

West Coast Fishing Fleet:

Analysis of Commercial Fishing Licence, Quota, and Vessel Values

As at March 31, 2014

Prepared for Fisheries and Oceans Canada, Pacific Region

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DECEMBER, 2014

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The logo for Nelson Bros Fisheries Ltd features a stylized flag with orange, white, and green horizontal stripes, positioned above the company name.

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Introduction

This report offers assessments of licence, quota, lease, and vessel values as of March 31, 2014 for commercial fisheries in B.C. The assessments are based where possible on market transactions.

The valuations contained in this report represent the best efforts of the contractor to encapsulate prevailing asset value levels in the commercial fishery. Since few transactions take place at or near the March 31 valuation date, activity from the last quarter of 2013 through the first half of 2014 was considered. The depth and quality of data upon which valuations are based varies by fishery. For fisheries with very limited vessel/licence markets, valuations are based more on inference and anecdotal information than on hard data. This is reflected in the reported “confidence level” of each assessment.

As noted in prior reports, each year seems to feature less open-market transaction activity than the last. This is attributed to a number of factors, including: consolidation of licence/quota holdings, licence retirement programs, and poor performance in some of the commercial fisheries. Increasingly, uncovering valuation data and information is a challenge.

This report provides by-fishery analysis of current and historical licence, quota, lease, and vessel values. The findings of this report are offered with the objective to provide information across fisheries on a consistent basis. The report is designed to allow the user to gain a useful snapshot of the current situation and trends prevailing in each fishery.

The contractor cautions that valuations contained in this study, while reflective of March 31, 2014 licence, quota, and vessel values, should not provide the valuation rationale for any purchase/sale transactions that may be contemplated. Licence and quota values are extremely dynamic, changing dramatically and quickly as harvest volumes, ex-vessel prices, and supply/demand forces change. Valuations provided herein cannot replace the due diligence required to negotiate the “right” price for a fishing vessel, licence, or quota.

Summary: Year ending March 31, 2014

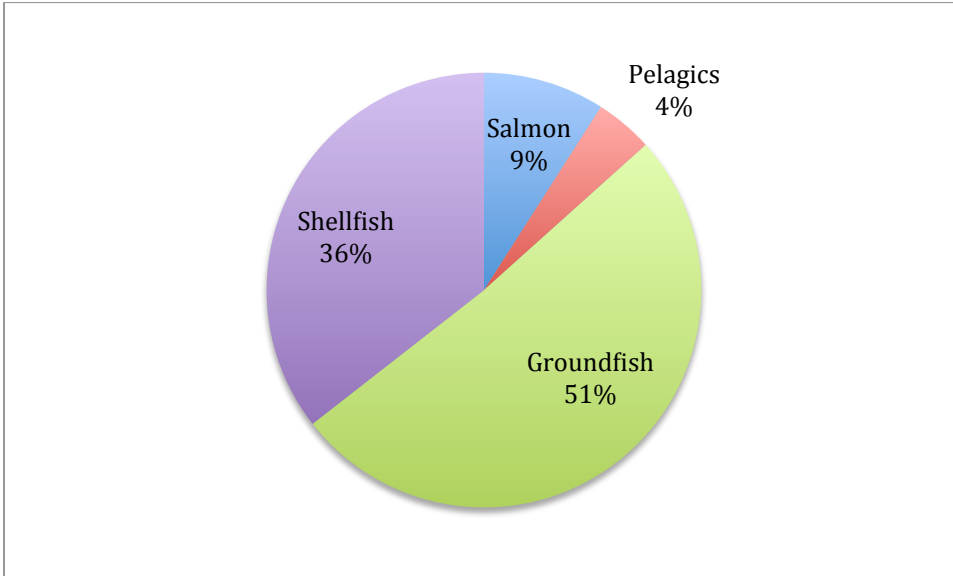
The market capitalization of commercial licences and quota in the BC fishery at March 31, 2014 is summarized as follows (excludes F licences and relinquished quota in the halibut and sablefish fisheries):

Fishery Grouping	Fishery	Licence Designation	# Licences	Average Licence Value (\$)	Aggregate Licence Value (\$)	Aggregate Quota Value (\$)	Total Licence & Quota Value (\$)
Salmon	Seine	AS	210	296,429	62,250,000	-	62,250,000
	Gillnet	AG	815	53,638	43,715,000	-	43,715,000
	Troll	AT	356	119,382	42,500,000	-	42,500,000
Pelagics	Herring - Roe Seine	HS	241	79,004	19,040,000	-	19,040,000
	Herring - Roe Gillnet	HG	1,100	38,755	42,630,000	-	42,630,000
	Herring - Spawn on Kelp	J	36	250,000	9,000,000	-	9,000,000
	Tuna	USA 68	110	n/a	n/a	-	n/a
	Sardine	ZS	25	n/a	n/a	-	n/a
Groundfish	Halibut	L	344	42,800	14,723,200	342,737,010	357,460,210
	Sablefish	K	42	250,000	10,500,000	169,161,232	179,661,232
	Groundfish Trawl	T	135	45,080	6,085,800	245,470,085	251,555,885
	Rockfish Inside	ZN	56	30,000	1,680,000	-	1,680,038
	Rockfish Outside	ZN	163	145,000	23,635,000	-	23,635,037
	Lingcod Hook & Line		-	-	-	21,862,000	21,862,000
	Dogfish Hook & Line		-	-	-	2,518,535	2,518,535
Shellfish	Prawn	W	195	678,950	132,395,250	-	132,395,250
	Crab	R	189	620,000	117,180,000	-	117,180,000
	Shrimp	S	215	33,520	7,206,800	-	7,206,800
	Geoduck	G	50	5,250,000	262,500,000	-	262,500,000
	Sea Cucumber	ZD	85	675,000	57,375,000	-	57,377,009
	Red Sea Urchin	ZC	81	55,000	4,455,000	-	4,455,065
	Green Sea Urchin	ZA	49	30,000	1,470,000	-	1,470,057
	Euphausiid	ZF	16	40,000	640,000	-	642,009
Schedule II	Schedule II Species	C	385	10,200	3,927,000	-	3,927,000
					862,908,050	781,748,862	1,644,656,912

Summary statistics and trends are shown in the following series of figures.

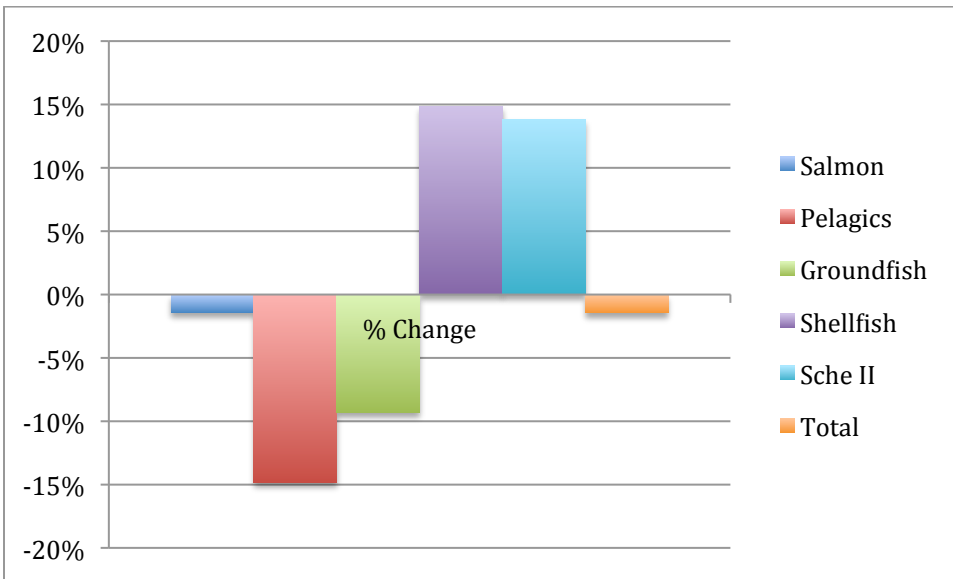
The current make-up of market value for the BC commercial fishery is shown below:

Market Value Breakdown for 2014 by Fishery Grouping



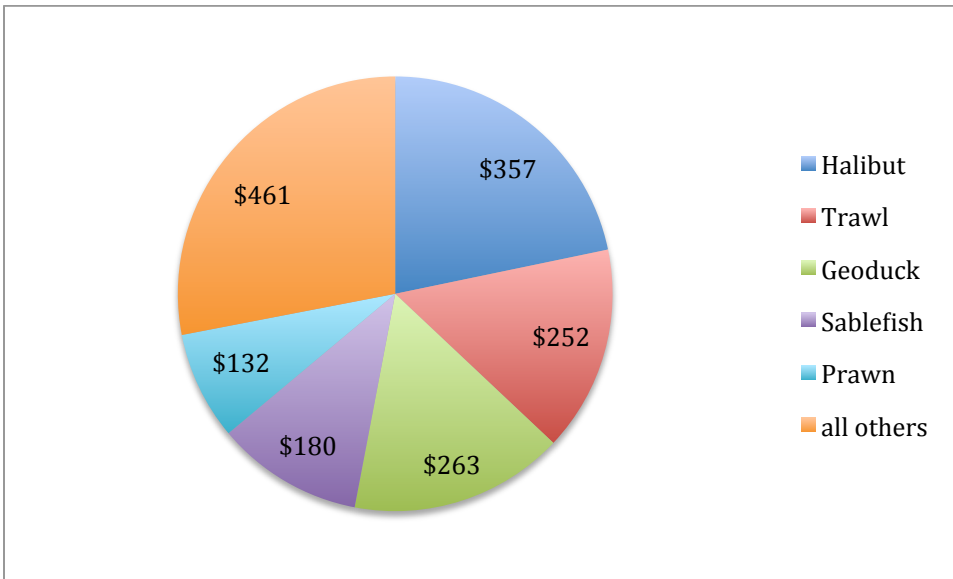
Total capitalization declined by 1% in 2014 compared to the prior year, with the percentage change for fishery groupings shown as follows:

Percentage Change in Market Value by Fishery Grouping – 2014 vs. 2013



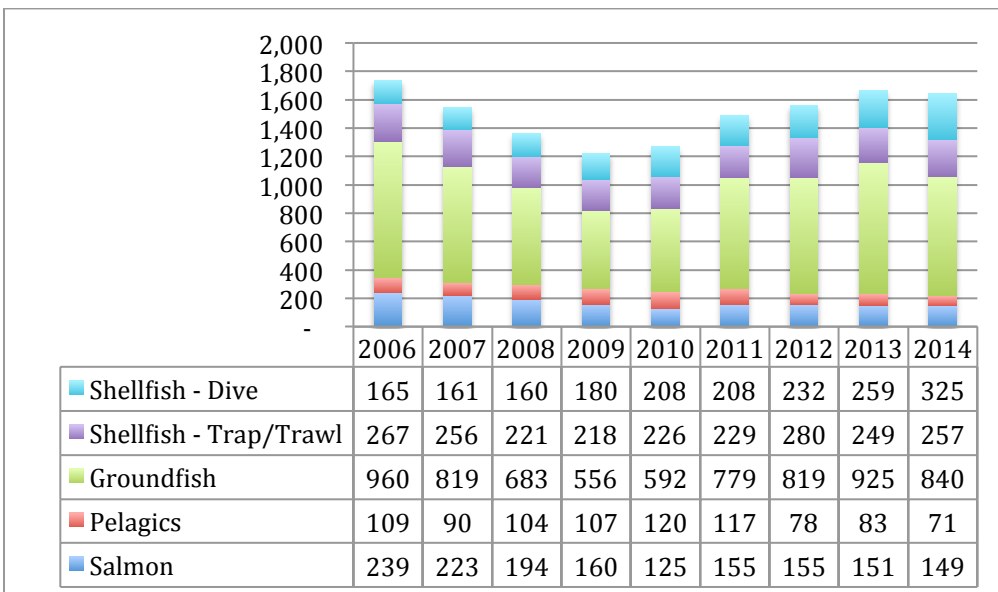
As shown in the next chart, the five fisheries with the largest aggregate licence and quota valuations account for 72% of total value, while the remaining 19 fisheries make up 28%.

Top Five Fisheries Relative to Overall Licence and Quota Values (\$millions)



The aggregate value trends are shown by fishery category in the next chart.

Aggregate Licence and Quota Value (\$millions) By Major Fishery Groupings



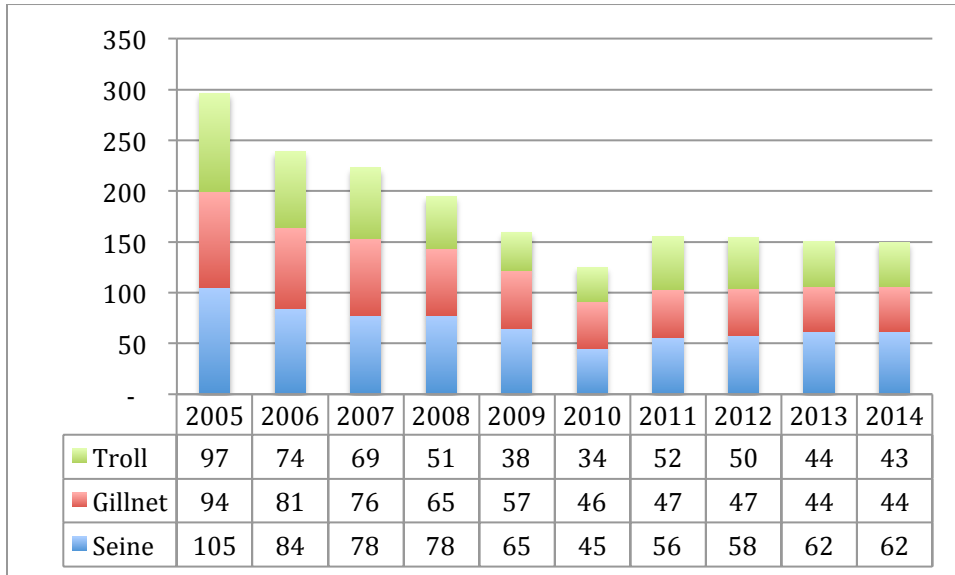
The total value of licences and quotas at March 31, 2014 is about \$1.6 billion. Having grown for four consecutive years since 2009, aggregate capitalization declined marginally (1%) in 2014. The growth seen in recent years was in spite of the fact that the pool of commercial licences and quotas has diminished through retirements under the PICFI program; the program relinquished more than \$100 million in access over the last six years. Growth since 2009 has been focused in the groundfish and shellfish fisheries.

Further details for key fishery grouping are provided on the next pages. In all charts values are *un-adjusted* for inflation (nominal dollars); also, valuations exclude F-category licences and quota.

Salmon

Salmon licence values have been remarkably stable over the last several years. Through the first decade of the 2000s the performance of the fishery was very poor but values were propped up by speculation about potential impending quota schemes. In recent years, values are more attributable to the financial performance, and perceived prospects, of the fishery.

Aggregate Salmon Licence Value (\$ millions)

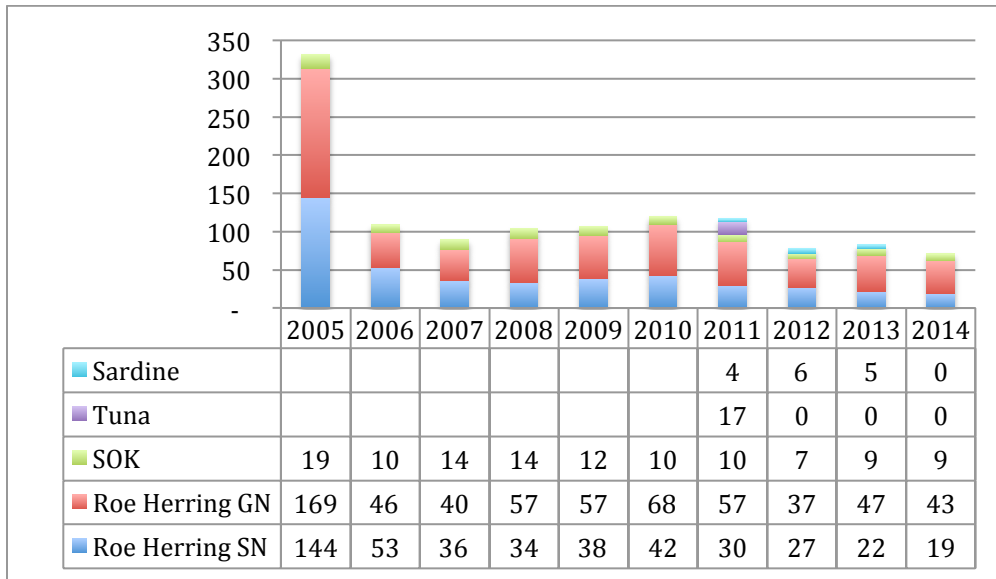


Pelagics

This category is enduring an extremely challenging period. The erosion in values in the roe herring fishery continued in 2014 (due largely to soft markets in Japan). The sardine fishery has just completed its second consecutive season with negligible harvests, as the sardine stock has failed to materialize in BC waters. Thus, licence values have collapsed. Flux in the access to USA tuna fishing waters associated with USA 68 licences has rendered these licences virtually unmarketable.

The following table provides a snapshot of this grim picture (note that sardine and tuna licences were not valued until 2011).

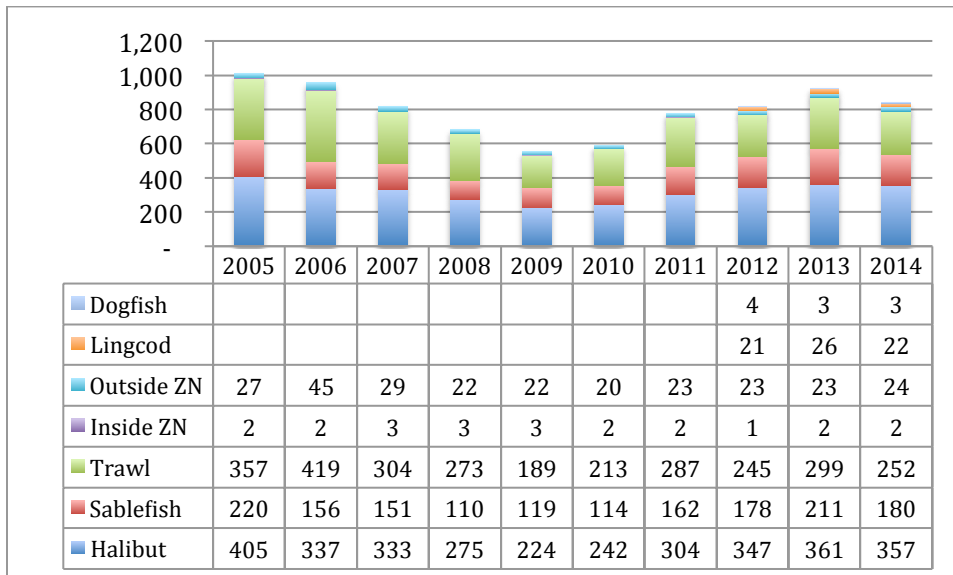
Aggregate Pelagics Licence Value (\$ millions)



Groundfish

Overall capitalization in the three major groundfish fisheries—groundfish trawl, halibut, and sablefish—declined by almost 10% in 2014. This was driven by a decline in quota prices in the sablefish fishery (from \$60/lb in 2013 to \$47.50 in the current year), and a reduction in the value of hake quota in the trawl fishery (from \$0.65/lb to \$0.50/lb). Halibut values remained essentially flat.

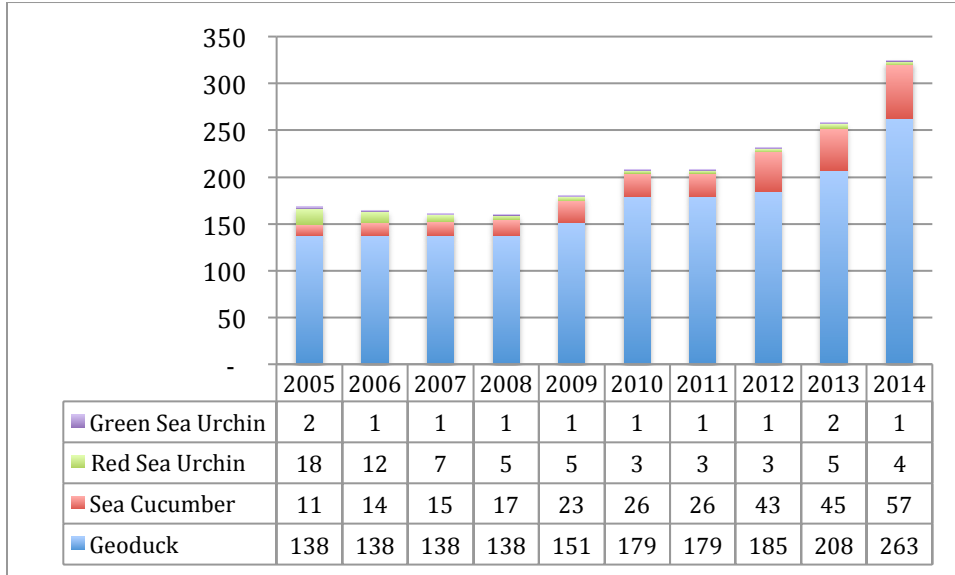
Aggregate Groundfish Licence and Quota Value (\$ millions)



Shellfish

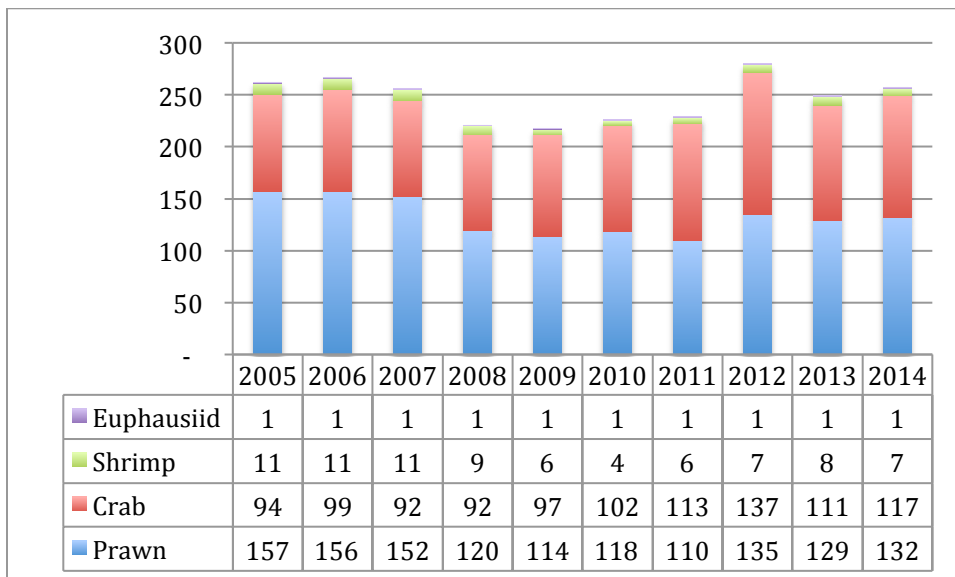
The dive-category shellfish fisheries showed continued growth in 2014. Geoduck values rose considerably, driven in part by the increased marketability of geoduck quota under the quota-block system (licences have been divided into 10 divisible blocks). Sea cucumber values also showed growth.

Shellfish Dive Fisheries – Aggregate Licence Value (\$ millions)



The trap/trawl shellfish fisheries continue to be dominated by the crab and prawn fisheries. Both of these categories saw very modest increases in 2014. These two categories are much sought after, and both feature active licence markets.

Shellfish Trap/Trawl Fisheries – Aggregate Licence Value (\$ millions)



Rates of Return – Leasing

The following table calculates the rate of return for leasing licences or quota for the valuation period, for those fishery categories with IVQs, or licence categories that can readily be leased:

Fishery	Lease Rate	Quota/Licence Valuation	Rate of Return
Herring - Roe Seine	\$-	\$79,004	0.0%
Herring - Roe Gillnet	\$1,500	\$38,755	3.9%
Sardine	\$-	\$-	0.0%
Halibut	\$5.50	\$70.00	7.9%
Sablefish	\$3.45	\$47.50	7.3%
Trawl - Groundfish	\$0.10	\$1.50	6.7%
Trawl - Offshore Hake	\$0.005	\$0.50	1.0%
Rockfish Inside	1,500	\$30,000	5.0%
Rockfish Outside	8,000	\$145,000	5.5%
Lingcod Hook & Line	\$0.30	\$8.50	3.5%
Dogfish Hook & Line	\$0.01	\$0.12	8.3%
Prawn	\$50,000	\$678,950	7.4%
Geoduck	\$600,000	\$5,250,000	11.4%
Sea Cucumber	\$70,000	\$675,000	10.4%
Red Sea Urchin	\$1,500	\$55,000	2.7%
Green Sea Urchin	\$1,500	\$30,000	5.0%

Key Issues for the Fish Harvesting Sector

In conducting research for this report, certain key messages were raised by informants that encompass the full range of fisheries.

The over-arching issue for the harvesting sector is secure access to the resource. Some key issues that undermine secure access are summarized as follows:

Funding for stock assessment research and science

Under the prevailing precautionary fishery management approach, commercial fisheries may only proceed when supported by an adequate measure of stock assessment research and science. There is a broad sentiment in the harvesting sector that current levels of DFO funding for science are not adequate, and that there is no suitable mechanism in place to enable industry to raise the funds needed to perform necessary research.

Good science is also critical to address legislative requirements under the Species at Risk Act (SARA) and to support marketing initiatives under programs like the Marine Stewardship Council (MSC) and Monterey Aquarium.

This issue impacts all fisheries, but particularly those lacking the wherewithal to fund their own research and science.

Marine planning

Marine planning occurs at federal, provincial, and regional levels, with different government agencies involved. The marine planning process lacks coordination and cohesion, and plans often include marine protected areas that exclude commercial fishing. Industry needs to dedicate substantial time and effort to participating in these ad hoc processes in order to preserve fishing grounds.

Uncertainty around First Nations access

As First Nations fishing rights, including rights to harvest for commercial purposes, are defined through legal proceedings, the rights associated with commercial fishing licences may be eroded.

It was noted by stakeholders that the substantial suite of F-category licences, representing a major investment by the federal government, and fished by First Nations communities and corporations, share the same risks in this regard as licences in the general commercial fishery.

Methodology

Valuations Performed

The following table shows the scope of work carried out in this report:

Fishery Grouping	Fishery	Gear	Valuation				
			Average Vessel Value	Average Licence Value		Quota Value	Lease Value
				Full Fee	Reduced Fee		
Salmon	Salmon	Seine	X	X	X		
	Salmon	Gillnet	X	X	X		
	Salmon	Troll	X	X	X		
Pelagics	Herring - Roe	Seine	X	X	X		X
	Herring - Roe	Gillnet	X	X	X		X
	Herring - Spawn on Kelp			X			
	Tuna	Hook & Line		X			X
	Sardine	Seine		X			X
Groundfish	Halibut	Longline	X	X		X	X
	Sablefish	Longline/Trap	X	X		X	X
	Groundfish Trawl	Trawl	X	X		X	X
	Rockfish	Hook & Line	X	X			X
	Lingcod and Dogfish	Hook & Line				X	X
Shellfish	Prawn	Trap	X	X			X
	Crab	Trap	X	X			
	Shrimp	Trawl	X	X			
	Geoduck	Dive	X	X		X	X
	Sea Cucumber	Dive	X	X			X
	Red Sea Urchin	Dive	X	X			X
	Green Sea Urchin	Dive	X	X			X
	Euphausiid	Trawl	X	X			
Schedule II	Schedule II Species			X			

Note that partial valuations for the tuna, sardine, lingcod, and dogfish categories are being included in this years report.

Valuation Methodology

In order to efficiently and most-accurately assess licence and vessel values, stratification was used where appropriate. Stratification is a statistical approach whereby licences or vessels being valued are divided into groups having similar characteristics. An average value is then determined for each group rather than each vessel (or licence).

Licence/Quota Stratification & Valuation Criteria

Licence stratification is generally quite simple, as each licence within a fishery tends to have similar characteristics. Exceptions are fisheries such as salmon and roe herring, where Full-fee and Reduced-fee licence distinctions bring different values. For fisheries where quotas are separable from licences, quota valuations are provided on a per-pound basis.

The valuation criteria applied to licence/quota valuation will be noted for each fishery (eg. value per licence, per foot, per pound of quota).

Vessel Stratification

The vessel valuation approach used in this report is described as follows:

1. The number of licensed vessels in each commercial category is identified (source: Commercial Licence Eligibility Counts report).
2. Vessels are apportioned between “classic” and “modern” style.

Classic vessels are of older design (typically pre-1980’s), meaning they may have less beam, power, sophisticated fishing gear, refrigeration, fish-packing capacity, and creature comforts than a modern vessel. Wood is the predominant construction material, though some are built of materials like steel, fibreglass, and aluminium.

