closing due to lack of salmon fishers, further exacerbating issues with the state of vessels in BC.

Other potential impacts on commercial fisheries include supply chain constraints caused by the ongoing war between Ukraine and Russia, an inflationary macroeconomic environment and future variants of COVID-19 and associated restrictions on trade and movement.

Nonetheless, there were bright spots in BC commercial fisheries, with species such as halibut, sea cucumber and geoduck continuing to grow in value with products that are highly sought after and an industry ecosystem that has been able to successfully harvest these species. These species are likely to continue to perform well in 2022 and beyond and support the growth of the commercial fisheries industry in BC.