Modern vessels are deemed to be those incorporating non-wood material with progressive design and enhanced capabilities, such as those mentioned above (speed, power, refrigeration, capacity, etc.). A surge in vessel construction occurred through the 1980’s in the salmon and roe herring fleets. Prosperity in the crab, prawn, and dive fleets resulted in considerable new vessel construction through the early-mid 2000’s.

3. A range of values—low and high—is pegged for both classic and modern vessels.
4. A calculation is provided, showing the estimated make-up and valuation of vessels in the fishery, for both individual vessels, and the fleet in aggregate. The following sample table is populated for each fishery:

Fishery	# Vessels	Avg Vessel Value	Aggregate Value
Classic Style			
Modern Style			
Total/Average			

Note: For some fisheries, the number of vessels enumerated does not correspond to the number of licences indicated for the fishery. This discrepancy is sometimes due to licence stacking permitted in a fishery. It may also be due to the fact that some licences were not renewed or assigned to vessels at the March 31, 2014 valuation date. The number of vessels evaluated for each fishery is derived from commercial licensing data provided for this study.

Vessel Stratification Intent

The vessel stratification approach used in this study reflects the absence of a current database on commercial vessel attributes (for instance year built and construction material). The intent of the current methodology is to provide a few values—for individual vessels and the fleet in aggregate—for readers interested in assessing the approximate value of craft in a particular fishery.

Information Collection

This report follows a similar methodology for valuing licences, quotas, and vessels to that applied in prior reports. Asset valuations are based upon a variety of information, including:

- First-hand reports of specific transactions (“best” source);
- Anecdotal reports of general price levels or trends (expert opinion);
- Consideration of vessel and licence “listings” (e.g. brokerage information);
- Consideration of prevailing industry “fundamentals” (fishery landings, landed prices, market situation, etc.);
- Application of the contractor’s judgment.

The key source of information on transaction price levels was interviews with industry participants, including fishermen, processing representatives, vessel / licence brokers, lawyers, and others close to a particular fishery.

Valuation Criteria

Each valuation furnished in the report represents a synthesis of the best information obtained from industry on transaction levels, and application of the contractor’s judgement in determining a going rate for licences and quota. Pegging a going rate often requires a high degree of judgement. For fisheries with a reasonable volume of trading activities, valuations are an attempt to encapsulate weighted average prices at the valuation date. For fisheries with little or no trading activity, valuations are merely estimates based upon anecdotal information, current fishery trends, and past price levels. The confidence level accompanying each valuation is linked to the depth and quality of information unearthed.

Valuation Trends

For each fishery, valuation trend graphs, including the current valuation along with those found in the four prior reports, are presented. Values in these graphs are in nominal terms (not adjusted for inflation).

Licensing Information

For each fishery evaluated in this report, a brief synopsis of the licensing system is provided in table format. Readers may require further information, which may be found in Integrated Fisheries Management Plans, or the Pacific Licensing web page. Links to these information sources:

- IFMP’s: <http://www.pac.dfo-mpo.gc.ca/fm-gp/ifmp-eng.htm>
- DFO Licensing: <http://www.pac.dfo-mpo.gc.ca/fm-gp/licence-permis/index-eng.htm>

SALMON: Salmon Seine

General Description

<i>Licence Designation</i>	AS
<i>Nature of Licence</i>	Vessel based – vessel owner may make annual application for issuance of licence
<i>Number of Commercial Licences (valued in this study)</i>	210
<i>No. of Communal Commercial Lic's (not valued in this study)</i>	66 (FAS designation – Party based)
<i>Licensing/Management Framework</i>	Area Licensing; vessel owner must designate one of two areas, north or south (A and B); periodic area re-selection (2007 was last re-selection). Stacking allowed; currently 108 Area A licences and 168 Area B (includes F licences).
<i>Additional Information</i>	Competitive fishery; occasional IVQ pilot demonstration fisheries. Licences have no associated quota. Vessel-based licence virtually precludes licence leasing. Reduced fee licences may only be held on a vessel where the vessel owner is an aboriginal individual. Vessel-based licence allows harvest of Schedule II species and transporting (packing).

Valuation Parameters

Valuations performed:	1. AS licence: full fee and reduced fee 2. Vessels
Basis for valuation:	Approx. 5 open market transactions No PICFI retirements Anecdotal information
Confidence in valuation:	Moderate

Current Valuation

Licence Value at March 31, 2014

Category	# Licences	Value/ Licence (\$)	Total Value (\$)
Full Fee	195	300,000	58,500,000
Reduced Fee	15	250,000	3,750,000
All AS	210	296,429	62,250,000

Valuation Comments

A small premium for Area B (south coast) vs. Area A (north coast) was noted. Area A licences pegged at slightly less than \$300,000 and Area B slightly higher than \$300,000.

Values for full fee licences ranged from \$250,000 to \$350,000 (based on estimates and reported sales). Values at the low end of the range may be “in-house” (sales within a company).

After a strong 2014 salmon season, values likely rose after the valuation date to the \$325-350k range.

Leasing activity for AS licences is rising, as F category licences (party based) may lease, and sockeye quotas for full fee and reduced fee licences could be leased in both Area A and B for the 2014 season. A variety of lease arrangements were being effected, with rates ranging from 25% to 40% of landed value.

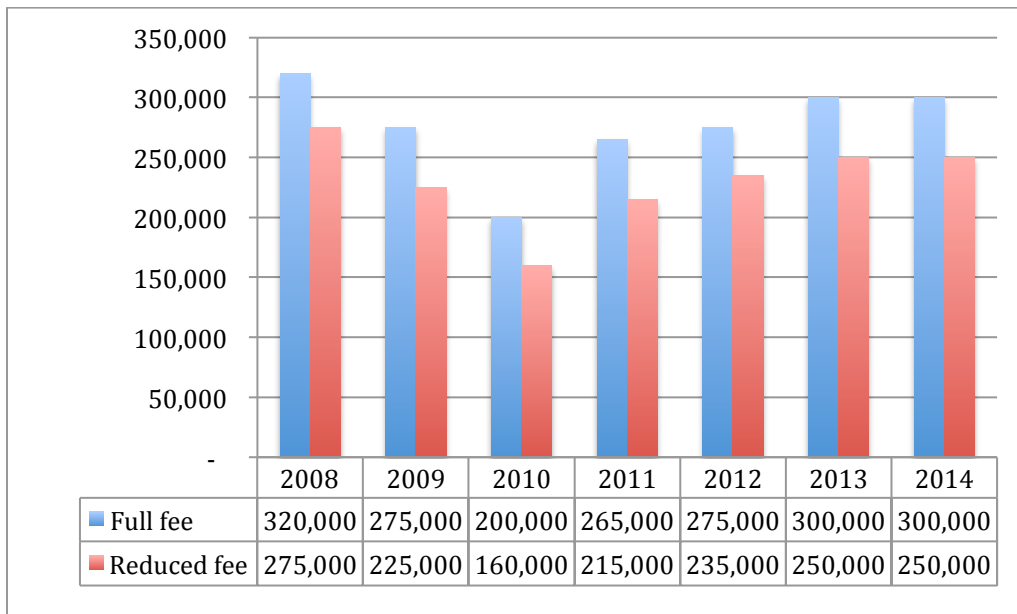
Vessel Value

Fleet composition is arrived at by using past data as a baseline. By nature, fleet vessel valuation is very imprecise and results should be used for general purposes only. The number of licensed vessels is drawn from current DFO data (may not be precise).

Salmon Seine	# Vessels	Avg Vessel Value (\$)	Aggregate Value (\$)
Classic Style	58	184,000	10,672,000
Modern Style	88	646,000	56,848,000
<i>Total</i>	146	462,466	67,520,000

Licensing Trends¹

Recent AS Licence Valuations (\$)

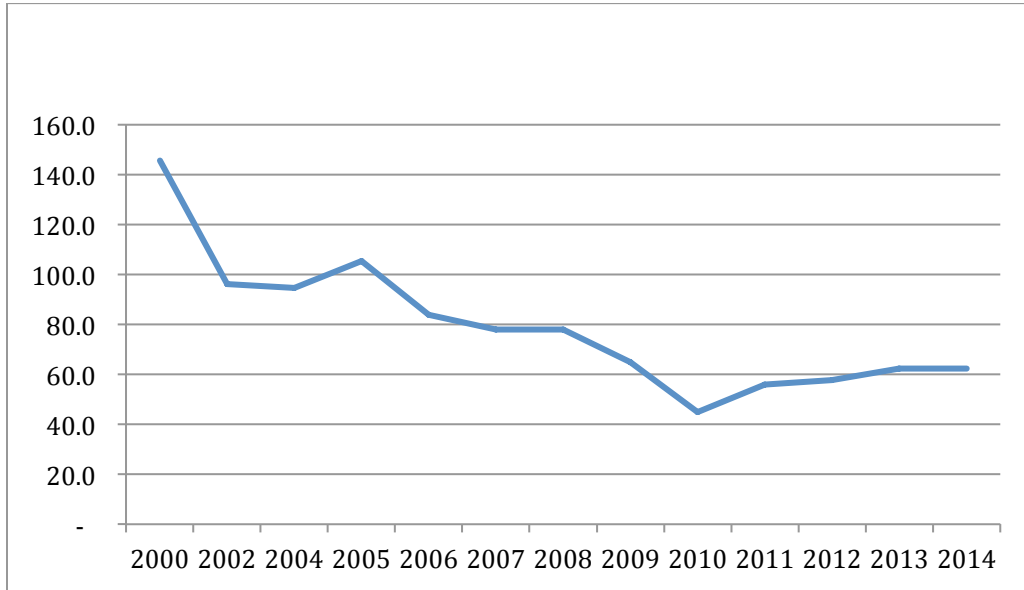


¹ Values in charts are in nominal terms (not adjusted for inflation)

PACIFIC FLEET LICENCE, QUOTA, AND VESSEL VALUATION: AT MARCH 31, 2014

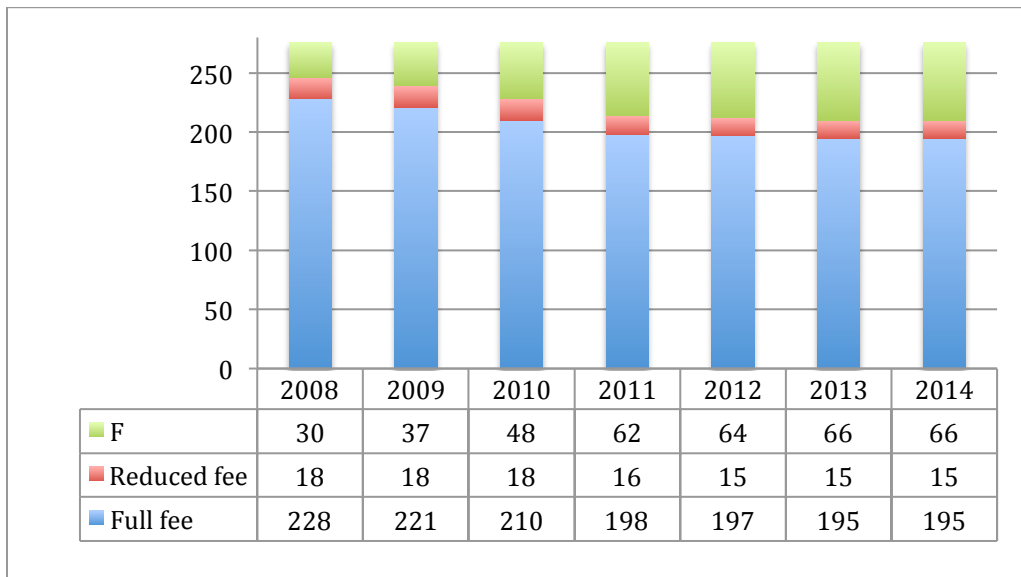
Values showed stability as of the March 31 valuation date, but are deemed to have risen in the ensuing months.

Aggregate Value of AS Licences (\$millions by year)



The salmon seine fishery is currently experiencing a period of relative stability (and modest growth), after a steep descent in preceding years.

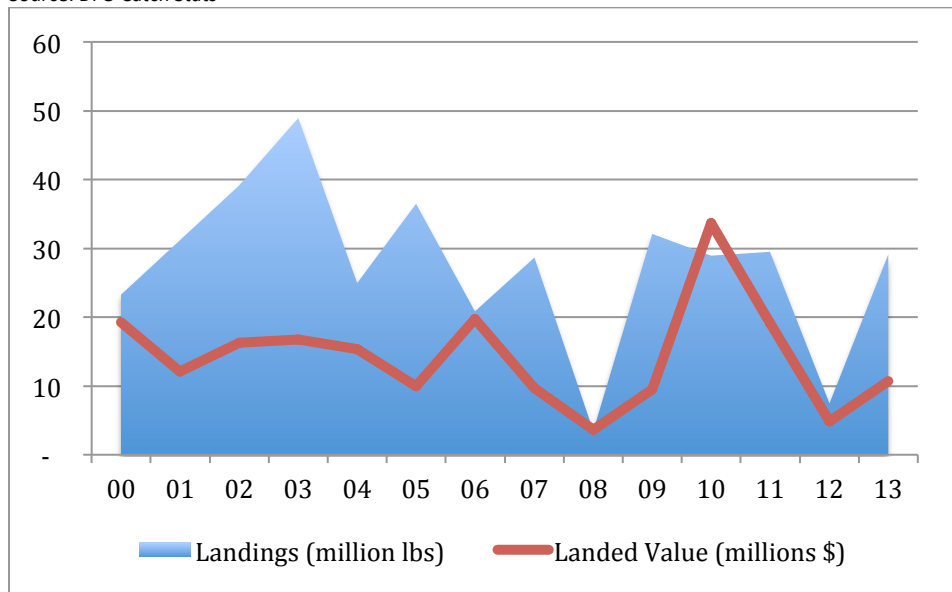
AS Licence Counts by Category



There have been no PICFI or ATP retirements in the last two years.

Seine Salmon Landings & Landed Value Trend

Source: DFO Catch Stats



Outlook/Commentary

The salmon seine fishery enjoyed a strong season in 2014, with good harvests of sockeye and pinks. This followed the 2013 season that saw a very large pink salmon harvest.

The outlook for the seine salmon sector is somewhat positive, given:

- Apparent improvement in salmon returns.
- Significant increase in fresh sales, enabled by pilot quota fisheries for sockeye and pink salmon; instead of large gluts of landings, the landings are spread out over a larger number of fishing days, allowing improved planning and handling.
- General improvement in pink and chum markets.
- Sentiment that pilot quota systems will continue at least on a year-to-year basis.
- Catches per vessel are healthy, given reduced seine fleets (with fleet reduction having been accomplished through fleet rationalization measures in the 1990s and early 2000s).

It is noted that the forecast for Bristol Bay in 2015 is the largest in decades, which could dampen market prices for sockeye in the upcoming season.

SALMON: Salmon Gillnet

General Description

<i>Licence Designation</i>	AG
<i>Nature of Licence</i>	Vessel based – vessel owner may make annual application for issuance of licence
<i>Number of Commercial Licences (valued in this study)</i>	822
<i>No. of Communal Commercial Lic's (not valued in this study)</i>	330 (FAG designation, Party-based)
<i>Licensing/Management Framework</i>	Area Licensing; vessel owner must designate one of 3 areas: North (C), Johnstone St/Barclay Sound (D), or Fraser River (E); periodic area reselection (2007 was last re-selection). Stacking allowed; currently 636 Area C, 380 Area D, and 390 Area E (includes FAG and NAG licences)
<i>Additional Information</i>	Competitive fishery. An additional 254 personal licences (NAG designation) are held by the Northern Native Fishing Corporation. Vessel-based licence virtually precludes licence leasing, except in FAG category. Reduced fee licences may only be held on a vessel where the vessel owner is an aboriginal individual. Vessel-based licence allows harvest of Schedule II species and transporting (packing).

Valuation Parameters

Valuations performed:	1. AG licence, full fee and reduced fee 2. Vessels
Basis for valuation:	> 10 open market transactions No PICFI retirements Anecdotal information
Confidence in valuation:	Moderate-High

Current Valuation

Licence Value at March 31, 2014

Category	# Licences	Value/Licence (\$)	Total Value (\$)
Full Fee	704	55,000	38,720,000
Reduced Fee	111	45,000	4,995,000
All AG	815	53,638	43,715,000

Valuation Comments

Values at the valuation date (March 31) were squarely in the \$55,000 range for full fee licences. After the valuation date, through the spring and summer, licence values rose to \$65,000.

There appears to be little link between vessel length and licence value (except that extremely small and extremely large licences may be valued somewhat lower/higher than the norm).

F-category licences (party based) are routinely leased under a variety of arrangements, from flat fees of \$1.5-5k, to percentages of the landed value. Lease rates were generally up in 2014 over levels the previous year.

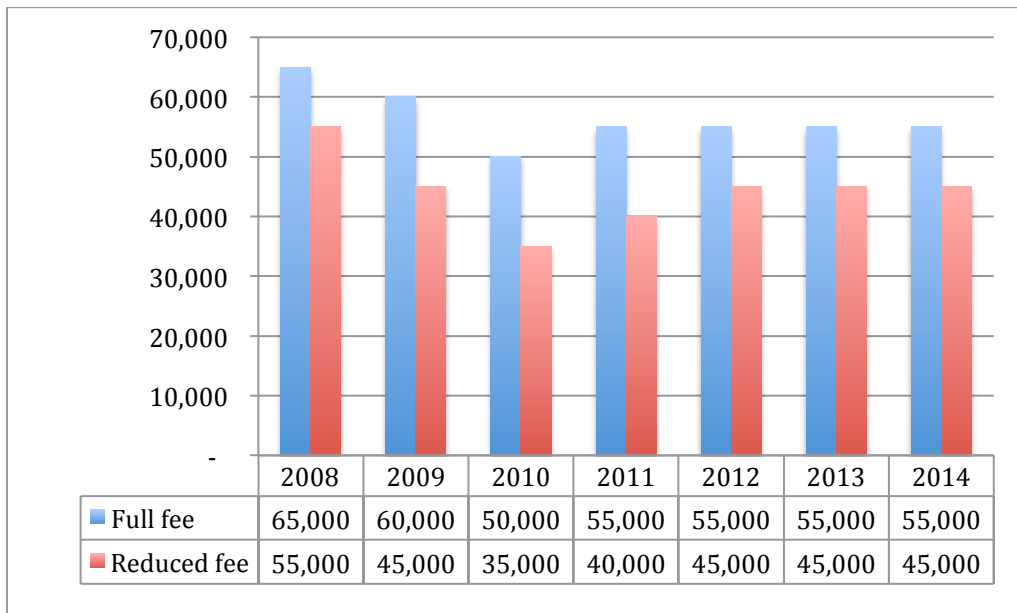
Vessel Value

Fleet composition is arrived at by using past data as a baseline. By nature, fleet vessel valuation is very imprecise and results should be used for general purposes only. The number of licensed vessels is drawn from current DFO data (may not be precise).

Salmon Gillnet	# Vessels	Avg Vessel Value (\$)	Aggregate Value (\$)
Classic Style	451	73,000	32,937,600
Modern Style	301	162,000	48,729,600
<i>Total</i>	752	108,600	81,667,200

Licensing Trends²

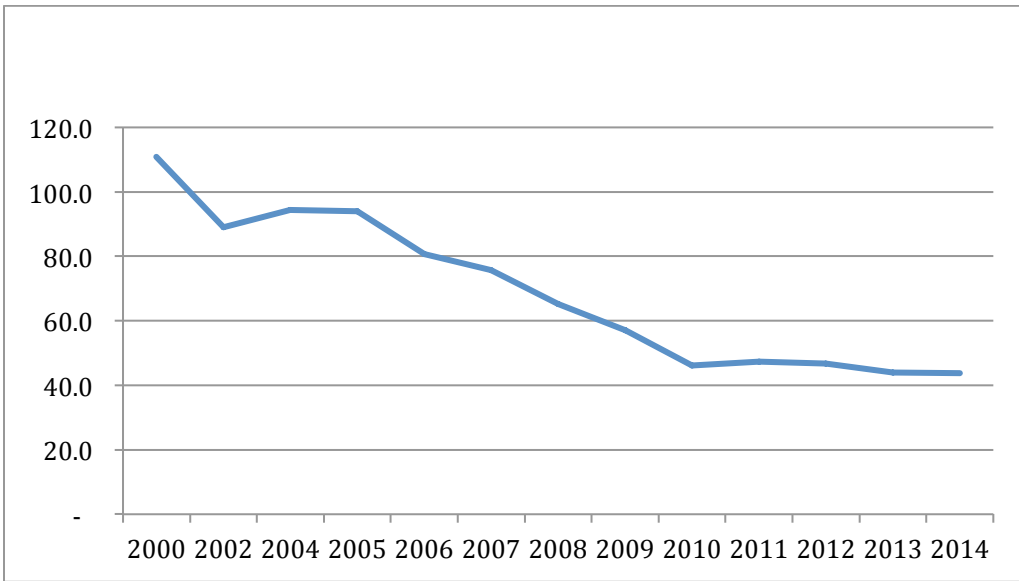
Recent AG Licence Valuations (\$)



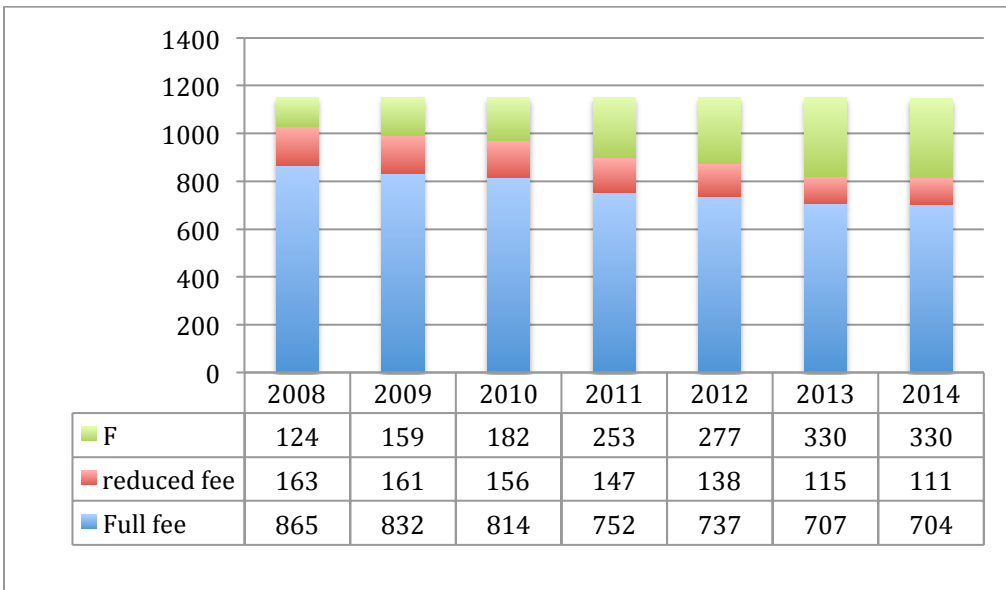
Gillnet salmon licence prices have been very stable in recent years; after the March 31 valuation date, however (not shown on the above graph), they appear to have surged to 2008 levels.

² Values in charts are in nominal terms (not adjusted for inflation)

Aggregate Value of AG Licences (\$ millions by year)



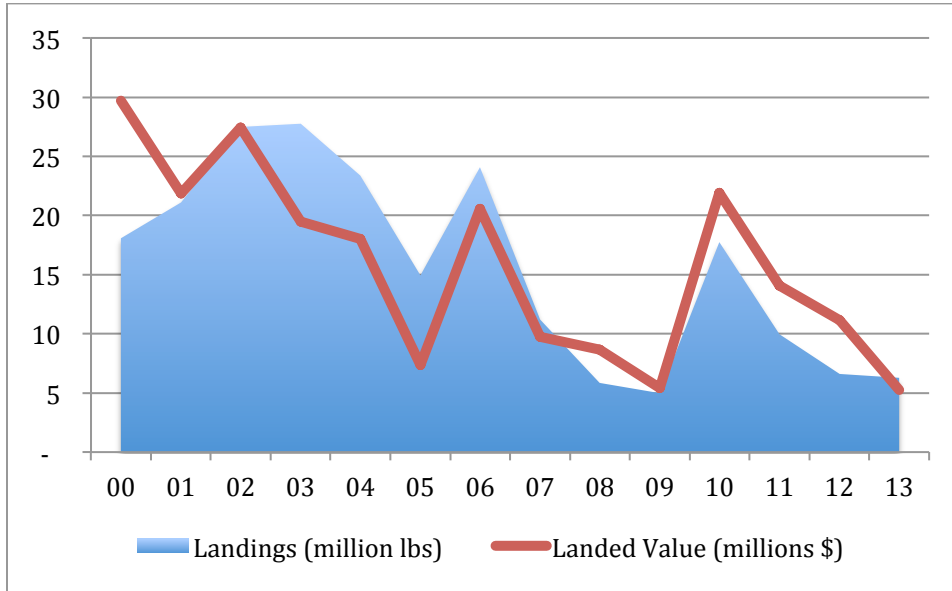
AG Licence Counts by Category



The above table does not include 254 Northern Native Fishing Corporation (NNFC) licences (NAG designation).

Gillnet Salmon Landings & Landed Value Trends

Source: DFO Catch Stats



Outlook/Commentary

Gillnet salmon harvesters enjoyed a strong Fraser sockeye season in 2014.

Unlike seine fisheries, however, the gillnet fleet is challenged to harvest its allocation in years like 2014. This results in forgone fishing opportunities.

Gillnet fisheries are managed in the traditional derby style, therefore they lack a mechanism for transferring surplus allocations to other gear-types.

SALMON: Salmon Troll

General Description

<i>Licence Designation</i>	AT
<i>Nature of Licence</i>	Vessel based – vessel owner may make annual application for issuance of licence
<i>Number of Commercial Licences (valued in this study)</i>	356
<i>No. of Communal Commercial Lic's (not valued in this study)</i>	83 (FAT designation, Party-based)
<i>Licensing/Management Framework</i>	Area Licensing; vessel owner must designate one of 3 areas: North (F), West Coast Vancouver Island (G), and Georgia Strait (H); periodic area re-selection allowed. Stacking allowed; currently 263 Area F, 165 Area G, 90 Area H (includes FAT licences).
<i>Additional Information</i>	Competitive fishery, except area F (IVQ). Vessel-based licence virtually precludes licence leasing. Reduced fee licences may only be held on a vessel where the vessel owner is an aboriginal individual. Vessel-based licence allows harvest of Schedule II species and transporting (packing).

Valuation Parameters

Valuations performed:	1. AT licence, full fee and reduced fee 2. Vessels
Basis for valuation:	≈10 open market transactions 12 PICFI retirements 43 Mitigation Fund retirements Anecdotal information
Confidence in valuation:	Moderate

Current Valuation

Licence Value at March 31, 2014

Category	# Licences	Value/Licence (\$)	Total Value (\$)
Full Fee	345	120,000	41,400,000
Reduced Fee	11	100,000	1,100,000
All AT	356	119,382	42,500,000

Valuation Comments

Values ranged from \$110k to \$140k and were reasonably constant throughout the year.

There does not appear to be a difference in value between licence areas.

It was noted that the Voluntary Salmon Troll Licence Retirement Program (often referred to as the “Mitigation Fund”) does not seem to be driving up licence prices in spite of buying activity. In fact, some observers feel that the Mitigation Fund is paying less for license than the open market.

F category (party based) licences lease from time to time. Troll quotas, for chinook in Area F and for sockeye in Area H were also leased this year. Chinook leases ranged from \$5 to \$10 per fish, and sockeye leases were in the \$3.50 per fish range.

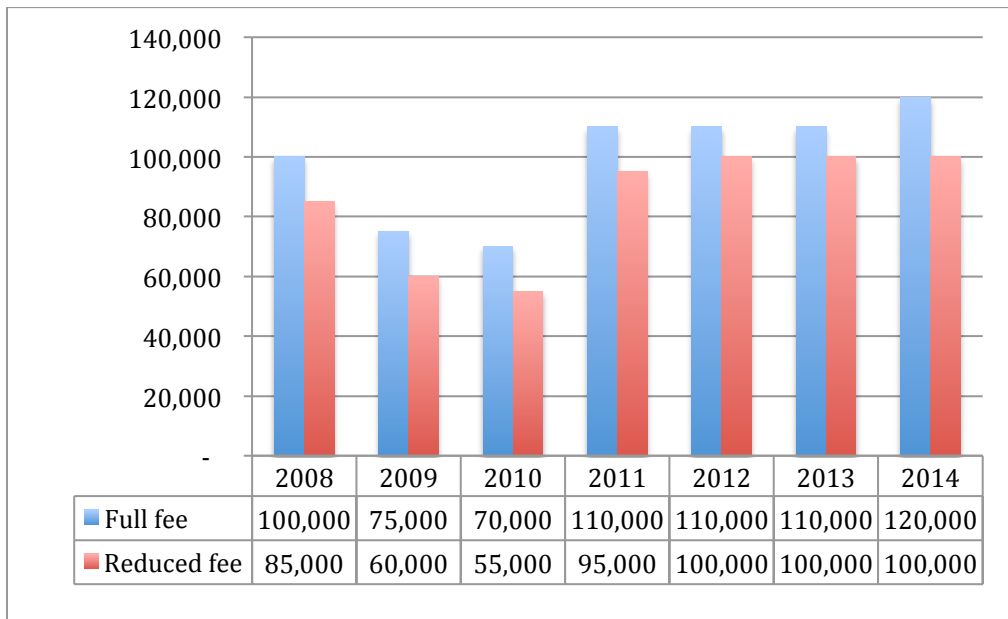
Vessel Value

Fleet composition is arrived at by using past data as a baseline. By nature, fleet vessel valuation is very imprecise and results should be used for general purposes only. The number of licensed vessels is drawn from current DFO data (may not be precise).

Salmon Troll	# Vessels	Avg Vessel Value (\$)	Aggregate Value (\$)
Classic Style	232	136,000	31,552,000
Modern Style	99	262,000	25,938,000
<i>Total</i>	331	173,686	57,490,000

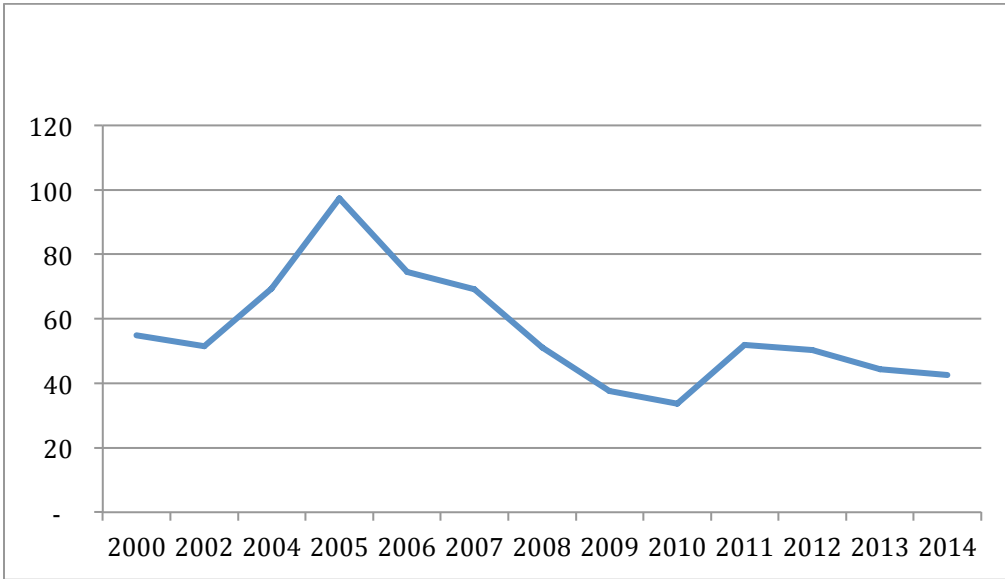
Licensing Trends³

Recent AT Licence Valuations (\$)

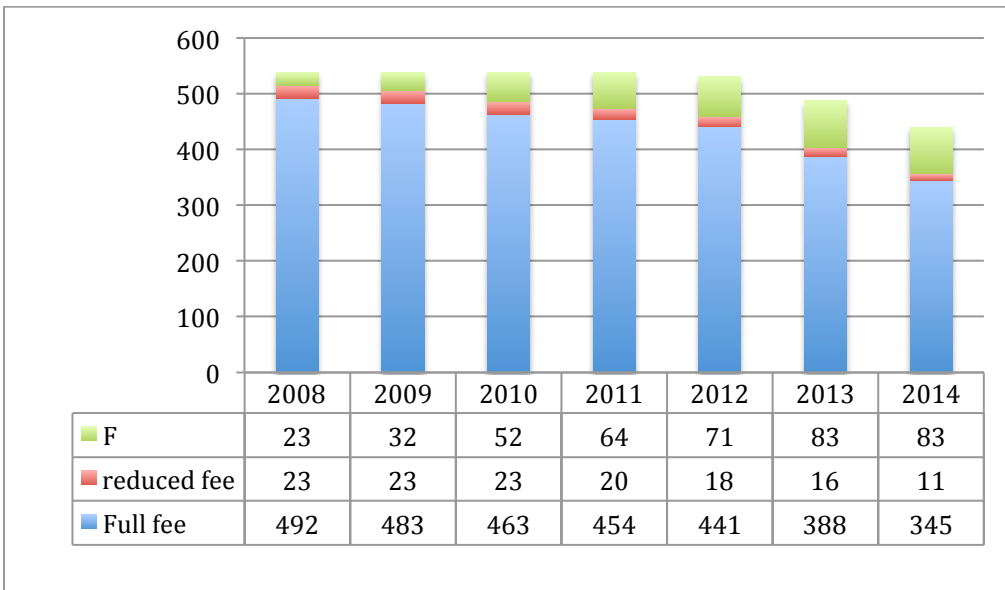


³ Values in charts are in nominal terms (not adjusted for inflation)

Aggregate Value of AT Licences (\$ millions by year)



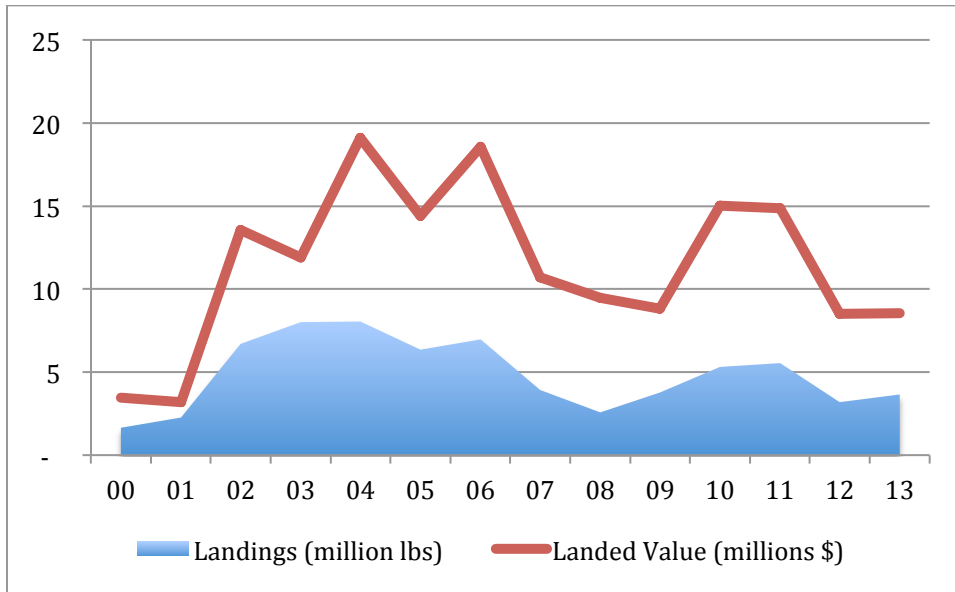
AT Licence Counts by Category



Note that the total number of AT licences is declining in recent years due to retirements by the Pacific Salmon Commission Voluntary Commercial Troll Licence Retirement Program.

Troll Salmon Landings & Landed Value Trends

Source: DFO Catch Stats



Outlook/Commentary

The troll salmon fishery has remained the most stable of the three gear types, not having seen a discernable upward or downward trend in recent years.

With firming markets for sustainably caught wild seafood, the market outlook for BC wild salmon is decidedly better than it was just a few years ago

PELAGICS: Roe Herring Seine

General Description

<i>Licence Designation</i>	HS
<i>Nature of Licence</i>	Party based – individual, corporation, or band may make annual application for issuance of licence
<i>Number of Commercial Licences (valued in this study)</i>	241
<i>No. of Communal Commercial Lic's (not valued in this study)</i>	11 (FHS designation)
<i>Licensing/Management Framework</i>	Area Licensing – holder annually selects a fishing area. Pool fishery – licensed vessels are organized into pools in order to avoid quota overages; each licence in a given area receives the same entitlement of fish. Two licences per vessel allowed (three or four in special circumstances). Minimum of 8 licences per pool.
<i>Additional Information</i>	Active lease market for licences. There are five stock management areas: QCI, North, Central, WCVI, and Strait of Georgia.

Valuation Parameters

Valuations performed:	1. HS licence, full fee and reduced fee 2. Annual lease rate 3. Vessels
Basis for valuation:	< 3 open market transactions No PICFI retirements Anecdotal information
Confidence in valuation:	Low

Current Valuation

Licence Value at March 31, 2014

Category	# Licences	Value/ Licence (\$)	Total Value (\$)
Full Fee	193	80,000	15,440,000
Reduced Fee	48	75,000	3,600,000
All HS	241	79,004	19,040,000

Valuation Comments

The market for roe herring seine licences virtually dried up in 2014.

Returns in the roe herring seine fishery were again extremely poor in 2014.

Lease values were nil.

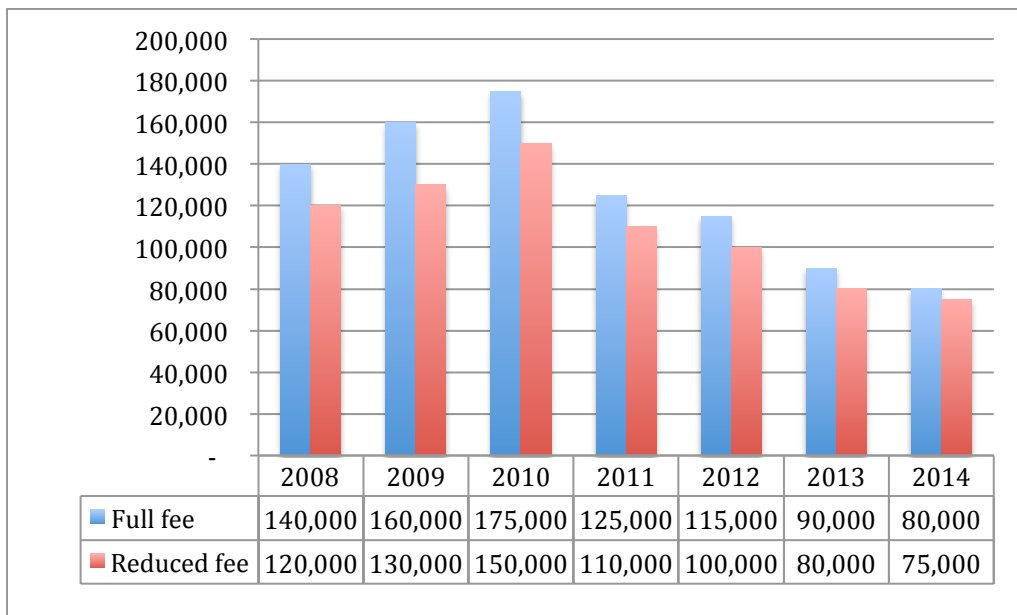
Vessel Value

Fleet composition is arrived at by using past data as a baseline. By nature, fleet vessel valuation is very imprecise and results should be used for general purposes only. The number of licensed vessels is drawn from current DFO data (may not be precise).

Herring Seine	# Vessels	Avg Vessel Value (\$)	Aggregate Value (\$)
Classic Style	35	175,000	6,125,000
Modern Style	105	733,000	76,965,000
<i>Total</i>	140	593,500	83,090,000

Licensing Trends⁴

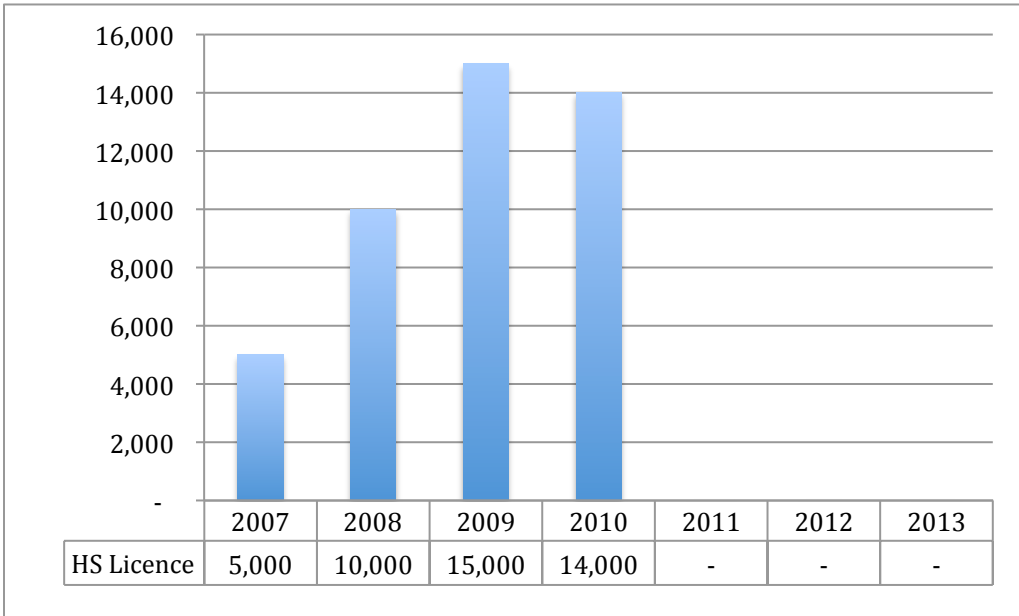
Recent HS Licence Valuations (\$)



A steady erosion in licence value continues. The decline since the early 2000s is particularly startling—the valuation for a full fee licence was \$725,000 as recently as 2002.

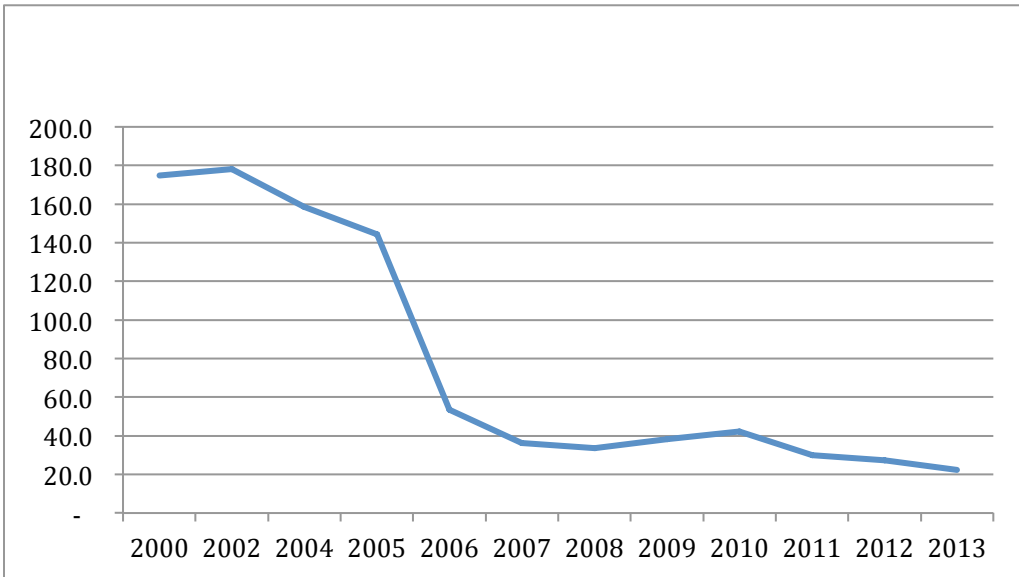
⁴ Values in charts are in nominal terms (not adjusted for inflation)

Recent HS Licence Lease Rates (\$)

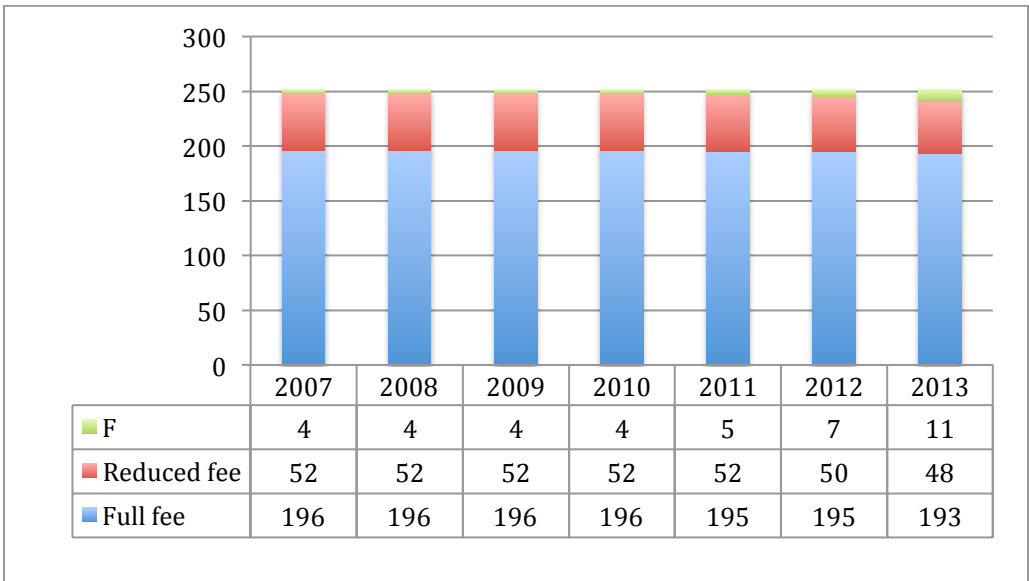


HS licences have had virtually no lease value for the past three seasons. Lessors typically pay only the DFO licence fees.

Aggregate Value of HS Licences (\$ millions by year)

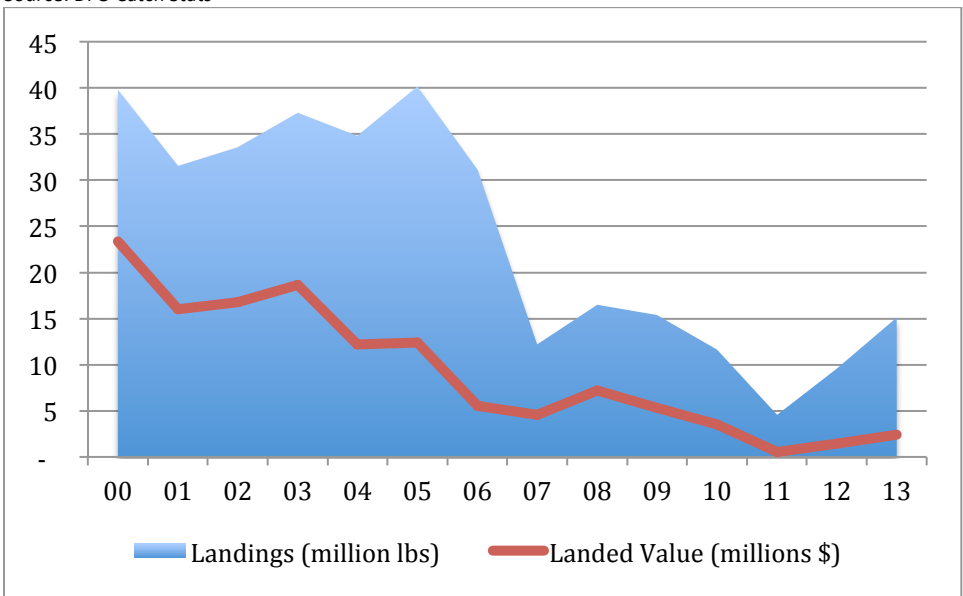


HS Licence Counts by Category



Seine Roe Herring Landings & Landed Value Trends

Source: DFO Catch Stats



Outlook

Seiners suffered another extremely poor roe herring seine fishery in 2014.

Despite positive signs on the resource side (rebounding stocks in some herring management areas), a weak Japanese market precludes profitable operations.

There is little optimism that the fishery will return to the lucrative status enjoyed in the past. Some participants predict that the future for herring fisheries lies in food and bait markets, though significant industry re-organization needs to occur to facilitate this.

Licence holders lament what they see as prohibitive renewal fees for HS licences relative to earnings potential.

PELAGICS: Roe Herring Gillnet

General Description

<i>Licence Designation</i>	HG
<i>Nature of Licence</i>	Party based – individual, corporation, or band may make annual application for issuance of licence
<i>Number of Commercial Licences (valued in this study)</i>	1100
<i>No. of Communal Commercial Lic's (not valued in this study)</i>	167 (FH) designation
<i>Licensing/Management Framework</i>	Area Licensing – holder annually selects a fishing area. Pool fishery – organized into pools in order to avoid quota overages; each licence in a given area receives the same entitlement of fish. Minimum of 4 licences per pool.
<i>Additional Information</i>	Active lease market for licences. There are five stock management areas: QCI, North, Central, WCVI, and Strait of Georgia.

Valuation Parameters

Valuations performed:	1. HG licence: full fee and reduced fee 2. Annual lease rate 3. Vessels
Basis for valuation:	<10 open market transactions 0 PICFI retirements Anecdotal information
Confidence in valuation:	Low-Moderate

Current Valuation

Licence Value at March 31, 2014

Category	# Licences	Value/Licence (\$)	Total Value (\$)
Full Fee	826	40,000	33,040,000
Reduced Fee	274	35,000	9,590,000
All HG	1100	38,755	42,630,000

Valuation Comments

Values range from \$35,000 to \$42,000, with the majority of sales clustered between \$38,000 to \$40,000.

Current (post March 31) estimates of value are even lower than this range.

The going-rate for leases is \$1,500. Some companies paid lower down payments but are likely to adjust. There was little variation from this value noted.

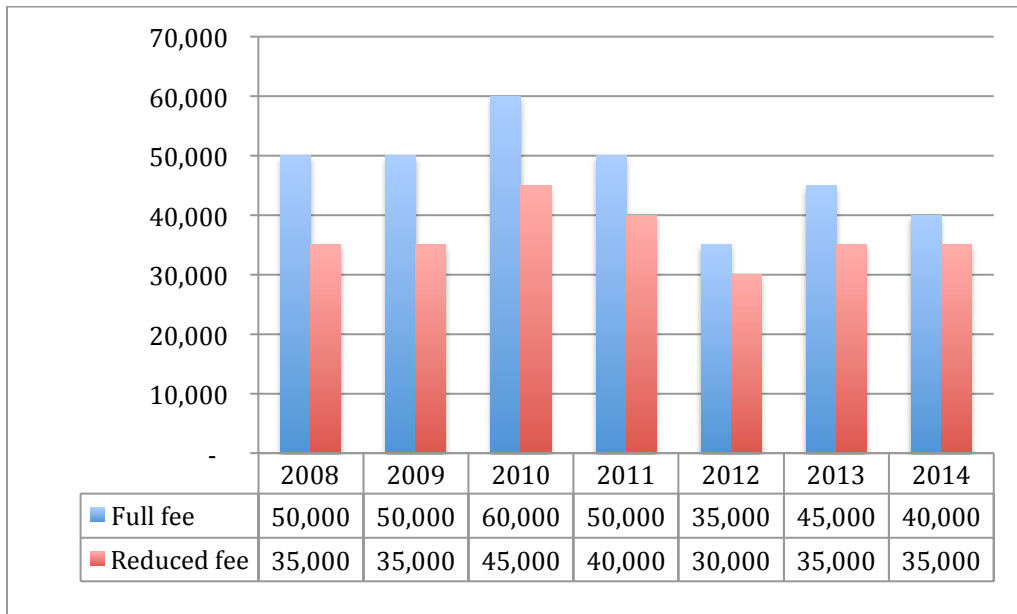
Vessel Value

Fleet composition is arrived at by using past data as a baseline. By nature, fleet vessel valuation is very imprecise and results should be used for general purposes only. The following vessel counts are estimates only, as the actual number of licensed vessels is not tracked by DFO.

Herring Gillnet	# Vessels	Avg Vessel Value (\$)	Aggregate Value (\$)
Classic Style	90	38,000	3,420,000
Modern Style	210	132,000	27,720,000
<i>Total</i>	300	103,800	31,140,000

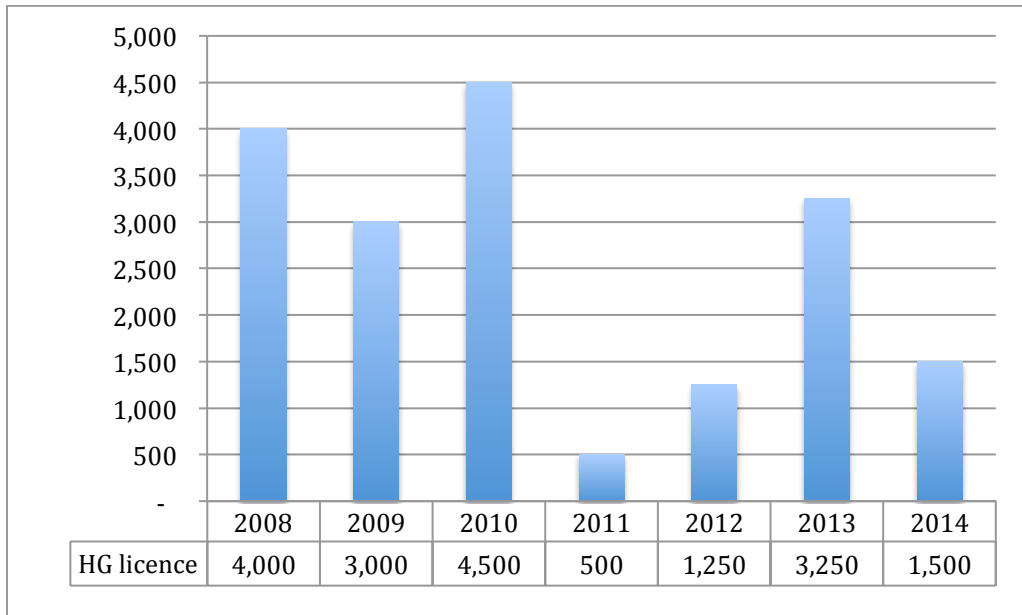
Licensing Trends⁵

Recent HG Licence Valuations (\$)



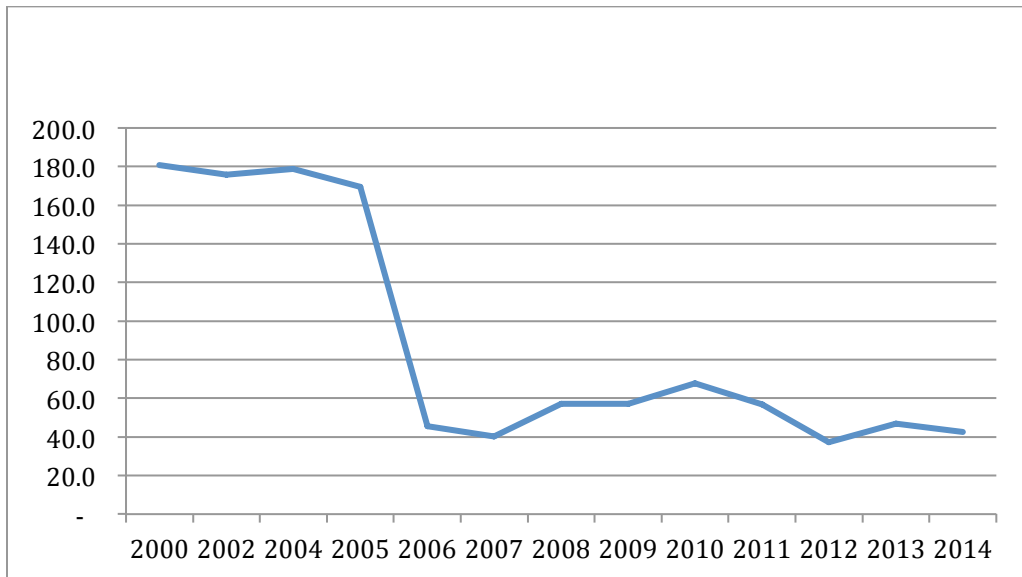
⁵ Values in charts are in nominal terms (not adjusted for inflation)

Recent HG Licence Lease Rates (\$)



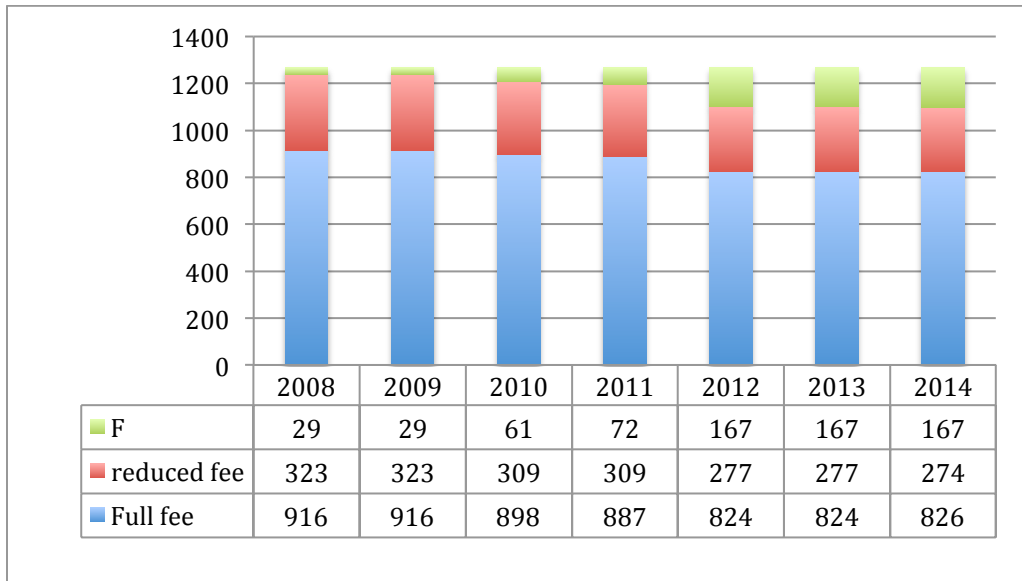
Licence leases continue a trend of bouncing up and down, although at far lower levels than seen in the past (the lease rate was \$15,000 as recently as 2004). The roe herring gillnet lease market is highly subject to speculation (a hint of good news may lead to bidding-up of lease rates).

Aggregate Value of HG Licences (\$ millions by year)



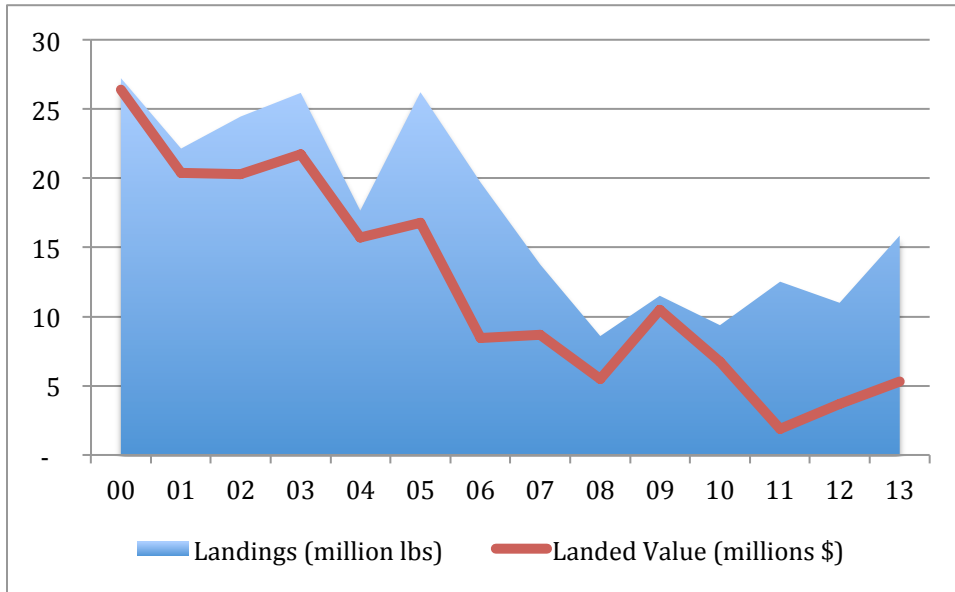
The aggregate value of HG license is a fraction of former levels, driven by soft market demand in Japan for BC roe.

Licence Counts by Category



Gillnet Roe Herring Landings & Landed Value Trends

Source: DFO Catch Stats



Outlook/Commentary

Gillnetters fared poorly again in the 2014 fishery.

There is little optimism that the fishery will return to the lucrative status enjoyed in the past.

PELAGICS: Herring Spawn on Kelp

General Description

<i>Licence Designation</i>	J
<i>Nature of Licence</i>	Party based – individual, corporation, or band may make annual application for issuance of licence
<i>Number of Commercial Licences (valued in this study)</i>	36
<i>No. of Communal Commercial Lic's (not valued in this study)</i>	3 (FJ designation) An additional 7 FJ licences may be issued annually to the Heiltsuk First Nation.
<i>Licensing/Management Framework</i>	Quota system – each J licence entitled to harvest 16,000 lbs (8 short tons) of product (FJ's may have a different entitlement). Licences are not technically transferable, but are effected through long term leases
<i>Additional Information</i>	Each licence is associated with a particular operating area; licences must be operated in that area Valuation is extremely imprecise, since there are no recognized transactions.

Valuation Parameters

Valuations performed:	J licence
Basis for valuation:	<3 transactions Anecdotal information
Confidence in valuation:	Low

Current Valuation

Licence Value at March 31, 2014

Category	# Licences	Value/Licence(\$)	Total Value (\$)
J Licences	36	250,000	9,000,000

Valuation Comments

Both anecdotal and sales information support a valuation of \$250,000.

This is a very illiquid licence category.

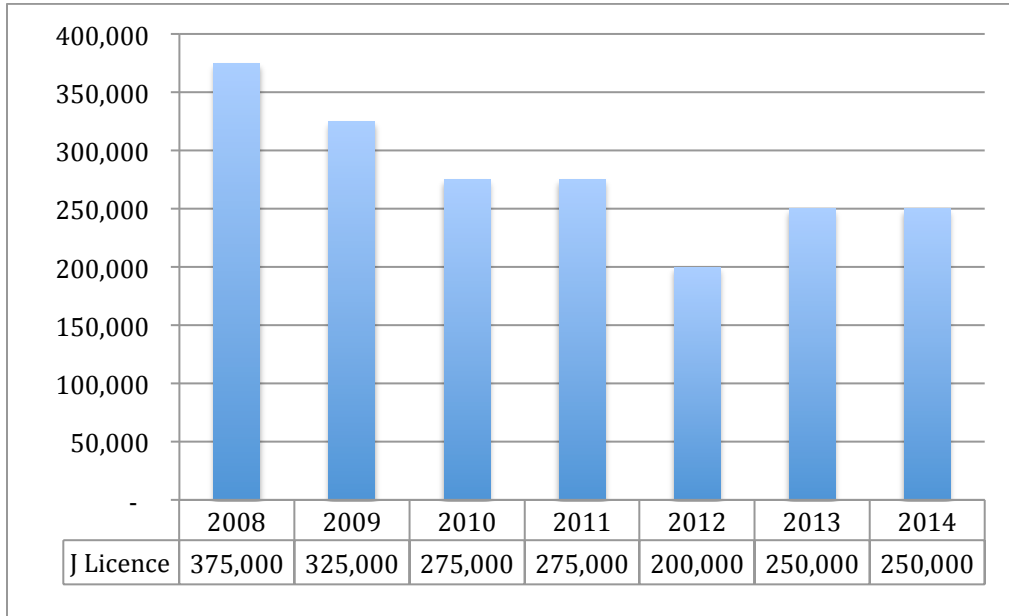
Any lease arrangements tend to be on a revenue sharing basis.

Vessel Value

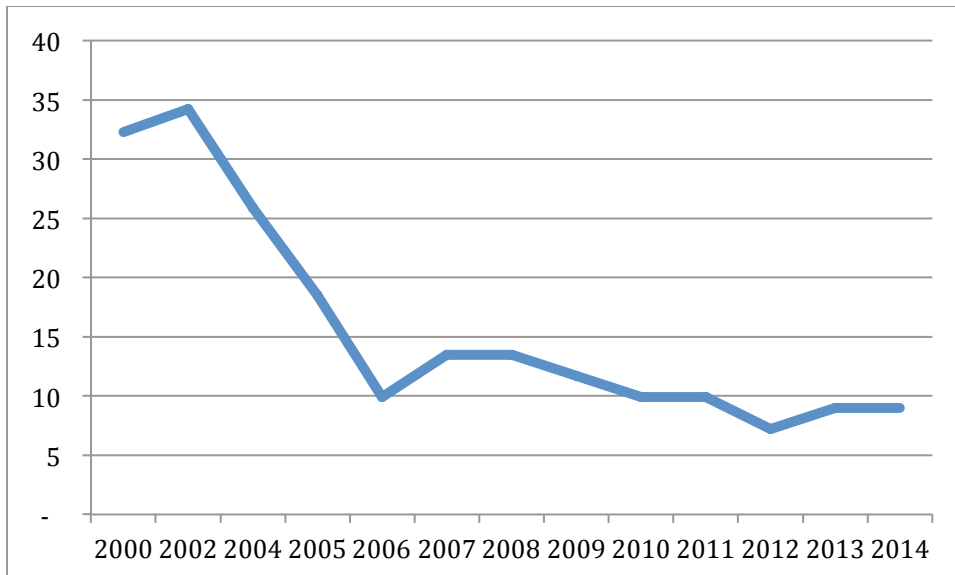
Not valued. There is no single vessel type associated with the spawn on kelp fishery, nor are licences assigned to a vessel.

Licensing Trends⁶

Recent J Licence Valuations (\$)



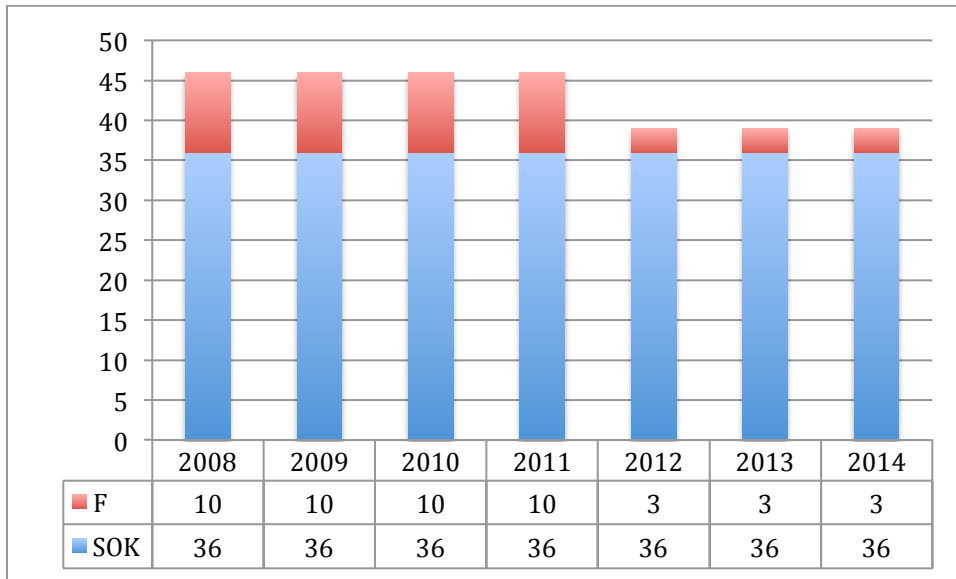
Aggregate Value of J Licences (\$ millions by year)



The sharp decline in J licence capitalization mirrors that seen in the roe herring fisheries.

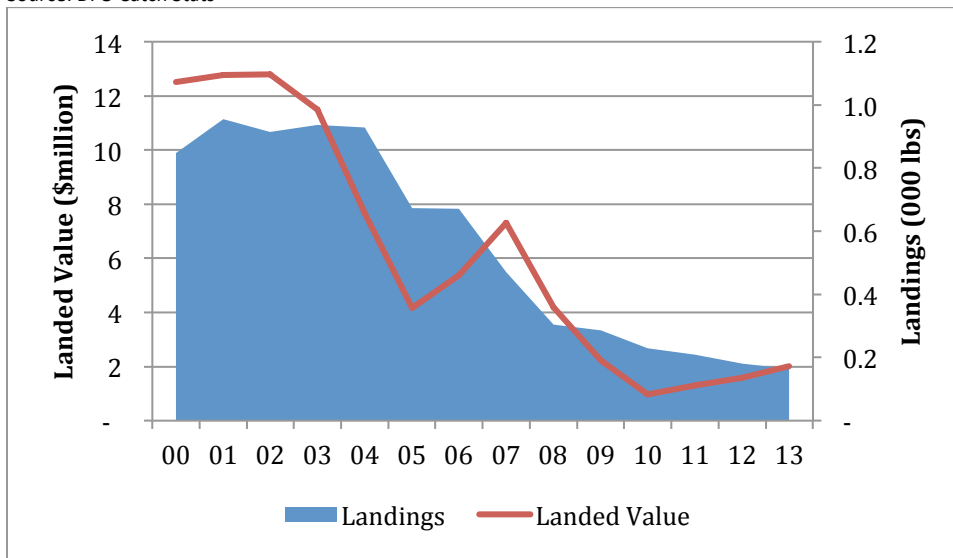
⁶ Values in charts are in nominal terms (not adjusted for inflation)

J Licence Counts by Category



Spawn on Kelp Landings & Landed Value Trends

Source: DFO Catch Stats



Outlook/Commentary

The economics of the fishery are challenging, with operating costs high relative to expected revenues. Operating results vary by SOK operating location: some operations with abundant herring stocks and good quality product are performing adequately, while many others are opting to not-operate.

The SOK fishery suffers from similar market dynamics to the roe herring fishery—namely, weak demand from Japan.

PELAGICS: Tuna and Sardine

Two fisheries that now feature “permanent” licence categories that trade on the open market are Tuna and Sardine. Current year partial valuations are provided for these fisheries:

Tuna (Category USA 68)

Valuation Parameters

Valuations performed:	1. USA 68 Licence 1. Lease rate
Basis for valuation:	No transactions
Confidence in valuation:	Low (no valuation provided)

Current Valuation

Licence Value at March 31, 2014

Category	# Licences	Value/ Licence (\$)	Total Value (\$)
USA 68	110	n/a	n/a

Valuation Comments

After a season (2012) in which USA 68 licences were denied access to tuna fishing in US waters, 45 USA 68 licences were allowed to fish there in 2013 and 2014. Thus, licence #s 1-45 had fishing rights, while the balance (#s 46-110) did not. The number of licences that will be permitted to fish in US waters in the future is uncertain.

This uncertain status of the Canada-US tuna treaty has meant that there is virtually no market for this licence category.

A few licences are reported to have leased in the \$8,000 to \$10,000 per season range.

Outlook/Commentary

In 2014, 45 of 110 USA 68 licences were permitted to fish in U.S. waters. Whether fishing rights will be restored to the entire USA 68 fleet is uncertain.

Over the last few years of flux in Canada-US tuna relations, the ability of the tuna fleet to locate and harvest fish in Canadian waters has improved.

Sardine (ZS)

Valuation Parameters

Valuations performed:	ZS Licence
Basis for valuation:	Anecdotal information
Confidence in valuation:	Low (no valuation provided)

Current Valuation

Licence Value at March 31, 2014

Category	# Licences	Value/Licence (\$)	Total Value (\$)
ZS	25	n/a	n/a

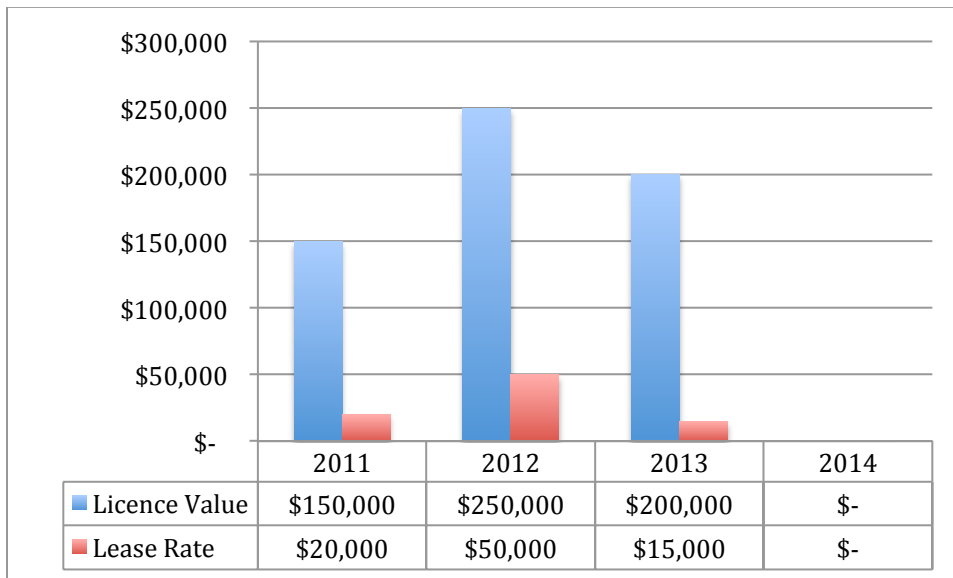
Note: there are an additional 25 ZSF licences (Communal Commercial) held by First Nations.

Valuation Comments

2014 marked the second consecutive season that sardines failed to materialize in BC waters, resulting in no harvest for the season. Accordingly, both the licence and lease market have dried up.

Licensing Trends

Recent Sardine Valuations



Outlook/Commentary

There is grave concern about the future of the fishery, as sardines are known to exhibit long term cyclical distribution patterns where they enter and exit northern hemisphere waters.

GROUND FISH: Halibut

General Description

<i>Licence Designation</i>	L
<i>Nature of Licence</i>	Vessel based – vessel owner may make annual application for issuance of licence
<i>Number of Commercial Licences (valued in this study)</i>	345
<i>No. of Communal Commercial Lic's (not valued in this study)</i>	91 (FL designation, Party-based)
<i>Licensing/Management Framework</i>	<p>Quota management system.</p> <p>Quota is separable from licence and divisible into one-pound increments. Quota can be re-allocated (transferred) amongst L licensed vessels on a temporary or permanent basis (FL's temporary only).</p> <p>Vessel must hold a halibut licence to hold or fish halibut.</p> <p>There is a minimum quantity of quota to be held on L licences (permanent allocation); see Management Plan for details.</p>
<i>Additional Information</i>	<p>Fewer than 150 L-licensed vessels actively fish for halibut.</p> <p>Quotas have declined in recent years due to stock fluctuation and distribution.</p> <p>Quota in the 2014 management plan for the commercial fishery is 5.8 million pounds.</p> <p>Vessel-based licence allows harvest of Schedule II species and transporting (packing).</p>

Valuation Parameters

Valuations performed:	<ol style="list-style-type: none"> 1. L licence (per foot and per licence) 2. Quota value per pound 3. Lease rate per pound 4. Vessels
Basis for valuation:	<p>< 5 L licence transactions</p> <p>< 3 PICFI quota relinquishments</p> <p>> 10 open market quota sale transactions</p> <p>> 10 quota leases</p> <p>Anecdotal information</p>
Confidence in valuation:	<p>High (transactions)</p> <p>High (lease)</p>

Current Valuation

Licence and Quota Value at March 31, 2014

Category	# Licences/ lbs quota	Value per Licence/ lb quota (\$)	Total Value (\$)
L	344	1,000	14,723,200
Quota	4,896,243	70.00	342,737,010
Total Value			357,460,210

Valuation Comments

The value of L licence tabs ranges from \$800 to \$1,100 per foot; precise valuation is confounded because most sales include a minimum amount of quota and the apportionment can vary.

L licence values have softened, it is reported, because groundfish integration offers long lining opportunities using various categories of vessel-based licences.

An average L tab (42.8') at \$1,000 per foot has a value of \$42,800.

The number of pounds of quota valued excludes cumulative relinquishments (estimated to be 17.8% of the TAC).

Quota transactions ranged from \$65 per lb to \$72 per lb—identical to the range seen the previous year.

There was a sizeable number of transactions researched this year, though most blocks of quota that trade are small (5,000 lbs or less).

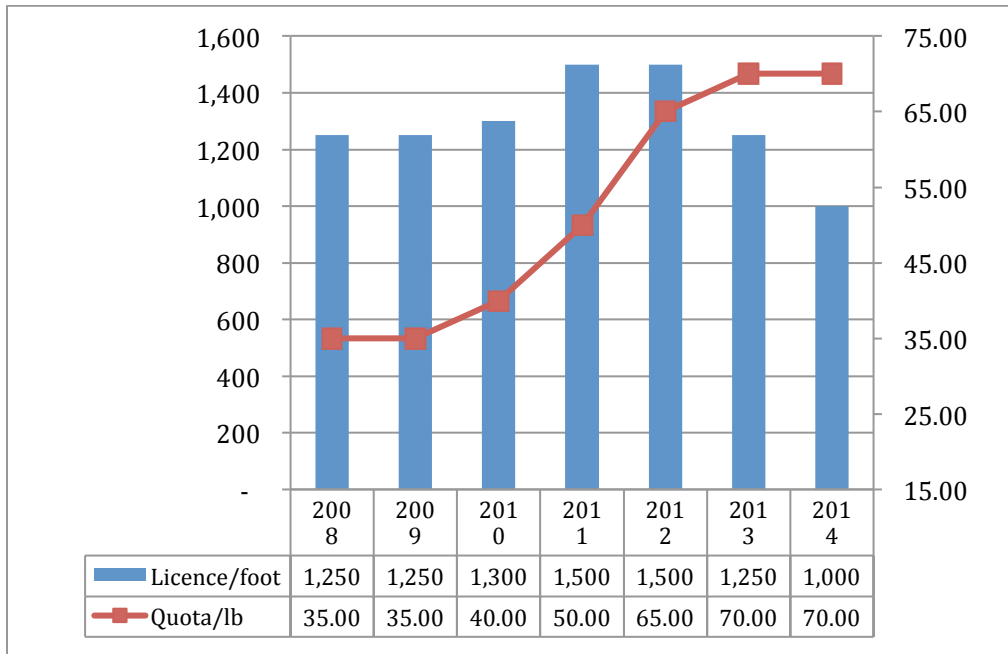
Vessel Value

Fleet composition is arrived at by using past data as a baseline. By nature, fleet vessel valuation is very imprecise and results should be used for general purposes only. The number of licensed vessels is drawn from current DFO data (may not be precise).

Halibut	# Vessels	Avg Vessel Value (\$)	Aggregate Value (\$)
Classic Style	251	147,000	36,987,000
Modern Style	167	268,000	44,756,000
<i>Total</i>	418	195,342	81,653,000

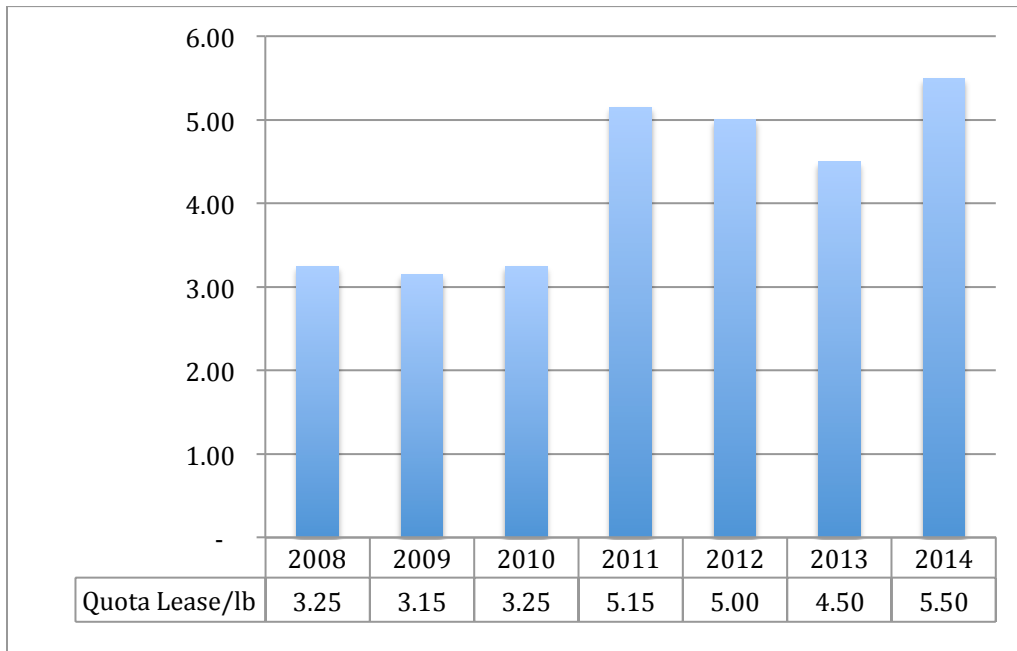
License & Quota Trends⁷

Recent L Licence and Halibut Quota Valuations (\$)



While licence values have softened, quota values steadied in 2014 at historic highs.

Recent Halibut Quota Lease Rates (\$ per lb)

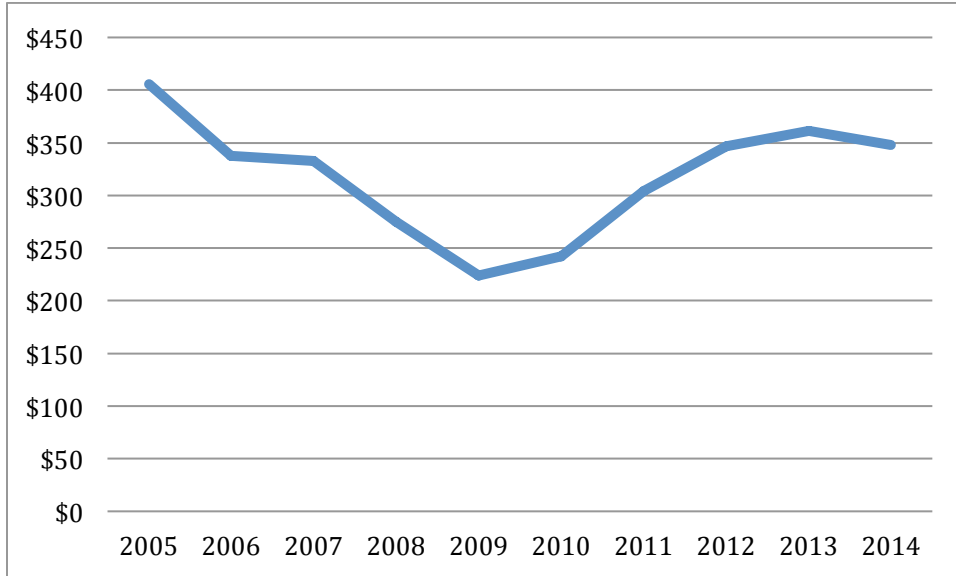


⁷ Values in charts are in nominal terms (not adjusted for inflation)

PACIFIC FLEET LICENCE, QUOTA, AND VESSEL VALUATION: AT MARCH 31, 2014

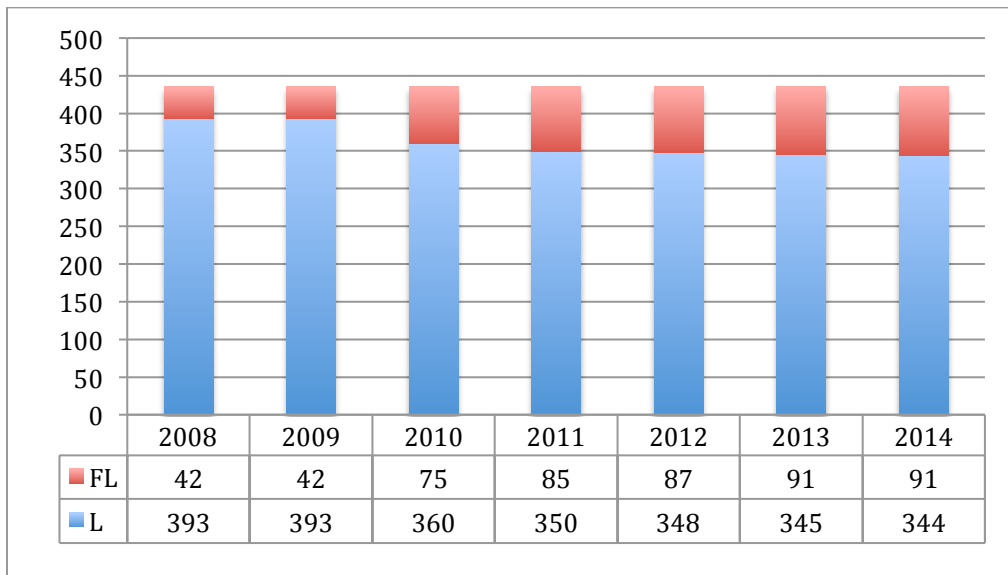
Lease rates in 2014 ranged from \$5.00 to \$6.00 per lb; strong fish prices, approaching \$8.00 per pound at times, supported these strong lease rates. In addition to the lease fee for quota, lessees also tend to pay the DFO/management fees.

Aggregate Value of L Licences and Halibut Quota (\$ millions by year)⁸



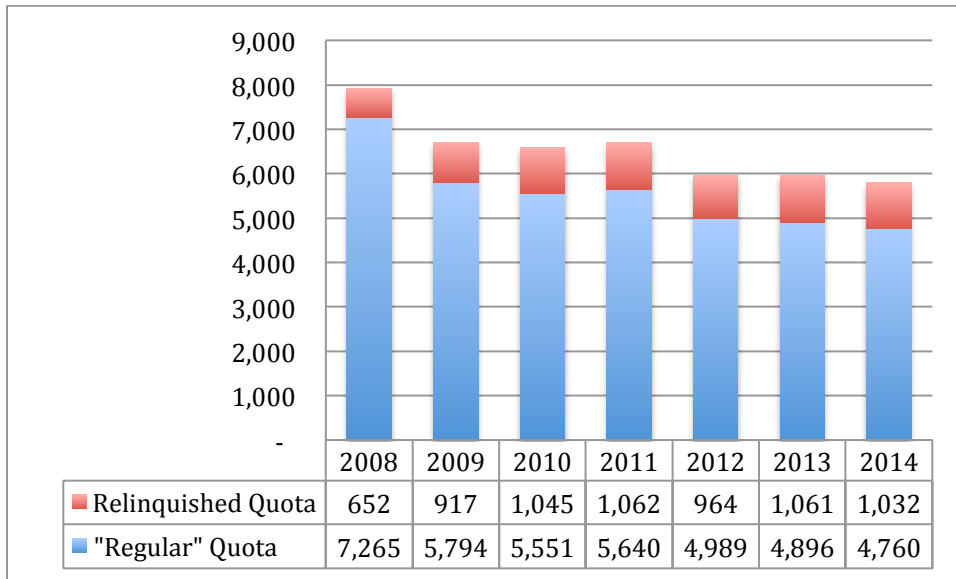
Quota values have risen sharply in recent years, resulting in higher aggregate values in spite of reduction in the pool of quota (resulting both from PICFI retirements and declining TACs).

L Licence Counts by Category



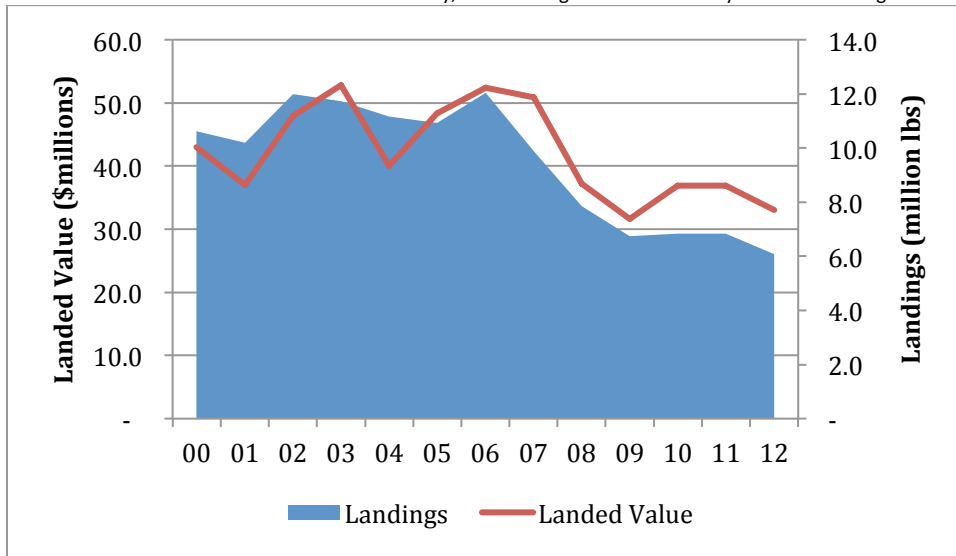
⁸ Excludes F licences and relinquished quota

Halibut Quota by Category (Relinquished vs. "Regular") – thousands of lbs



Halibut Landings & Landed Value Trends

Source: DFO Catch Stats. Data includes halibut-only, note other groundfish that may be landed during halibut trips.



No landings are reported since 2012. Data for 2013 and 2014 was not available at the time of publication.

Outlook/Commentary

As the single most valuable fishery category (\$357m value of licences and quota in 2014), the halibut fishery enjoys strong fundamentals, including sound management and strong market demand. Quota prices have remained lofty, indicating that holders are satisfied with the risk/return profile.

A key factor for the halibut fishery in years to come is the state of the Pacific halibut resource. It is hoped that halibut conservation measures in recent years (the TAC has been at low levels) will be rewarded with a rebounding stock and rising TACs.

GROUND FISH: Sablefish (Black Cod)

General Description

<i>Licence Designation</i>	K
<i>Nature of Licence</i>	Vessel based – vessel owner may make annual application for issuance of licence
<i>Number of Commercial Licences (valued in this study)</i>	42
<i>No. of Communal Commercial Lic's (not valued in this study)</i>	6 (FK designation, Party-based)
<i>Licensing/Management Framework</i>	Quota management system. Each K licence was allocated a sablefish quota (permanent % of the TAC) based on a combination of vessel length and catch history. Quota is separable from licence and divisible into one pound increments. Quota can be re-allocated (transferred) amongst K licensed vessels on a temporary or permanent basis (FK's temporary only).
<i>Additional Information</i>	About 30 vessels actively fishing currently. Vessel-based licence allows harvest of Schedule II species and transporting (packing).

Valuation Parameters

Valuations performed:	<ol style="list-style-type: none"> 1. K licence (per licence) 2. Quota value per pound 3. Lease rate per pound 4. Vessels
Basis for valuation:	<p>< 3 K licence tabs < 5 quota transactions > 10 quota leases Anecdotal information</p>
Confidence in valuation:	Low- Moderate for K and quota valuations, Moderate for quota leases

Current Valuation

Licence and Quota Value at March 31, 2014

Category	# Licences/ lbs quota	Value per Licence/ lb quota (\$)	Total Value (\$)
K Licence	42	250,000	10,500,000
Quota	3,561,289	47.5	169,161,232
Total Value			179,661,232

Valuation Comments

The K licence market is extremely thin, with only 42 general-category licences on the market.

Few sablefish quota transactions were identified this year. Values range from \$45 to \$55 per j cut pound. Knowledgeable persons opined that the “right” current value is in the \$47-49 range.

The number of pounds of quota valued excludes cumulative relinquishments (estimated to be 11.3% of the TAC).

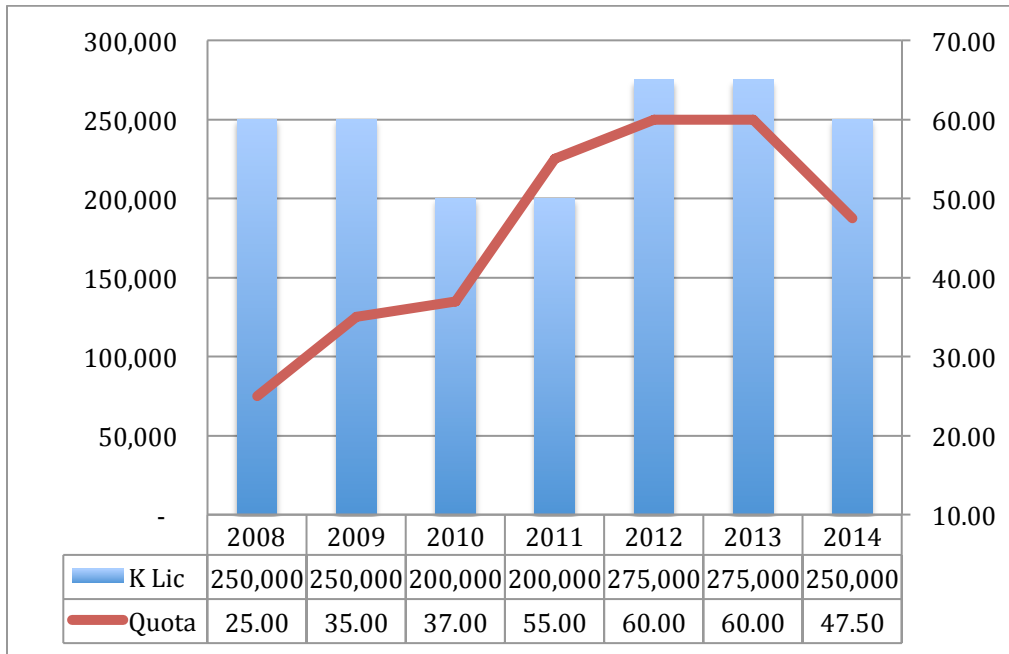
Vessel Value

Fleet composition is arrived at by using past data as a baseline. By nature, fleet vessel valuation is very imprecise and results should be used for general purposes only. The number of licensed vessels is drawn from current DFO data (may not be precise).

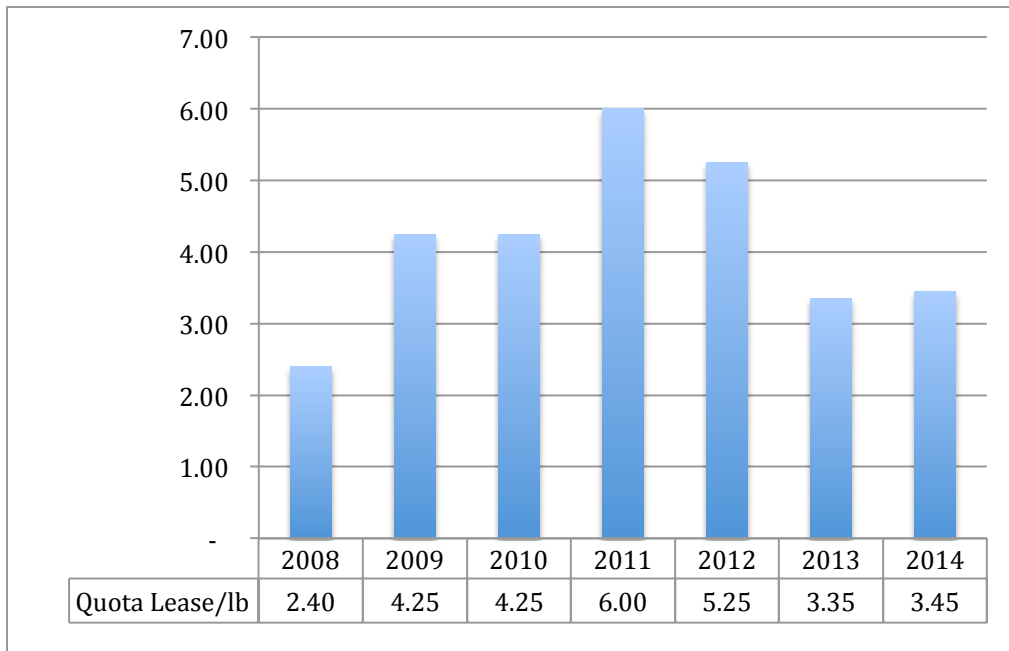
Sablefish	# Vessels	Avg Vessel Value (\$)	Aggregate Value (\$)
Classic Style	22	200,000	4,400,000
Modern Style	23	650,000	14,950,000
<i>Total</i>	45	430,000	19,350,000

License & Quota Trends⁹

Recent K Licence and Sablefish Quota Valuations (\$)



Recent Sablefish Quota Lease Rates (\$ per lb)



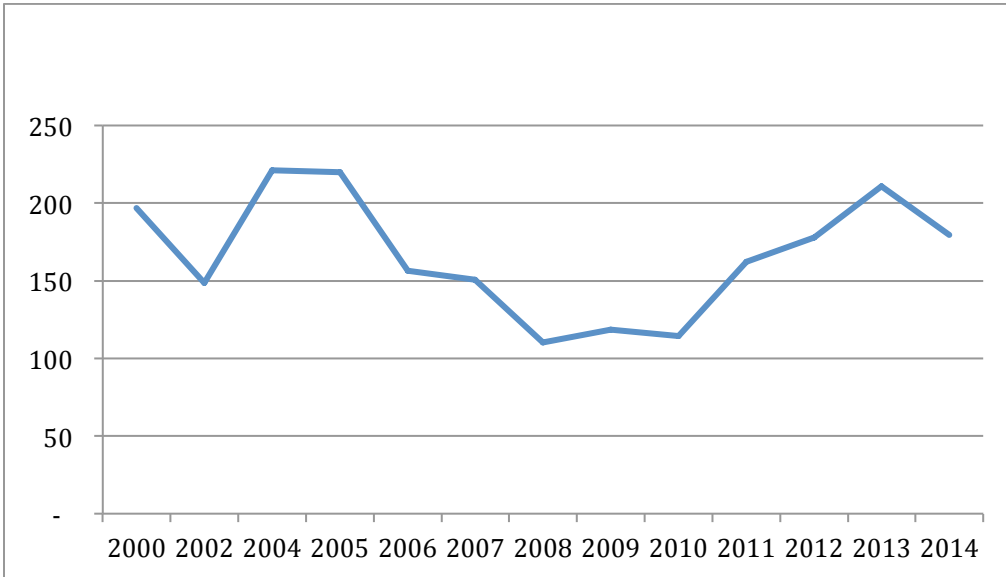
⁹ Values in charts are in nominal terms (not adjusted for inflation)

PACIFIC FLEET LICENCE, QUOTA, AND VESSEL VALUATION: AT MARCH 31, 2014

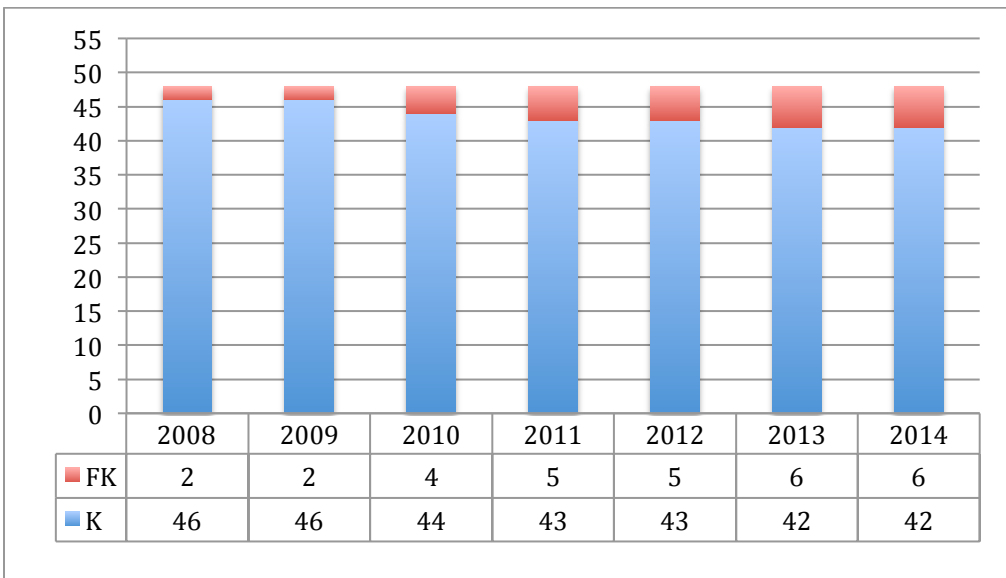
The lease rate is pegged at \$3.45, with a range from \$3.20 to \$3.80 per j cut pound. The lease rate rose slightly from the prior year, despite a significant drop in quota value.

The lessor generally pays the DFO/management fees in sablefish (about 25 cents per lb).

Aggregate Value of K Licences and Sablefish Quota (\$ millions by year)¹⁰

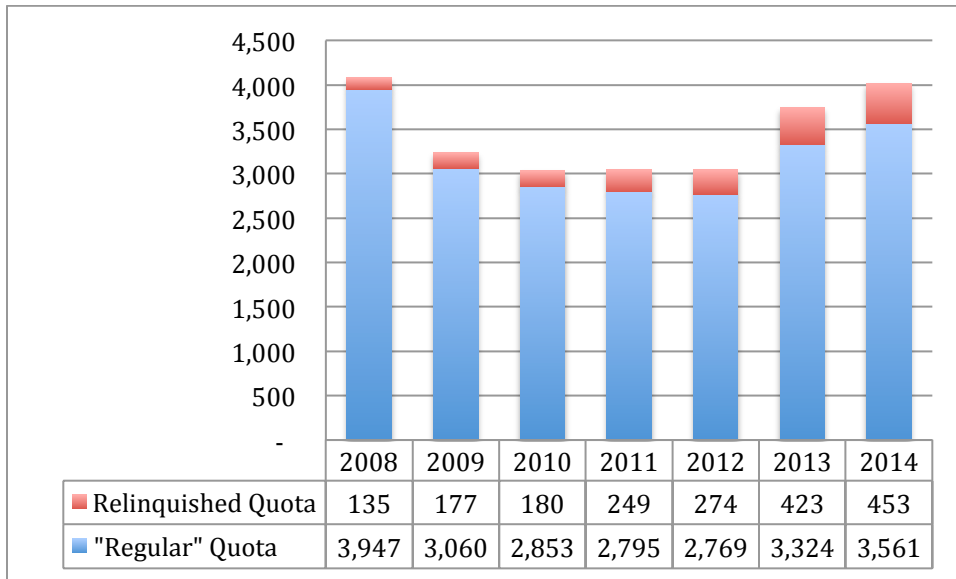


K Licence Counts by Category



¹⁰ excludes F licences and relinquished quota

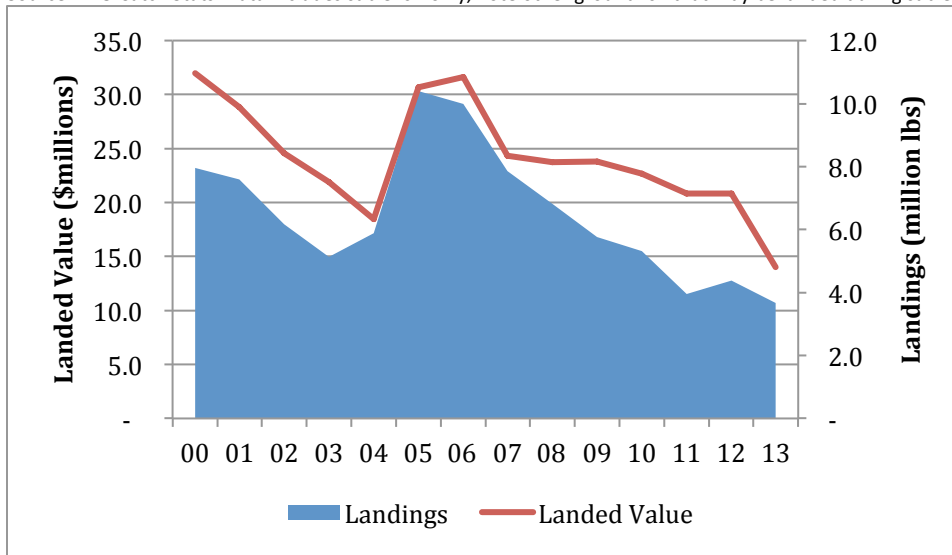
Sablefish Quota by Category (Relinquished and "Regular") – thousands of lbs



After bottoming out in 2010-2012, the commercial TAC has grown slightly in recent years.

Sablefish Landings & Landed Value Trends

Source: DFO Catch Stats. Data includes sablefish-only, note other groundfish that may be landed during sablefish trips.



Outlook/Commentary

While sablefish remains a well-managed fishery, some informants suggested the fishery is on a slightly downward trend.

Market prices have softened compared to prior levels, and the small number of K licences issued limits options for harvesting the fish.

GROUND FISH: Groundfish Trawl

General Description

<i>Licence Designation</i>	T
<i>Nature of Licence</i>	Vessel based – vessel owner may make annual application for issuance of licence
<i>Number of Commercial Licences (valued in this study)</i>	135
<i>No. of Communal Commercial Lic's (not valued in this study)</i>	4 (FT designation, Party-based)
<i>Licensing/Management Framework</i>	Individual quotas – about 50 quotas based on species and areas – complex system. 80% of quota allocated to vessels as IVQ, and 20% allocated to vessels via the Groundfish Development Authority (see Management Plan). Quotas divisible and transferable amongst T licensed vessels on a temporary or permanent basis.
<i>Additional Information</i>	100% at sea observer coverage, 100% offload monitoring coverage. Each T licence has a unique holdings cap, which influences licence value. Vessel-based licence allows harvest of Schedule II species and transporting (packing).

Valuation Parameters

Valuations performed:	<ol style="list-style-type: none"> 1. T licence 2. Quota values per pound: <ol style="list-style-type: none"> a. Uncut groundfish quota b. Offshore hake 3. Lease rate per pound for above quotas 4. Vessels
Basis for valuation:	<p>< 5 licence transactions <3 groundfish quota transactions < 3 hake quota transactions > 10 groundfish and hake quota leases Anecdotal information</p>
Confidence in valuation:	<p>Low for transactions Moderate for leases</p>

Note that gulf hake and arrowtooth flounder are not specifically valued in this report as these species/quotas possess very little value, are seldom traded, and valuations for them are difficult to discern.

Current Valuation

Licence and Quota Value at March 31, 2014

Category	# Licences/ lbs quota, thousands	Value per Foot/ lb quota (\$)	Total Value (\$ thousands)
T	135	\$700	6,086
Uncut quota	91,173	\$1.50	136,760
Hake outside	217,420	\$0.50	108,710
Total Value			251,556

Valuation Comments

T licence values appear to have softened significantly this year, with values ranging from \$500 to \$1100 per foot. Large licences (85'+) traded for values at the lower end of the range. T licence values are highly dependent on the specific holdings cap assigned to each licence. At \$700/ft, the indicated average T licence value is \$45,000.

While “uncut” groundfish quota is still the valuation basis for trawl quota, the species are increasingly dis-aggregated, with individual markets emerging by-species, by-area. Uncut quota transactions and estimates of value ranged from \$1.30 to \$1.65 per pound, but there was very little volume of quota traded.

There were no offshore hake quota transactions unearthed this year. Though TACs have been high the last two years, the fish has been difficult to catch, with significant quotas left in the water. Estimates of hake value range from 50 to 60 cents per pound. The pegged value of \$0.50 per pound reflects a softening of the market based upon poor fish catch-ability.

Vessel Value

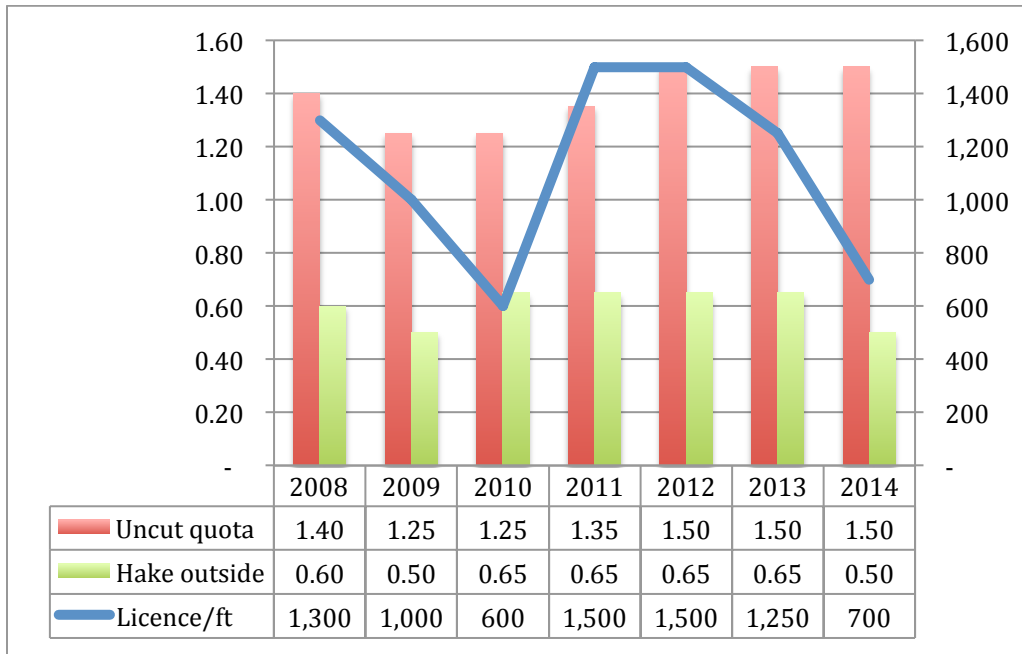
Fleet composition is arrived at by using past data as a baseline. By nature, fleet vessel valuation is very imprecise and results should be used for general purposes only. The number of licensed vessels is drawn from current DFO data (may not be precise).

Trawl	# Vessels	Avg Vessel Value (\$)	Aggregate Value (\$)
Classic Style	68	440,000	22,920,000
Modern Style	68	1,375,000	93,500,000
<i>Total</i>	136	907,509	123,420,000

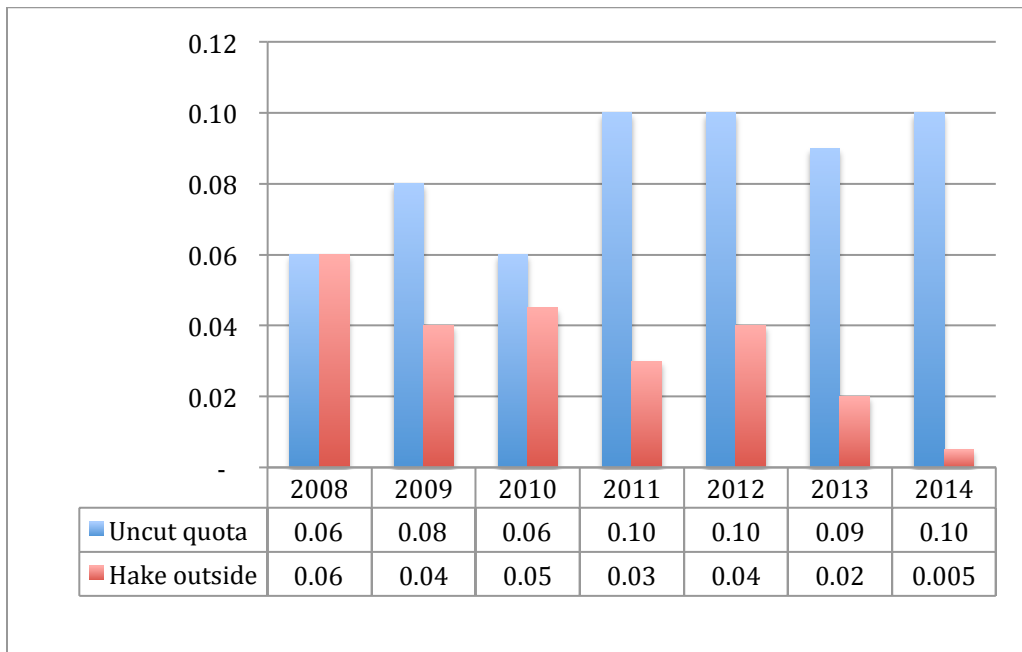
Note that in the groundfish trawl fleet there are now four large-scale freezer-trawlers in operation. Each of these vessels have multi-million dollar valuations, and are not included in the above calculation.

Licence & Quota Trends¹¹

Recent T Licence and Trawl Quota Valuations (\$)



Recent Trawl Quota Lease Rates (\$ per lb)



Uncut groundfish quota leases ranged from \$.08 -\$.11 per lb. Individual species leases were conducted at a variety of rates: large rockfish 12-15 cents/lb, small rockfish and soles 3-6

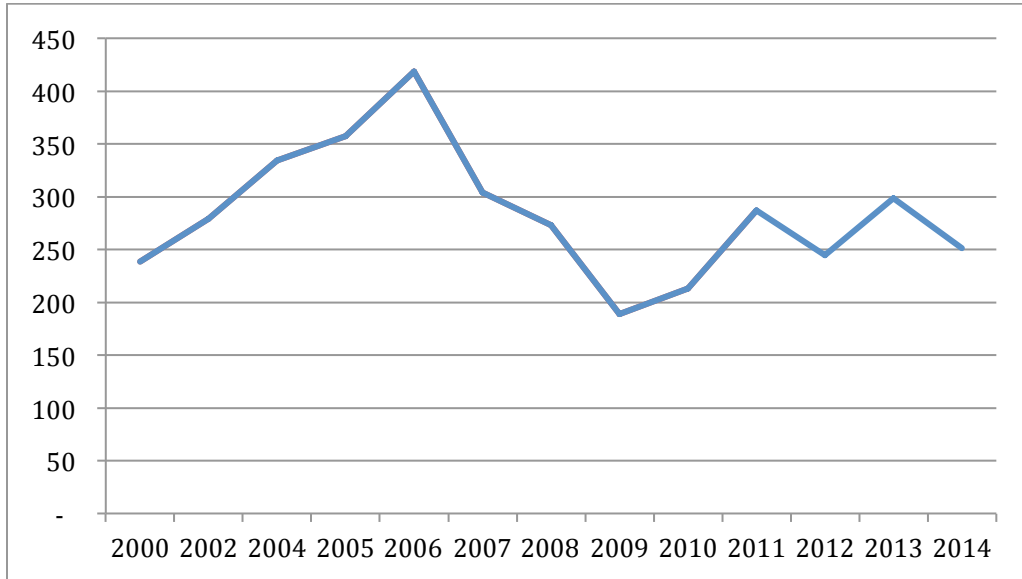
¹¹ Values in charts are in nominal terms (not adjusted for inflation)

PACIFIC FLEET LICENCE, QUOTA, AND VESSEL VALUATION: AT MARCH 31, 2014

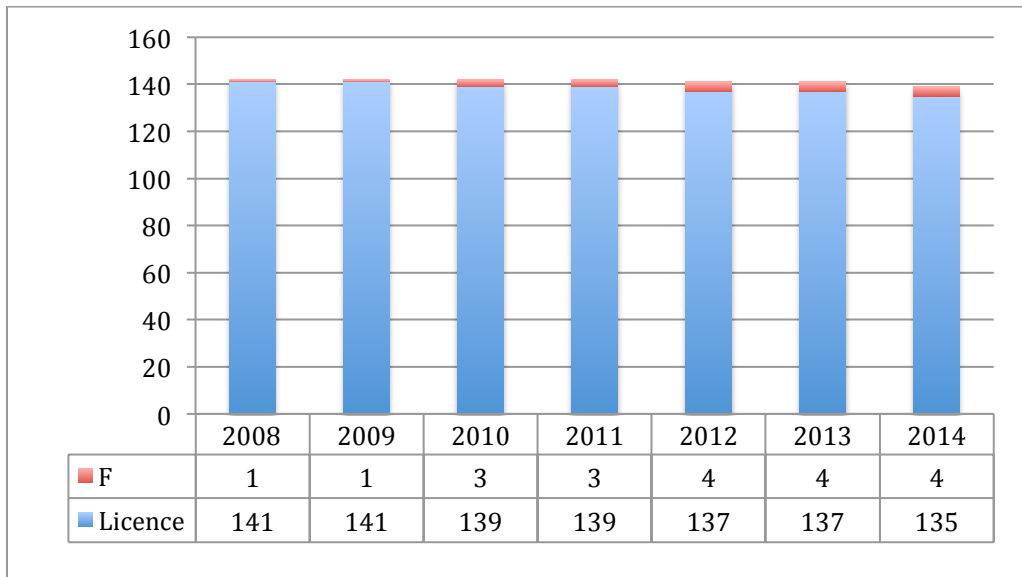
cents/lb, and pollock at 4-6 cents/lb. Trawl quota may be leased within the trawl sector, or to vessels in the hook and line sector. Rates may vary according to sector.

Hake quota lease rates were dampened by recent (and expected) difficulty in catching the TAC. Rates ranged from 2 cents (early in the season) to nil, and are pegged at ½ cent/lb.

Aggregate Value of T Licences and Trawl Quota (\$ millions by year)¹²



Licence Counts by Category

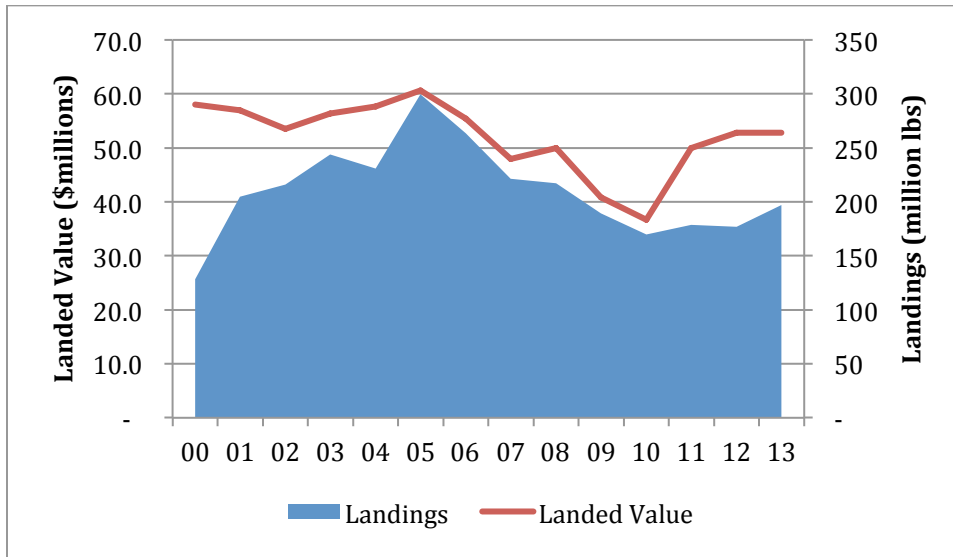


The above data shows a decrease of two general-category licences in 2014; it is not confirmed if this is a data error or an actual development.

¹² Relinquished quota is not excluded from this calculation as the amount is immaterial (0.24% of the TAC in 2009 and 2010; nil in prior years)

Groundfish Trawl Landings & Landed Value Trends

Source: DFO Catch Stats



Outlook/Commentary

The groundfish business is reasonably steady; the weakening of the Canadian dollar will assist, as the bulk of fresh sales are to the USA market.

The hake business continues to suffer from poor fish catch-ability by the traditional “wet boat” fleet. Fish distribution and timing has made it impossible to fully harvest TACs. This has resulted in a softening of the hake quota market.

The exception in the hake fishery is the emerging freezer trawler segment; these large vessels are able to conduct extended trips over widely-ranging fishing grounds, and have been successful in harvesting their individual vessel quotas.

Another cloud in the hake business is the lack of access to eastern European markets related to political developments in Russia and the Ukraine. Lost access to this key market curbed production (fishing operations) and necessitated a rapid shift to markets such as China.

The groundfish trawl fishery is extremely pro-active in addressing environmental concerns, with the trawl sector having recently entered a pact with environmental groups to limit the footprint of bottom trawl gear.

GROUND FISH: Rockfish Hook & Line

General Description

<i>Licence Designation</i>	ZN
<i>Nature of Licence</i>	Party based – individual, corporation, or band may make annual application for issuance of licence
<i>Number of Commercial Licences (valued in this study)</i>	219 (163 Outside, 56 Inside)
<i>No. of Communal Commercial Lic's (not valued in this study)</i>	43 (FZN designation – 28 Outside, 15 Inside)
<i>Licensing/Management Framework</i>	The pilot integration program has been made permanent, effective 2010. ZN licences are allocated Individual Vessel Quota (IVQ). IVQ can be transferred within the ZN fleet, and to other groundfish sectors. Each licence receives an equal share of ZN rockfish allocation.
<i>Additional Information</i>	The inside fishery is severely constrained due to inshore rockfish conservation measures. 100% electronic monitoring is in place.

Valuation Parameters

Valuations performed:	<ol style="list-style-type: none"> 1. ZN Inside licence 2. ZN Outside licence 3. Lease rate for Inside and Outside 4. Vessels
Basis of valuation:	<p>< 3 Inside ZN licence transactions < 5 Outside ZN licence transactions > 5 outside ZN leases < 3 inside ZN leases Anecdotal information</p>
Confidence in valuation:	<p>Low - Inside Moderate - Outside</p>

Current Valuation

Licence Value at March 31, 2014

Category	# Licences	Value/ Licence (\$)	Total Value (\$)
ZN Inside	56	30,000	1,680,000
ZN Outside	163	145,000	23,635,000
ZN Total	219	115,594	25,315,000

Note: in prior reports ZN licences were value on a per-foot basis; per licence is now used as this seems to be the unit most commonly used in the industry; graphs on the following page have been adjusted to reflect the current approach.

Valuation Comments

Inside ZN licence values are estimated at \$30,000 to \$35,000 per licence; a value of \$30,000 was pegged in order to be conservative in the absence of many transactions..

Outside ZN licence values range from \$120,000 to \$150,000 per licence, with a value of \$145,000 pegged for valuation purposes.

Note that the individual species-area groundfish quotas associated with ZN licences may be traded separately from the licence. For the purposes of valuation, however, ZN licences are deemed to include the full suite of species that were initially allotted to the licences.

Vessel Value

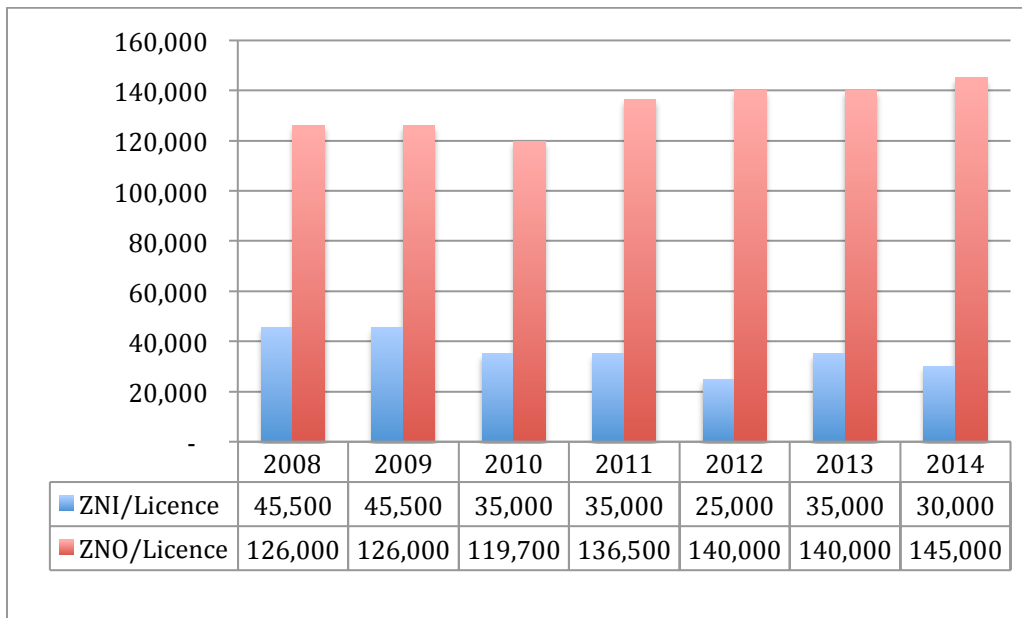
Vessel counts exclude F licences. Fleet composition is arrived at by using past data as a baseline. By nature, fleet vessel valuation is very imprecise and results should be used for general purposes only. The number of licensed vessels is drawn from current DFO data (may not be precise).

ZN Outside	# Vessels	Avg Vessel Value	Aggregate Value
Classic Style	116	136,000	15,735,200
Modern Style	62	286,000	17,817,800
<i>Total</i>	178	188,500	33,553,000

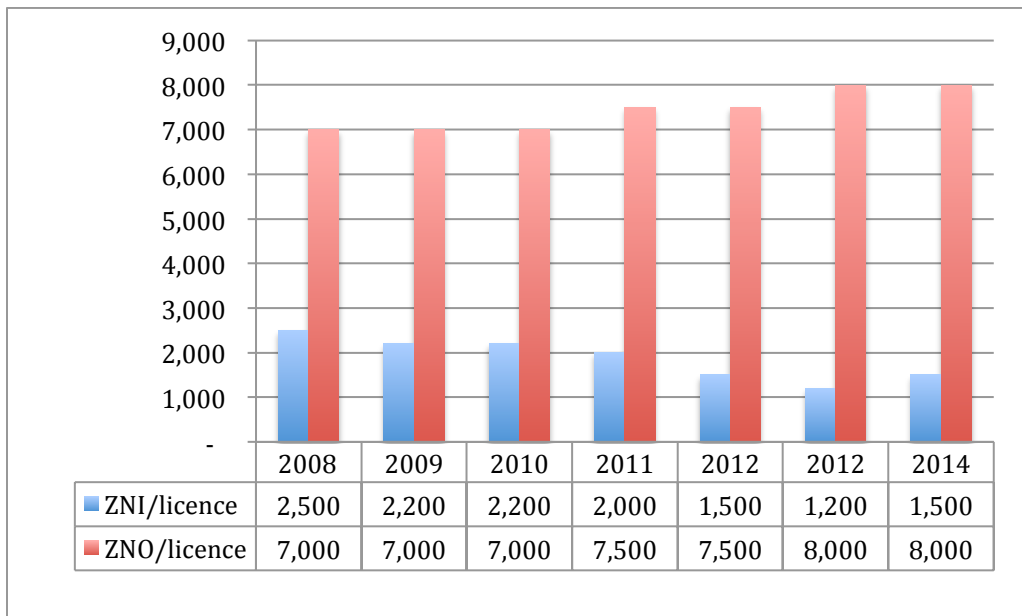
ZN Inside	# Vessels	Avg Vessel Value (\$)	Aggregate Value (\$)
Classic Style	12	75,000	900,000
Modern Style	7	196,000	1,176,000
<i>Total</i>	19	119,579	2,076,000

Licensing Trends¹³

Recent ZN Licence Valuations (\$ per licence)



Recent ZN Licence Lease Rates (\$)

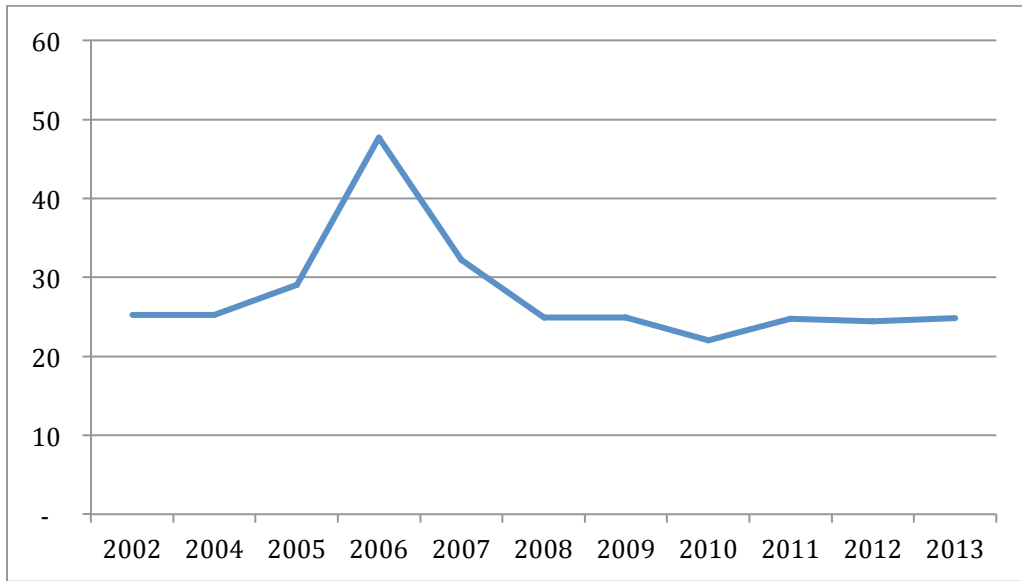


Outside ZN licence leases range from \$7,500 to \$8,500.

Inside ZN lease rates are reported in the \$1,000 to \$2,000 range (information was anecdotal, and thus a low confidence in this valuation).

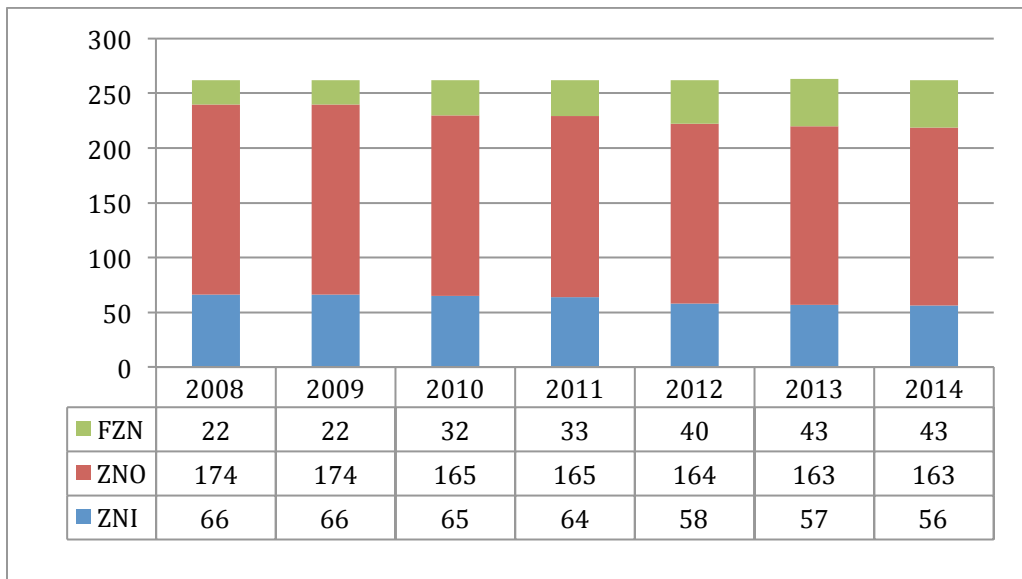
¹³ Values in charts are in nominal terms (not adjusted for inflation)

Aggregate Value of ZN Licences (\$ millions by year)



The “blip” in values seen in the mid-2000s was fueled by speculation that, in the integrated groundfish fishery, the rockfish bycatch afforded by ZN licences would be essential to prosecuting the halibut and sablefish fishery. As rockfish bycatch concerns eased, so too did values for ZN licences. The fishery is now marked by stability.

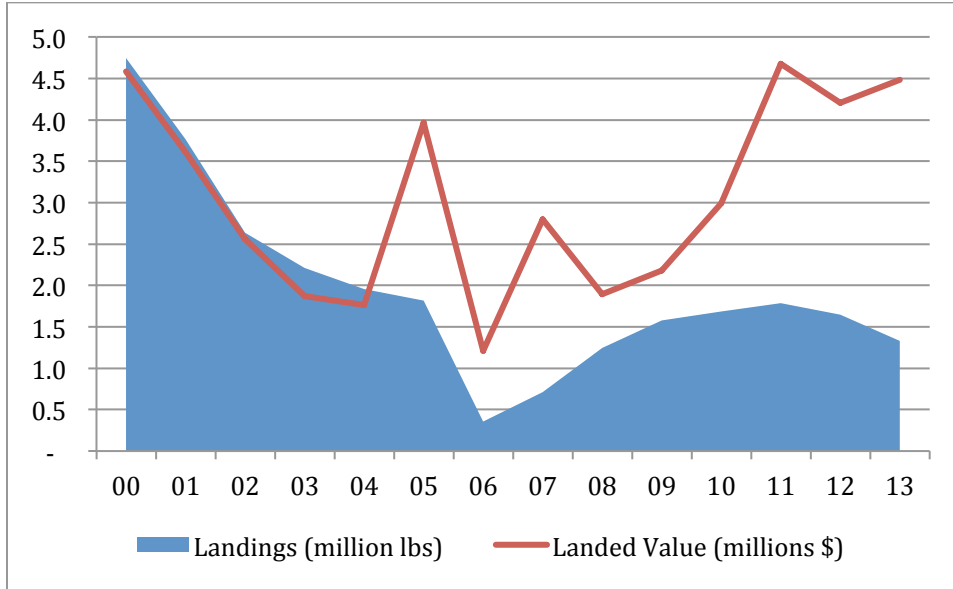
Licence Counts by Category



Note: the data shows a reduction in 2014 of one ZNI licence from the general pool of licences; it is unknown whether this is a reality or a data error.

Rockfish Hook & Line Landings & Landed Value Trends

Source: DFO Catch Stats. Data includes rockfish-only, not other groundfish that may be landed during rockfish trips.



Immediately after implementation of the integration pilot program ZN landings dipped sharply, as rockfish was “hoarded” by other sectors as bycatch. As concerns that rockfish would be in short supply have been allayed, landings have rebounded.

Outlook/Commentary

The outside ZN licence category supports both targeted rockfish fishing and the rockfish bycatch requirements of other groundfish categories (notably halibut and sablefish).

The inside ZN fishery to a large extent targets quillback rockfish for the live market; the potential listing of quillback under the Species at Risk Act has created future uncertainty for this category.

GROUND FISH: Lingcod and Dogfish

Lingcod and dogfish are discrete hook and line fisheries under the integrated groundfish IFMP. These fisheries are now managed under an IVQ program and both permanent and temporary trades of quota are permitted.

Unlike most other fisheries, however, lingcod and dogfish do not have dedicated licence categories, but can be executed under the authority of any vessel based licence. Therefore, these fisheries are difficult to pigeonhole for valuation purposes.

The lingcod and dogfish fisheries receive their own allocations, and can also source fish from, and lease fish to, other groundfish sectors and the integrated groundfish management plan.

Some valuation information on quota and lease values for these two fisheries is found below:

Lingcod

5-10 transactions

Quota Value at March 31, 2014

Category	lbs Quota	Value/lb	Total Value (\$)
Lingcod Quota (H&L)	2,572,000	\$8.50	21,862,000

Lingcod quota transactions range from \$5.50 to \$10.00 per lb. A rate of \$8.50 is pegged based as the majority of transactions were around this value.

Lingcod leases in the hook and line fishery range widely according to area:

- West Coast Vancouver Island—35-40 cents.
- Queen Charlotte Sound—20-30 cents.
- North Coast— <20 cents.
- The difference in lease rates is related to the ease and cost of catching lingcod in the various areas, and the costs of getting the fish to market. The WCVI is the most expedient lingcod harvesting area for the hook and line fleet, while the north coast poses logistical challenges.

Values in the lingcod have been following a downward trend in the last several months.

Dogfish

< 3 transactions

Quota Value at March 31, 2014

Category	lbs Quota	Value/lb	Total Value (\$)
Dogfish Quota (H&L)	20,987,792	\$0.12	2,518,535

Estimates of dogfish quota value range from 10 to 20 cents per lb.

Dogfish leases tend to be for virtually no value. Some leases at 1 cent per lb were reported.

The dogfish fishery struggles with challenging harvesting logistics and economics as well as poor market conditions. BC has lost market penetration in the key European market because of strong supply from the east coast of the USA (this region enjoys a competitive advantage over BC because of higher volume and proximity to market).

SHELLFISH: Prawn-by-Trap

General Description

<i>Licence Designation</i>	W
<i>Nature of Licence</i>	Vessel based – vessel owner may make annual application for issuance of licence
<i>Number of Commercial Licences (valued in this study)</i>	195
<i>No. of Communal Commercial Lic's (not valued in this study)</i>	55 (FW designation, Party-based)
<i>Licensing/Management Framework</i>	Fishery managed by time and area, with trap limits (300 traps per vessel). Licence stacking – additional traps may be placed on a W licensed vessel, allowing a total of 500 traps to be deployed.
<i>Additional Information</i>	Competitive fishery. Licence (trap) stacking provision creates a licence lease market. May retain octopus. Vessel-based licence allows harvest of Schedule II species and transporting (packing).

Valuation Parameters

Valuations performed:	1. W licence (per foot) 2. Annual lease rate (per licence) 3. Vessels
Basis for valuation:	> 15 open market transactions nil PICFI licences > 10 leases Anecdotal information
Confidence in valuation:	Moderate - High

Current Valuation

Licence Value at March 31, 2014

Category	# Licences	Value/ Foot (\$)	Total Value (\$)
W Licences	195	18,500	132,395,000

Valuation Comments

Significant transactions activity was unearthed for the period. Transactions ranged from \$16,000 to \$22,000 per foot. In general, short licences trade for higher per-foot values than longer ones, though longer licences still have a higher overall value. For example, the following relationship could apply to this years' valuation (example only):

Licence Length	Value	Value per ft
26 feet	\$550,000	\$21,154
40 feet	\$700,000	\$17,500

Average licence value based on \$18,500 per foot and 36.7' vessel = \$679,000.

Part of the reason for a wide range of values is that transactions often include vessels and fishing gear, and apportionment of values between asset categories varies, and can be based on tax or other considerations.

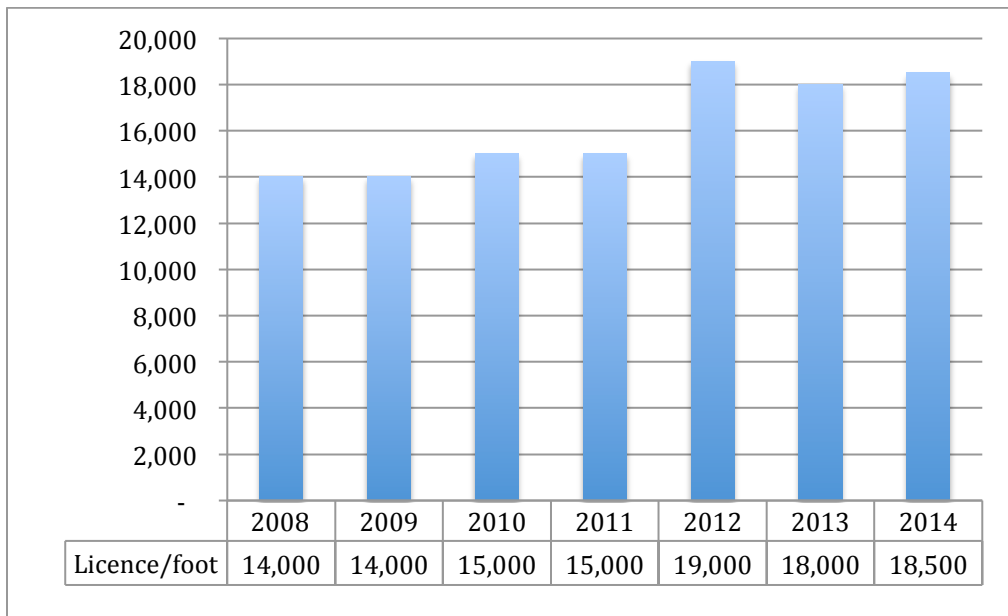
Vessel Value

Fleet composition is arrived at by using past data as a baseline. By nature, fleet vessel valuation is very imprecise and results should be used for general purposes only. The number of licensed vessels is drawn from current DFO data (may not be precise).

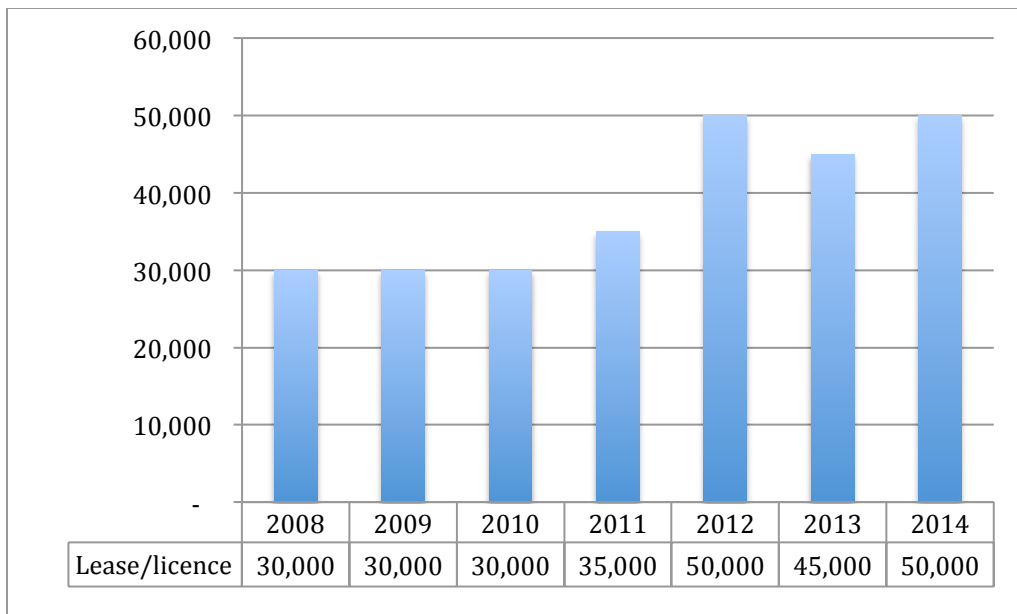
Prawn	# Vessels	Avg Vessel Value (\$)	Aggregate Value (\$)
Classic Style	100	162,000	16,200,000
Modern Style	149	325,000	48,425,000
<i>Total</i>	225	259,538	64,625,000

Licensing Trends¹⁴

Recent W Licence Valuations (\$)



Recent W Licence Lease Rates (\$)



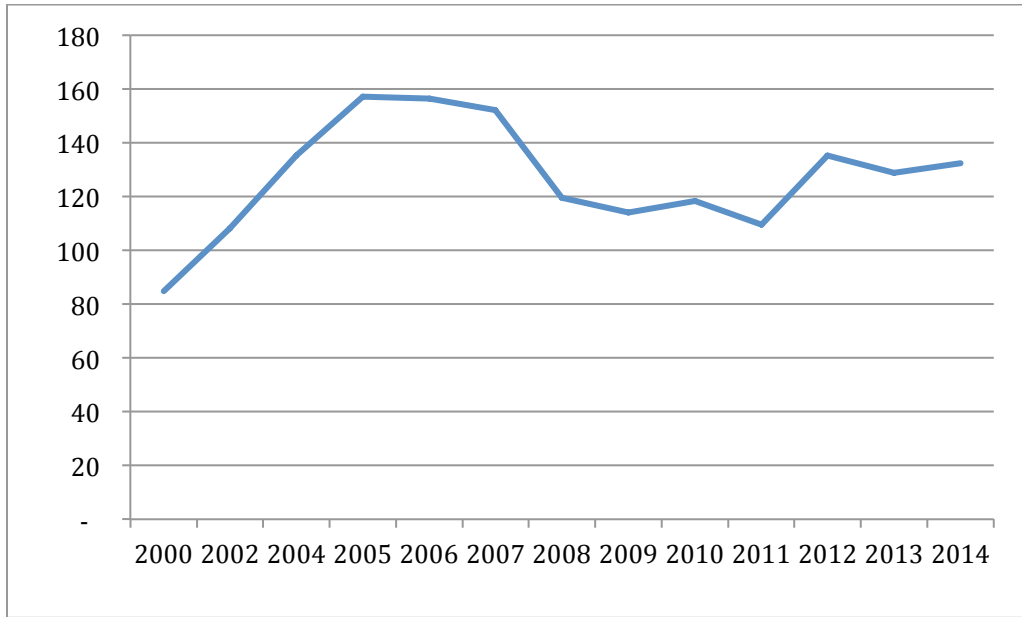
There was a very wide range of lease rates—from \$35k to \$60k—this year, making it difficult to peg a single value. The prawn fishery is extremely competitive (the season is short, and vessels

¹⁴ Values in charts are in nominal terms (not adjusted for inflation)

vie for their share of production) so results (and affordability of leases) vary widely amongst participants.

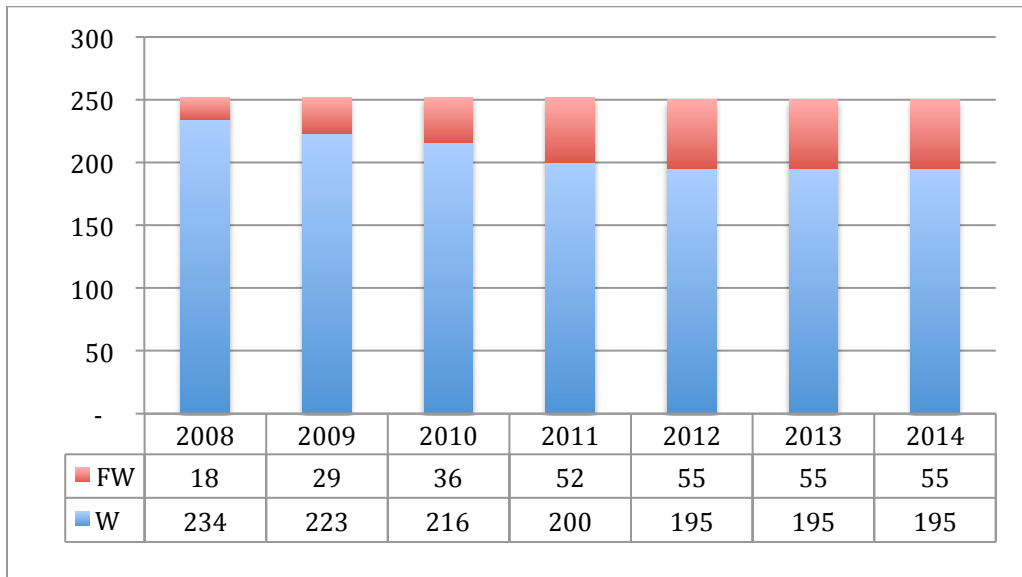
The prawn licence leasing market is facilitated by the ability to “stack” second licences (and thereby an additional 150 traps), and by the pool of FW licences (that are party based and have more lenient in-season transfer restrictions than W licences).

Aggregate Value of W Licences (\$ millions by year)



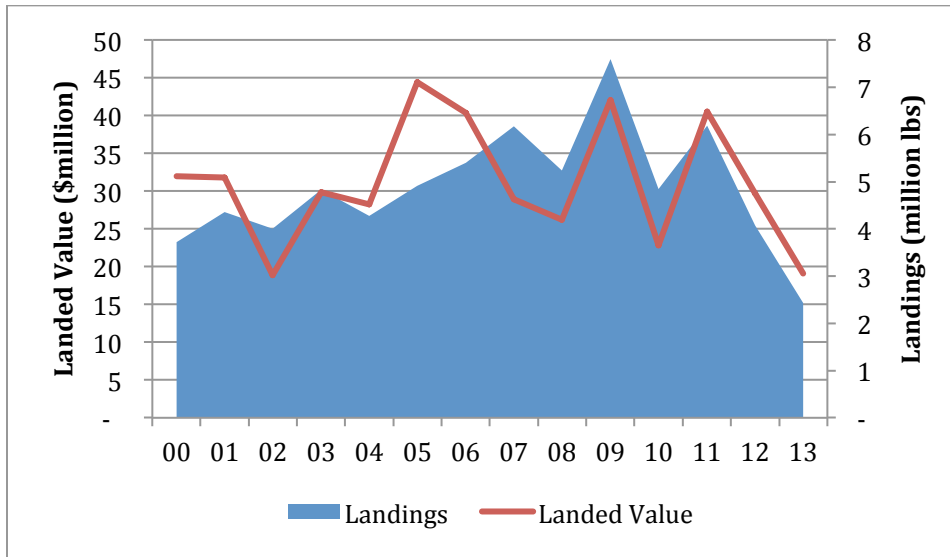
The drop in aggregate market value is related to the reduction in the pool of general-category W licences (as the pool of FW’s has risen), not a decrease in licence values.

W Licence Counts by Category



Prawn Landings & Landed Value Trends

Source: DFO Catch Stats



Outlook/Commentary

The 2014 prawn fishing season was again characterized by relatively low catch levels, a short fishing season, and strong prices for prawns.

While BC spot prawns were traditionally marketed almost exclusively to Japan, markets are now more diversified (including domestic and USA), helping the demand profile of the fishery.

This is a fishery featuring strong demand for licences, and the profile of the fishery suits young, aggressive fishermen.

SHELLFISH: Crab

General Description

<i>Licence Designation</i>	R
<i>Nature of Licence</i>	Vessel based – vessel owner may make annual application for issuance of licence
<i>Number of Commercial Licences (valued in this study)</i>	189
<i>No. of Communal Commercial Lic's (not valued in this study)</i>	32 (FR designation, Party-based)
<i>Licensing/Management Framework</i>	Area Licensing – 7 areas. No stacking allowed – must select a single area. Area re-selection periodically; a re-selection is upcoming after the 2014 season. Fishery managed on basis of time, area, size, sex, and trap limits (limits vary by area)
<i>Additional Information</i>	Competitive fishery. Currently, the resource and market situation is reasonably healthy. Area A (QCI/Hecate Strait) is the predominant area in terms of landings and landed value. Vessel licence allows harvest of Schedule II species and transporting (packing). Vessel-based licence virtually precludes licence leasing, though a market is emerging for FR (Communal Commercial party-based) licences.

Valuation Parameters

Valuations performed:	1. R licence (per foot) 2. Vessels
Basis for valuation:	5-10 open market licence transactions No PICFI transactions Anecdotal information
Confidence in valuation:	Moderate

Current Valuation

Licence Value at March 31, 2014

Category	# Licences	Value/Foot (\$)	Total Value (\$)
R Licences	189	20,000	117,180,000

Valuation Comments

Licence transactions ranged from \$18,000 to over \$24,000 per foot. Although shorter licences trade at higher per-foot values, they are still less valuable on a per-licence basis than longer licences.

At \$20,000 per foot, and given an average vessel length of 31', the indicated average licence value is \$620,000.

An impending area re-selection is resulting in a blurring of values for the licence areas. It was however noted anecdotally that Area B licences were slightly less valuable than other areas during the period (say, \$18,000 per foot).

F-category crab licences lease in the \$25,000 to \$40,000 range. General category R licences are seldom leased because of the restrictions associated with vessel-based licences.

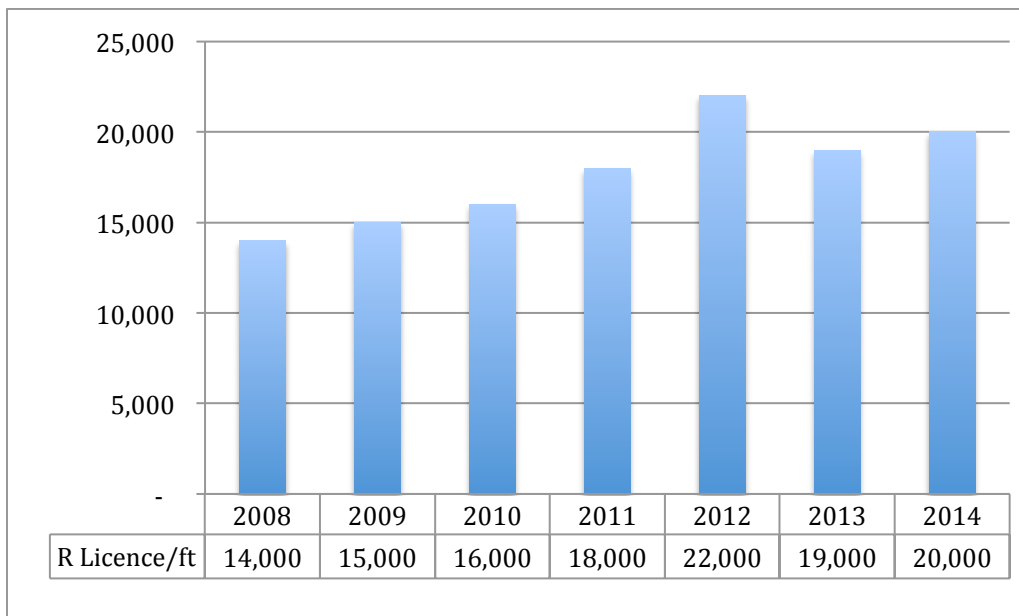
Vessel Value

Fleet composition is arrived at by using past data as a baseline. By nature, fleet vessel valuation is very imprecise and results should be used for general purposes only. The number of licensed vessels is drawn from current DFO data (may not be precise).

Crab	# Vessels	Avg Vessel Value (\$)	Aggregate Value (\$)
Classic Style	87	144,000	12,528,000
Modern Style	131	350,000	48,850,000
<i>Total</i>	218	267,789	58,378,000

Licensing Trends¹⁵

Recent R Licence Valuations (\$)

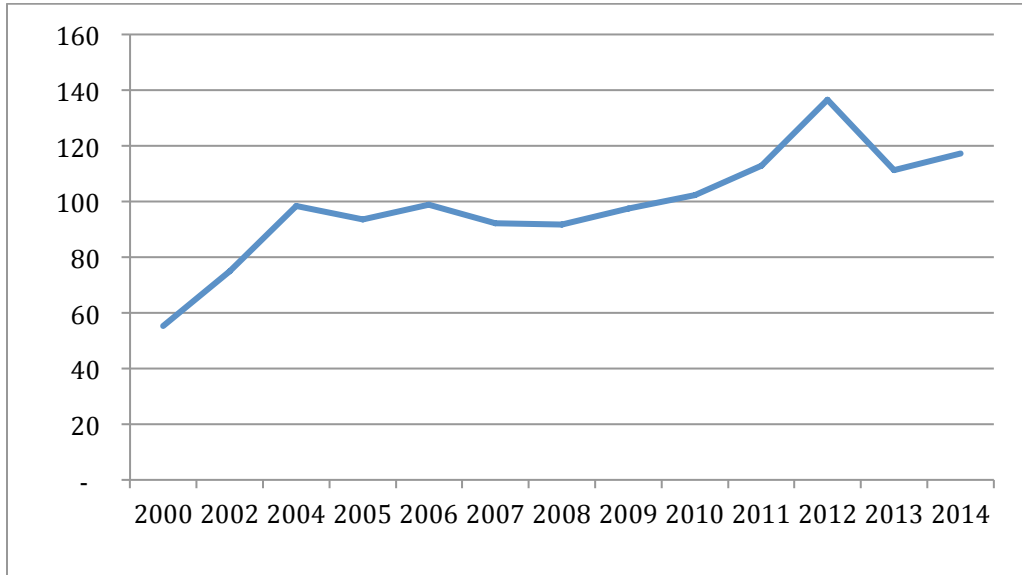


¹⁵ Values in charts are in nominal terms (not adjusted for inflation)

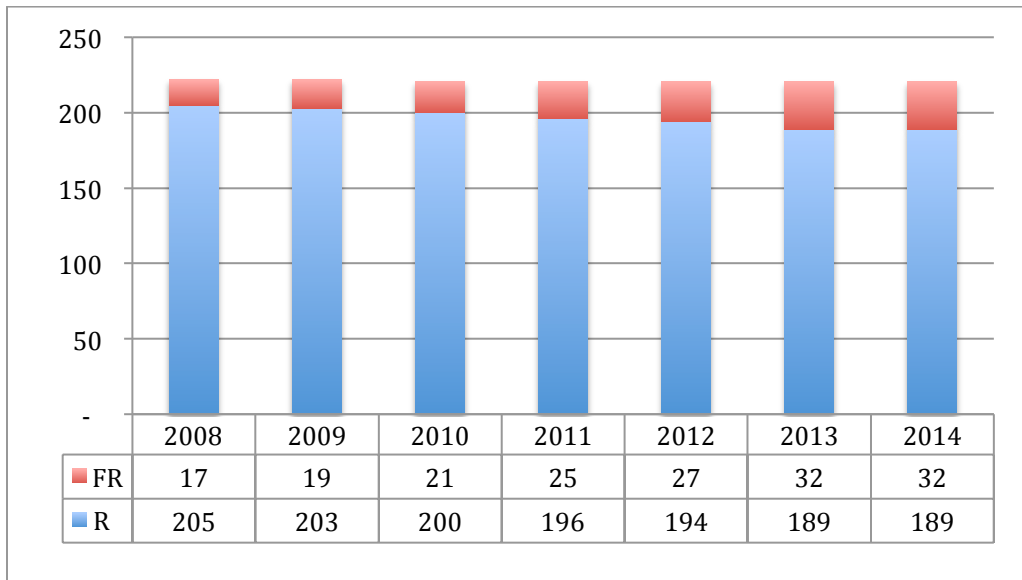
PACIFIC FLEET LICENCE, QUOTA, AND VESSEL VALUATION: AT MARCH 31, 2014

Some of the variation seen in licence values the last three years is related to the mix of transactions occurring each year; for example, in 2013 transactions were weighted to longer licences that had lower prices per foot. In 2012, the opposite was true (higher proportion of transactions for shorter licences).

Aggregate Value of R Licences (\$ millions by year)

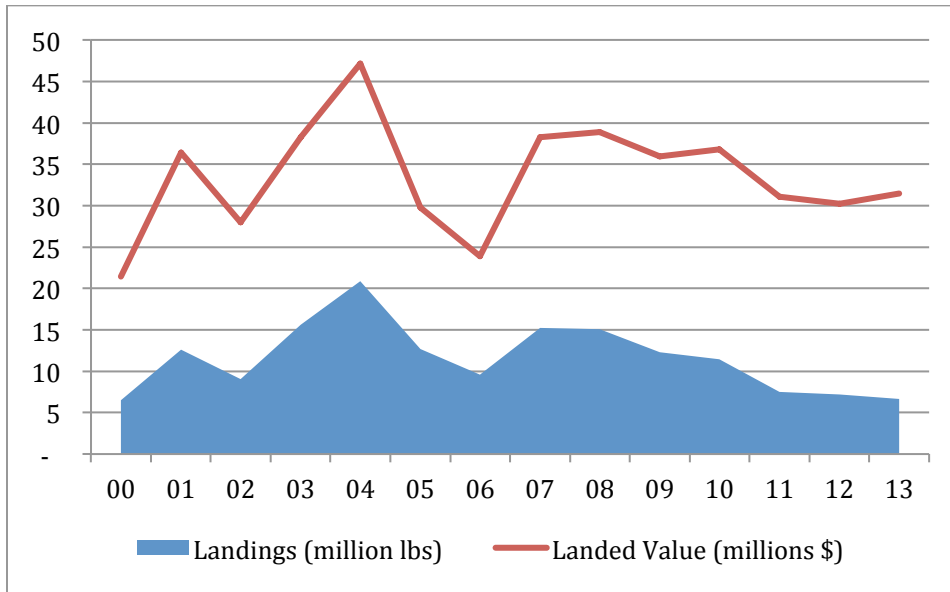


Licence Counts by Category



Crab Landings & Landed Value Trends

Source: DFO Catch Stats



Outlook/Commentary

With a generally healthy resource (although stocks are currently in a cyclical trough) and improving demand, particularly in Asia, the market for crab licences is very healthy.

The crab sector is exploring certain management changes, including allowing greater latitude in length restrictions, and trap stacking.

SHELLFISH: Shrimp-by-Trawl

General Description

<i>Licence Designation</i>	S
<i>Nature of Licence</i>	Vessel based – vessel owner may make annual application for issuance of licence
<i>Number of Commercial Licences (valued in this study)</i>	215
<i>No. of Communal Commercial Lic's (not valued in this study)</i>	23 (FS designation, Party-based)
<i>Licensing/Management Framework</i>	Fishery managed on basis of specie quotas by area (shrimp management areas). Areas are closed to fishing once a specie harvest is reached in a given area. Only one S (or FS) licence per vessel allowed.
<i>Additional Information</i>	Competitive fishery. Poor markets for pink shrimp in recent years have meant that the majority of the licensed fleet has not participated in the fishery. Vessel based licence virtually precludes licence leasing. Vessel-based licence allows harvest of Schedule II species and transporting (packing).

Valuation Parameters

Valuations performed:	1. S licence (per foot) 2. Vessels
Basis for valuation:	< 5 licence transactions No PICFI retirements Anecdotal information
Confidence in valuation:	Moderate

Current Valuation

Licence Value at March 31, 2014

Category	# Licences	Value/ Foot (\$)	Total Value (\$)
S Licences	215	800	7,206,800

Valuation Comments

Transactions ranged from \$650 - \$850 per foot.

Average licence value based on a \$800 per foot valuation and 41.9' average vessel length is \$33,520.

The bloom is somewhat off the rose for S licences for the valuation period, when compared to modest speculation that was underway the prior year. There is little transactions activity in this category.

Any leases of FS licences that may occur would be at virtually no value.

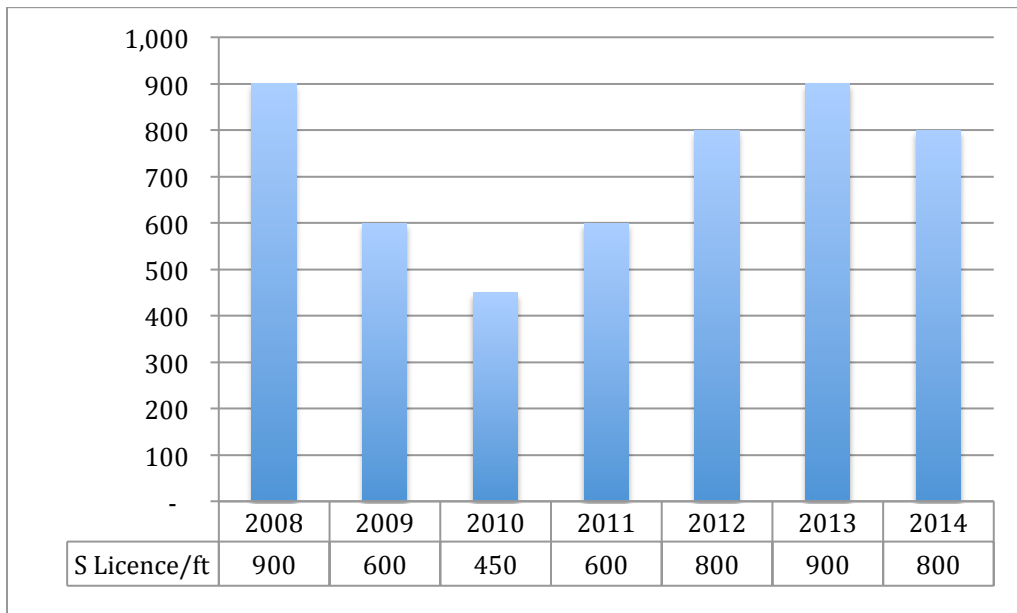
Vessel Value

Fleet composition is arrived at by using past data as a baseline. By nature, fleet vessel valuation is very imprecise and results should be used for general purposes only. The number of licensed vessels is drawn from current DFO data (may not be precise).

Shrimp Trawl	# Vessels	Avg Vessel Value (\$)	Aggregate Value (\$)
Classic Style	149	83,000	12,367,000
Modern Style	64	167,000	10,688,000
<i>Total</i>	213	108,239	23,055,000

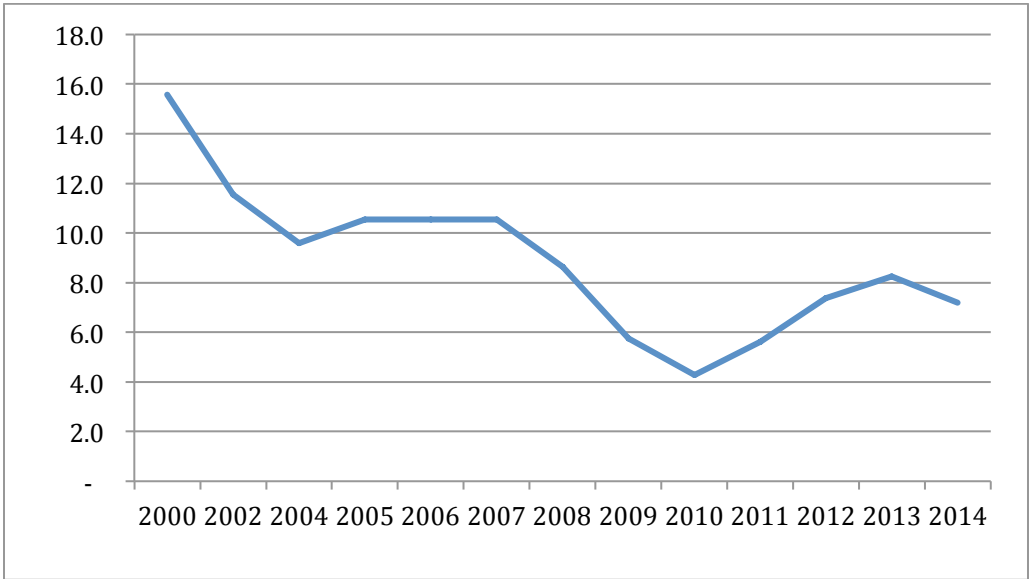
Licensing Trends¹⁶

Recent S Licence Valuations (\$)

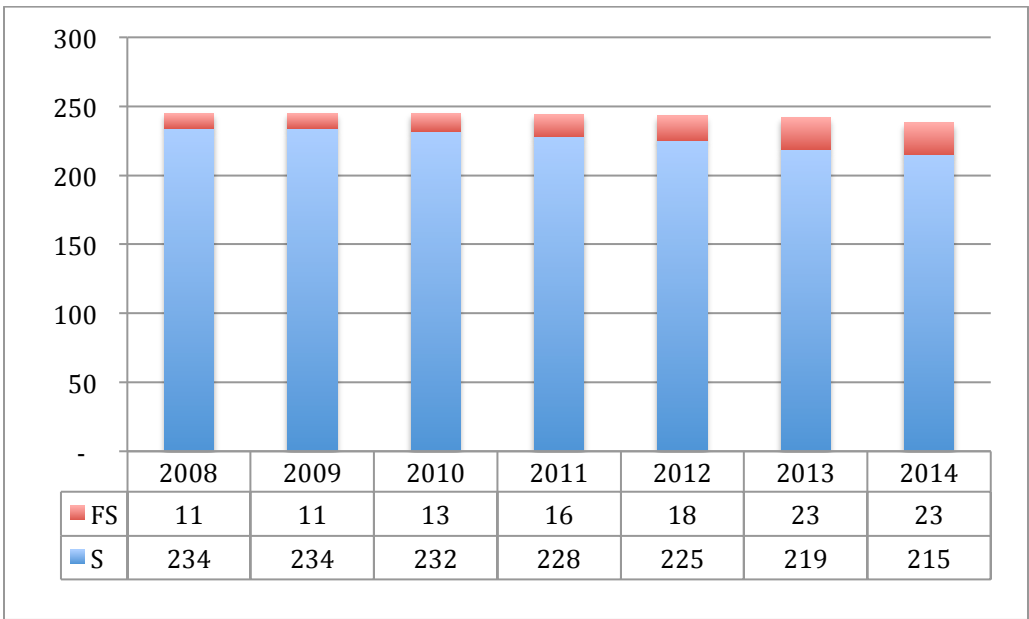


¹⁶ Values in charts are in nominal terms (not adjusted for inflation)

Aggregate Value of S Licences (\$ millions by year)



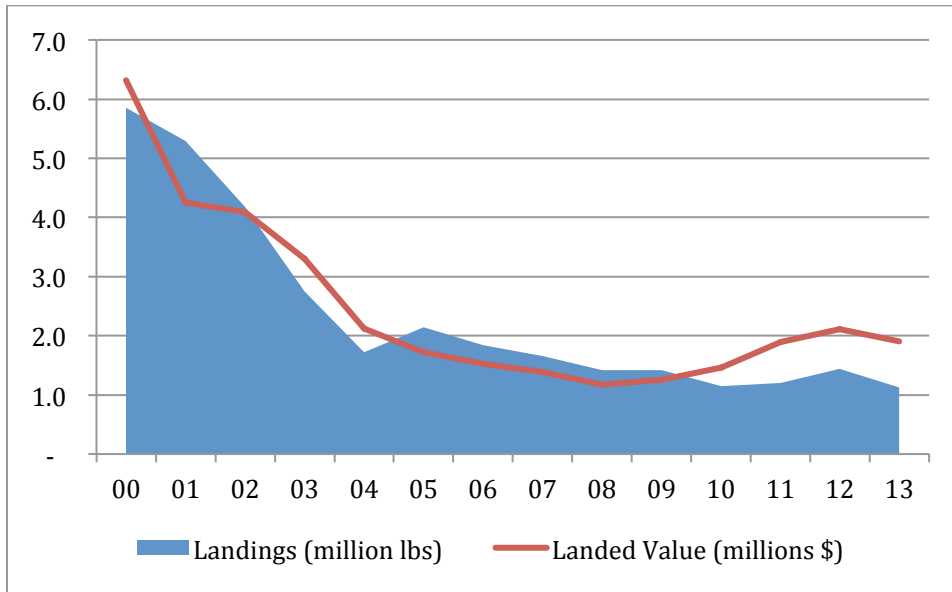
S Licence Counts by Category



The above data shows a decrease of four general-category licences in 2014; it is not confirmed if this is a data error or an actual development.

Shrimp Landings & Landed Value Trends

Source: DFO Catch Stats



Outlook/Commentary

After a minor rally in 2013, licence values in the shrimp fishery softened again in 2014.

While there is significant interest within industry in building viable programs for pink shrimp, progress remains very limited to date.

SHELLFISH: Geoduck/Horseclam

General Description

<i>Licence Designation</i>	G
<i>Nature of Licence</i>	Vessel based – vessel owner may make annual application for issuance of licence
<i>Number of Commercial Licences (valued in this study)</i>	50 licences 500 quota blocks
<i>No. of Communal Commercial Lic's (not valued in this study)</i>	5 licences 50 quota blocks
<i>Licensing/Management Framework</i>	Area Licensing: three areas, north coast, WCVI, and inside waters of Vancouver Island. Areas are selected annually. The number of licence eligibilities fishing each area may change annually according to the proportion of the total quota assigned to each area. Quota management with a “quota block” system – each licence/quota block may harvest an equal share of the total quota (60,000 lbs per licence, or 6,000 lbs per quota block in 2014).
<i>Additional Information</i>	Dive fishery. 10 quota blocks per licence. Stacking allowed - 50 quota blocks maximum per licence. Vessel-based licence allows harvest of Schedule II species and transporting (packing).

Valuation Parameters

Valuations performed:	<ol style="list-style-type: none"> 1. G licence 2. Quota blocks (10 per licence, 6,000 lbs per block based on current TAC) 3. Annual lease rate (quota block) 4. Vessels
Basis for valuation:	<p>< 3 G licences</p> <p>< 5 quota blocks</p> <p>Anecdotal information</p>
Confidence in valuation:	<p>Low-moderate for licences and quota blocks, because of few transactions.</p> <p>Very low for leases, since a variety of lease arrangements are effected, and information is challenging to gather.</p>

Current Valuation

Licence Value at March 31, 2014

Category	# Licences/ lbs quota	Value per Licence/ quota blk (\$)	Total Value (\$)
G Licence (tab)	50	250,000	12,500,000
Quota Blocks	500	575,000	287,500,000
Total Value			300,000,000

Valuation Comments

Estimates of G licence (tab, or licence-only) value range indicate a \$250,000 valuation.

Quota block values range from \$550,000 to \$600,000, with a value of \$575,000 pegged.

The above valuations suggest that a G licence with 10 blocks of quota would command a value of \$6 million (\$250k licence plus \$5.75m for 10 quota blocks). Information collected suggests that a “whole” G licence (including 10 blocks) is worth less than the additive value of its components—a value in the \$5.0 to \$5.5 million range is estimated. This is likely due to the prohibitive cost to acquire the entire asset; raising the required capital is challenging.

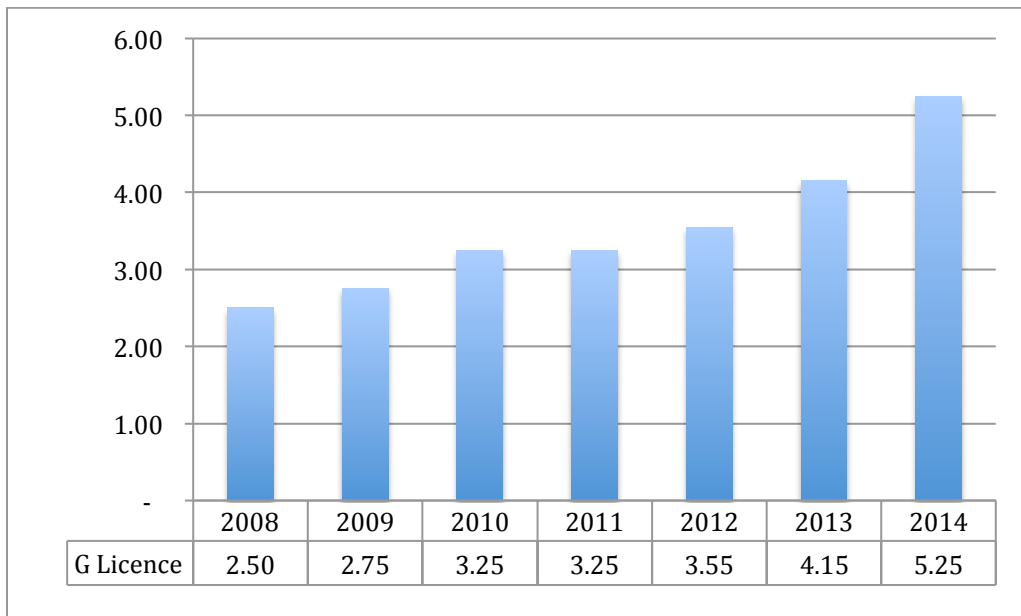
Vessel Value

Fleet composition is arrived at by using past data as a baseline. By nature, fleet vessel valuation is very imprecise and results should be used for general purposes only. The number of licensed vessels is drawn from current DFO data (may not be precise).

Geoduck	# Vessels	Avg Vessel Value (\$)	Aggregate Value (\$)
Classic Style	18	108,000	1,944,000
Modern Style	23	264,000	6,072,000
<i>Total</i>	41	195,512	8,016,000

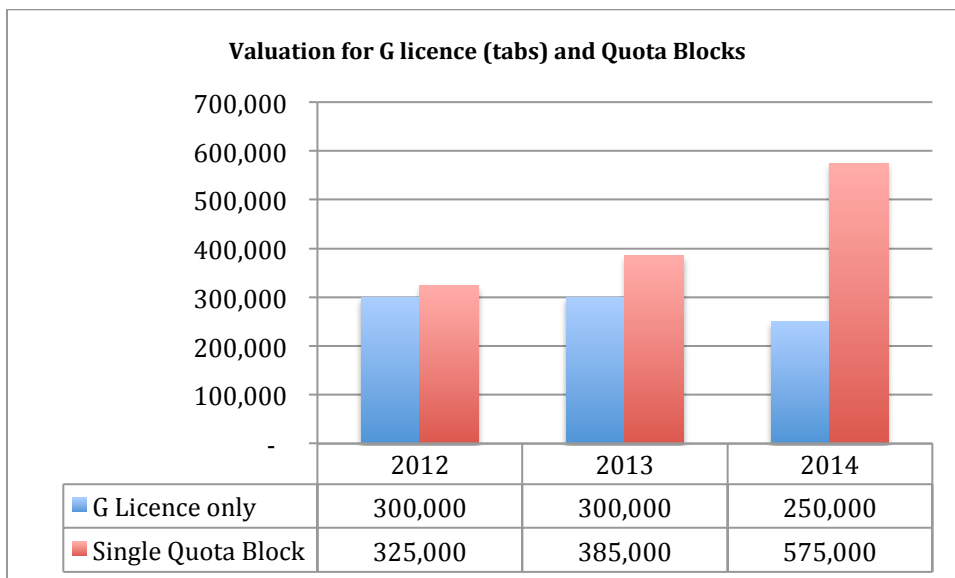
Licensing Trends¹⁷

Recent G Licence Valuations (\$ millions)



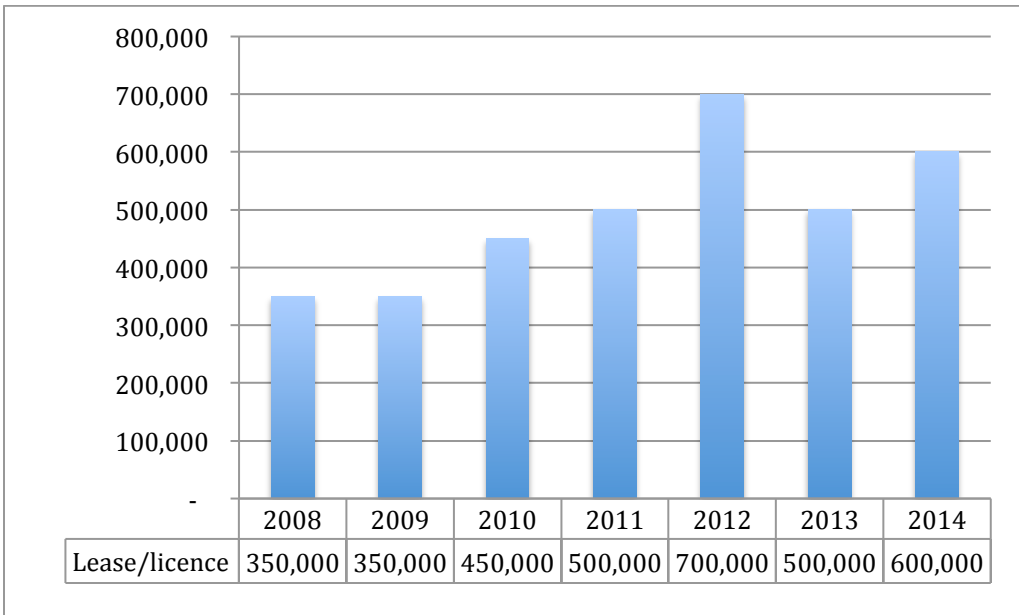
Note that the valuations for 2012 onwards are for one G licence and 10 quota blocks; values are presented in this fashion for continuity purposes. As stated above, it is deemed that the value of a G licence with 10 quota blocks, at \$5.25 million, is less than the value of the components when combined (which indicates a value of \$6.0 million).

The value trend for geoduck licences and quota blocks since their inceptions of the new licensing system is shown as follows:



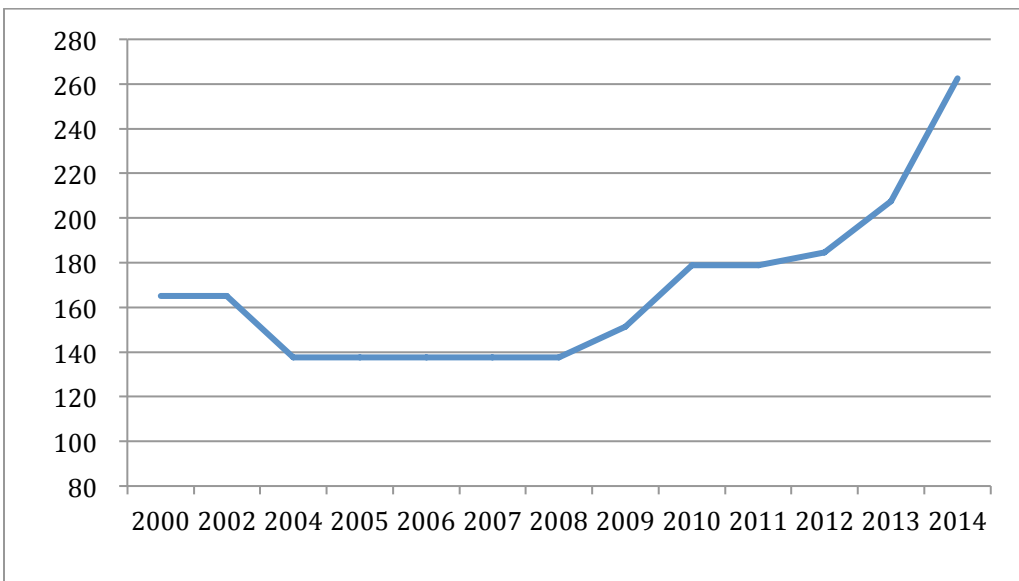
¹⁷ Values in charts are in nominal terms (not adjusted for inflation)

Recent G Licence Lease Rates (\$)

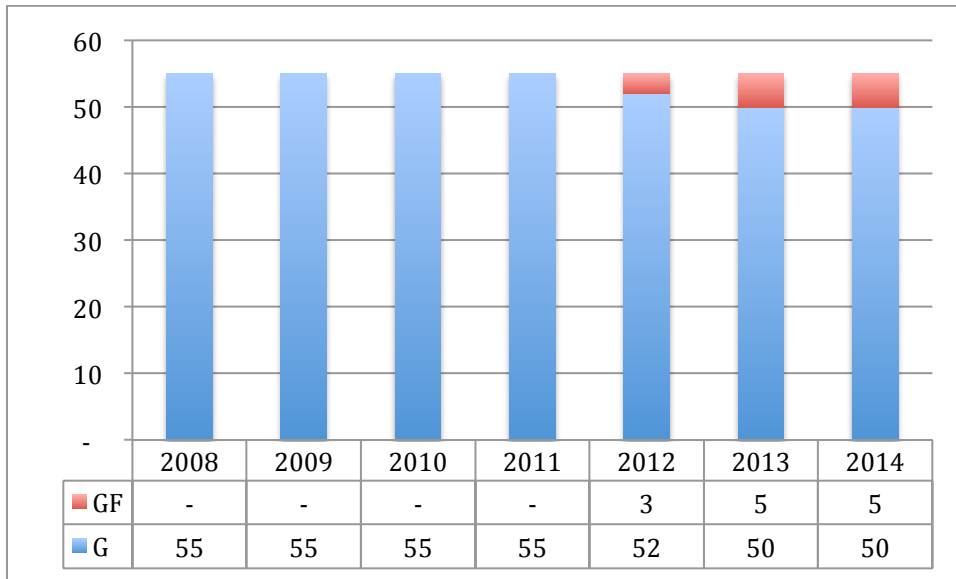


Most leases are done on a share of revenue basis, and it is very hard to definitively peg lease rates in this fishery.

Aggregate Value of G Licences (\$ millions by year)

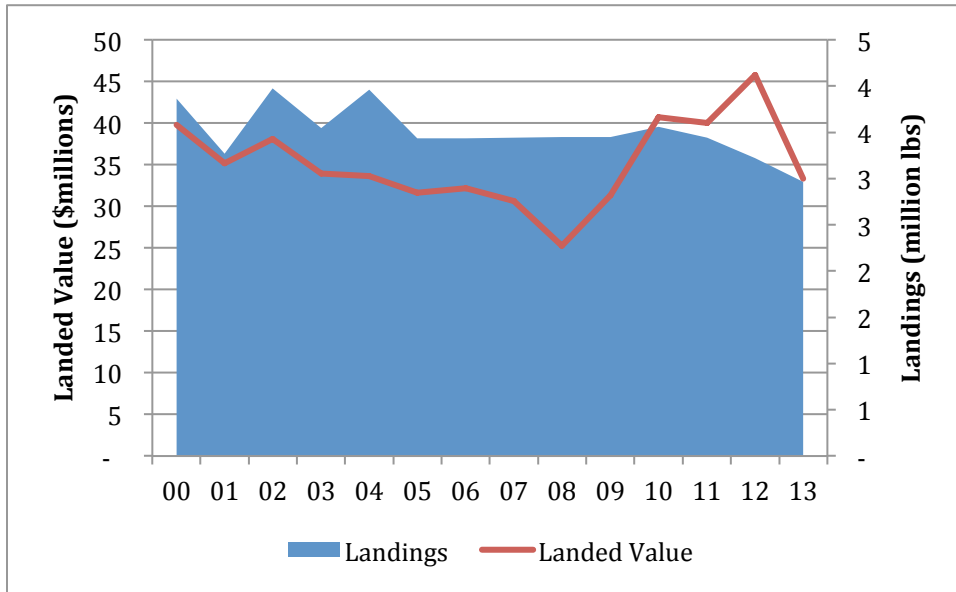


G Licence Counts by Category



Geoduck Landings & Landed Value Trends

Source: DFO Catch Stats



The lower landings and landed value level in 2013 likely reflects incomplete data rather than an actual reduction in catch. The catch has been—and remains—extremely stable in this fishery.

Outlook/Commentary

Under the former licensing system where the 55 licences were not divisible, there was a very limited market for the licences, as their high value stifled transactions. With the quota block system dividing each licence into 10 shares, the liquidity of the quota has been improved, and more transactions are occurring. Improved liquidity is deemed to be the biggest factor contributing to higher quota-block values in 2014.

The geoduck fishery continues to be challenged by high catches in the Alaskan fishery; during Alaskan openings, BC geoduck harvesters generally cease operating because of downward pressure on prices. These interruptions in the BC fishery make it challenging to catch the full geoduck TAC.

Another issue facing the fishery is high duties and taxes imposed on Canadian geoduck imports by the Chinese government.

Geoduck fishery leaders are anxiously awaiting a geoduck aquaculture policy, as this policy has a significant potential impact on access to wild geoduck beds for licence holders.

In spite of concerns, the geoduck fishery continues to be profitable, and actively attracting investment capital.

SHELLFISH: Sea Cucumber

General Description

<i>Licence Designation</i>	ZD
<i>Nature of Licence</i>	Party based – individual, corporation, or band may make annual application for issuance of licence
<i>Number of Commercial Licences (valued in this study)</i>	85
<i>No. of Communal Commercial Lic's (not valued in this study)</i>	0
<i>Licensing/Management Framework</i>	Quota management – each licence receives 1/85 of the allowable catch – 16,000 pounds (split weight) per licence under the current fishing plan Area Licensing – 4 areas: North, Central, WCVI, St. of Georgia Stacking allowed – maximum 5 licences per vessel
<i>Additional Information</i>	Quotas not divisible. Allowed harvest is set on a fixed precautionary rate: 4.2% of the estimated biomass; this has allowed for steadily growing quotas.

Valuation Parameters

Valuations performed:	1. ZD licence 2. Annual lease rate 3. Vessels
Basis for valuation:	3-5 transactions Anecdotal information
Confidence in valuation:	Low

Current Valuation

Licence Value at March 31, 2014

Category	# Licences	Value/Licence (\$)	Total Value (\$)
ZD Licences	85	675,000	57,375,000

Valuation Comments

This is the first year in several in which concrete transactions occurred. Values ranged from \$650,000 to \$700,000.

There was discussion that these transactions may indicate that some fishery insiders are (finally) willing to exit, reflecting both high values and perceived impending weakness in the fishery.

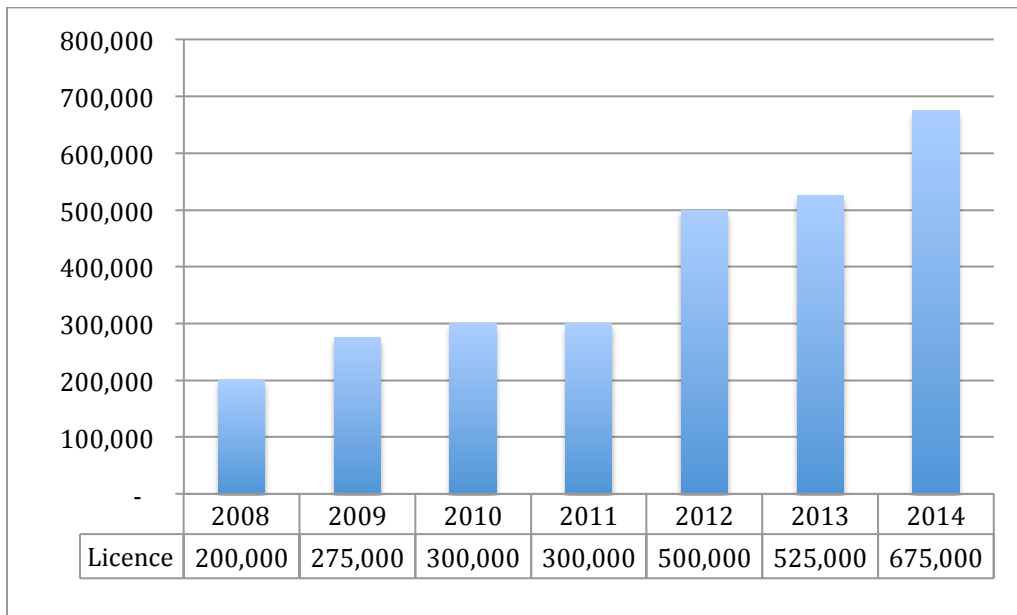
Vessel Value

Fleet composition is arrived at by using past data as a baseline. By nature, fleet vessel valuation is very imprecise and results should be used for general purposes only. The number of licensed vessels is drawn from current DFO data (may not be precise).

Sea Cucumber	# Vessels	Avg Vessel Value (\$)	Aggregate Value (\$)
Classic Style	14	108,000	1,512,000
Modern Style	16	264,000	4,224,000
<i>Total</i>	30	191,200	5,736,000

Licensing Trends¹⁸

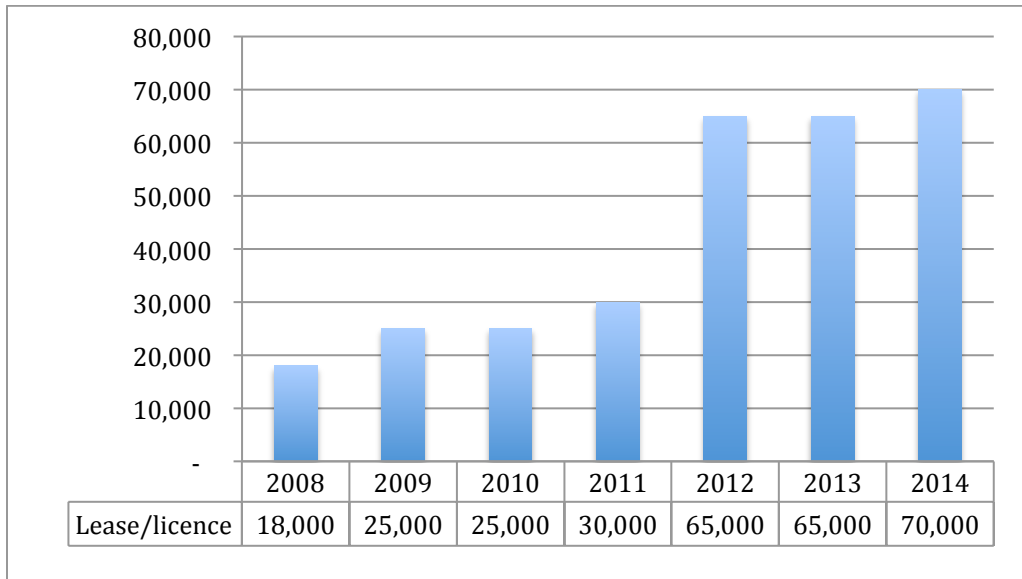
Recent ZD Licence Valuations (\$)



While the current year valuation of \$675,000 shows significant appreciation over the preceding years, it is noted that prior year valuations were estimates based on anecdotal information only and thus, conservative valuations were applied. Therefore, the current year increase may appear to be greater than it actually is.

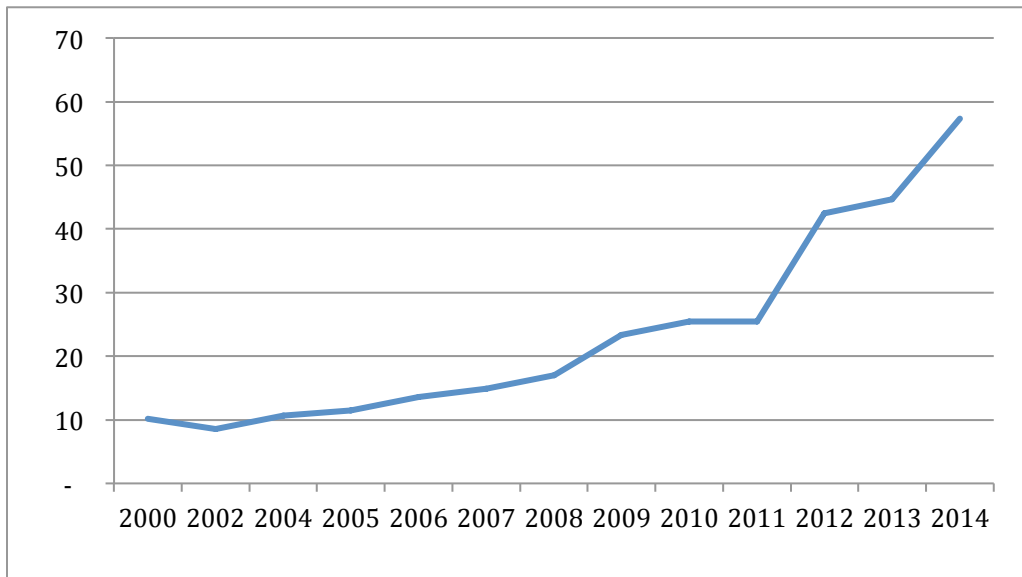
¹⁸ Values in charts are in nominal terms (not adjusted for inflation)

Recent ZD Licence Lease Rates (\$)



Lease rates were generally in the \$70,000 range. There is some thinking that leases for the upcoming season will be at lower levels given weakening signals in the fishery.

Aggregate Value of ZD Licences (\$ millions by year)

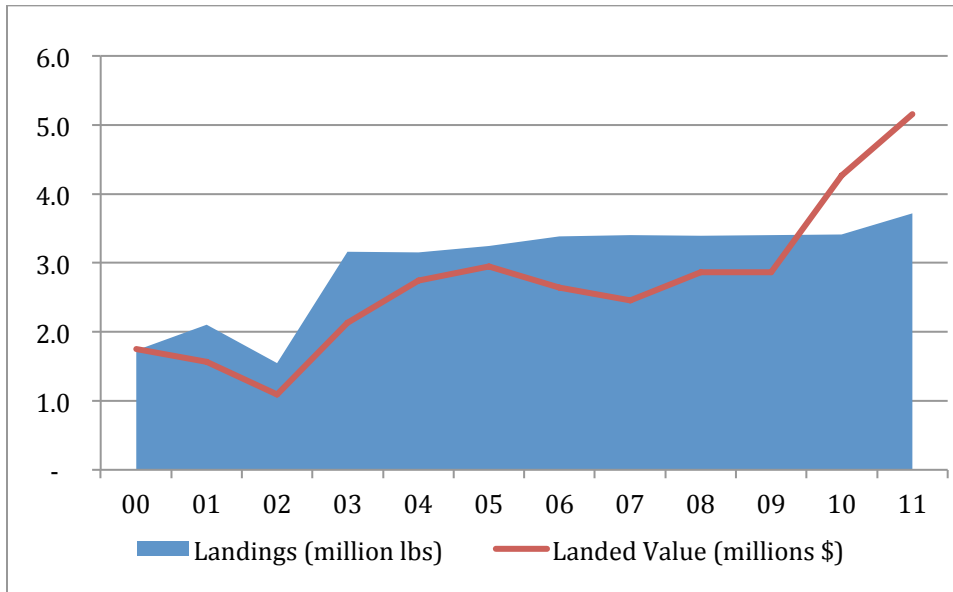


ZD Licence Counts by Category

No chart shown: all 85 licences are category ZD.

Sea Cucumber Landings & Landed Value Trends

Source: DFO Catch Stats



No updated landings & landed value data has been available from DFO Catch Stats since 2011.

Outlook/Commentary

In spite of a current year spike in licence prices, there is some sentiment that this fishery may face some downward pressure due to large supply of product to the Orient.

SHELLFISH: Red Sea Urchin

General Description

<i>Licence Designation</i>	ZC
<i>Nature of Licence</i>	Party based – individual, corporation, or band may make annual application for issuance of licence
<i>Number of Commercial Licences (valued in this study)</i>	81
<i>No. of Communal Commercial Lic's (not valued in this study)</i>	29 (FZC designation – Party-based)
<i>Licensing/Management Framework</i>	Quota management – average quota per licence for the 11/12 season approx 91,500 lbs; total quota approx 10 million lbs. Area Licensing – north and south coast. Quota for each area divided by the number of licences in the area to determine per-licence quotas. Stacking allowed – maximum 5 licences per vessel.
<i>Additional Information</i>	Quotas not divisible. Currently about 30 vessels fishing ZC licences. A lottery process is used for annual area selection.

Valuation Parameters

Valuations performed:	1. ZC licence 2. Annual lease rate 3. Vessels
Basis for valuation:	3-5 open market licence transactions 4 PICFI retirements Anecdotal information
Confidence in valuation:	Low to Moderate

Current Valuation

Licence Value at March 31, 2014

Category	# Licences	Value/Licence (\$)	Total Value (\$)
ZC Licences	81	55,000	4,455,000

Valuation Comments

Transactions ranged from \$55,000 to \$70,000, but the bulk of activity (near the March 31, 2014 valuation date) was in the \$55,000 range. There was upward pressure on prices after the valuation date.

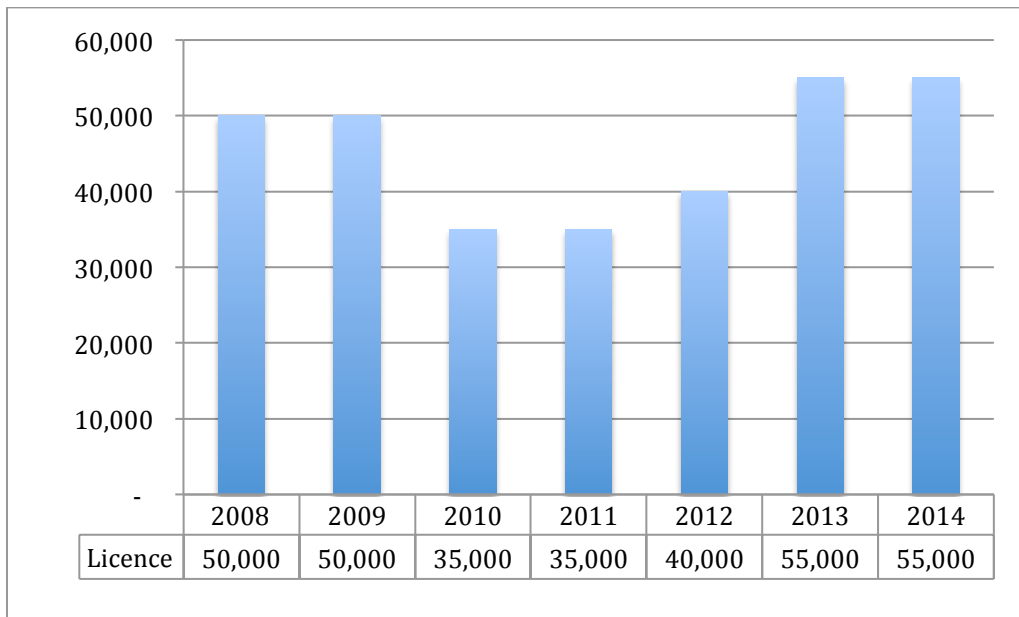
Vessel Value

Fleet composition is arrived at by using past data as a baseline. By nature, fleet vessel valuation is very imprecise and results should be used for general purposes only. The number of licensed vessels is drawn from current DFO data (may not be precise).

Red Sea Urchin	# Vessels	Avg Vessel Value (\$)	Aggregate Value (\$)
Classic Style	16	81,000	1,296,000
Modern Style	24	200,000	4,800,000
<i>Total</i>	40	152,400	6,096,000

Licensing Trends¹⁹

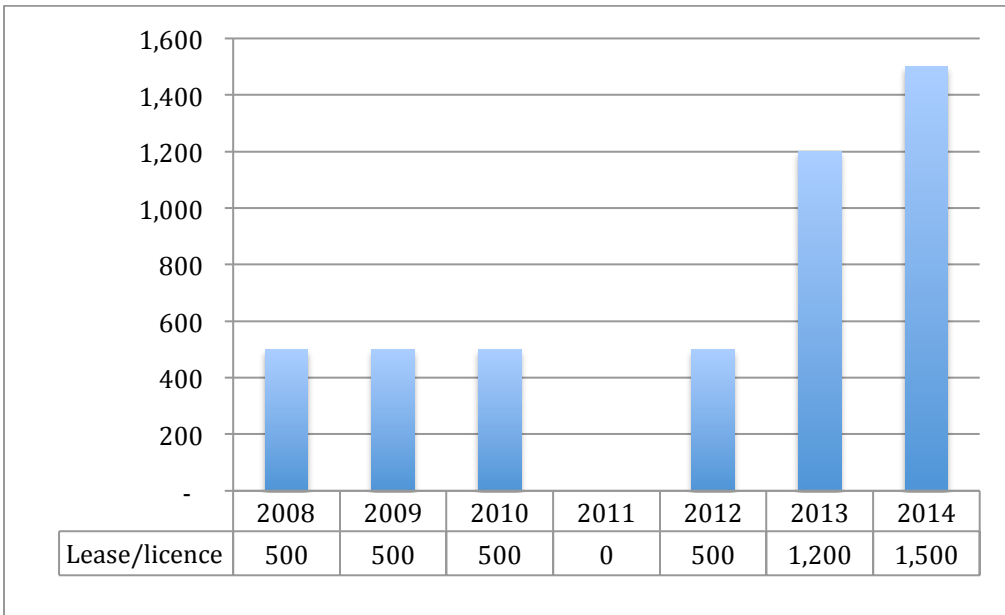
Recent ZC Licence Valuations (\$)



There is a modest strengthening in this fishery noted in recent years.

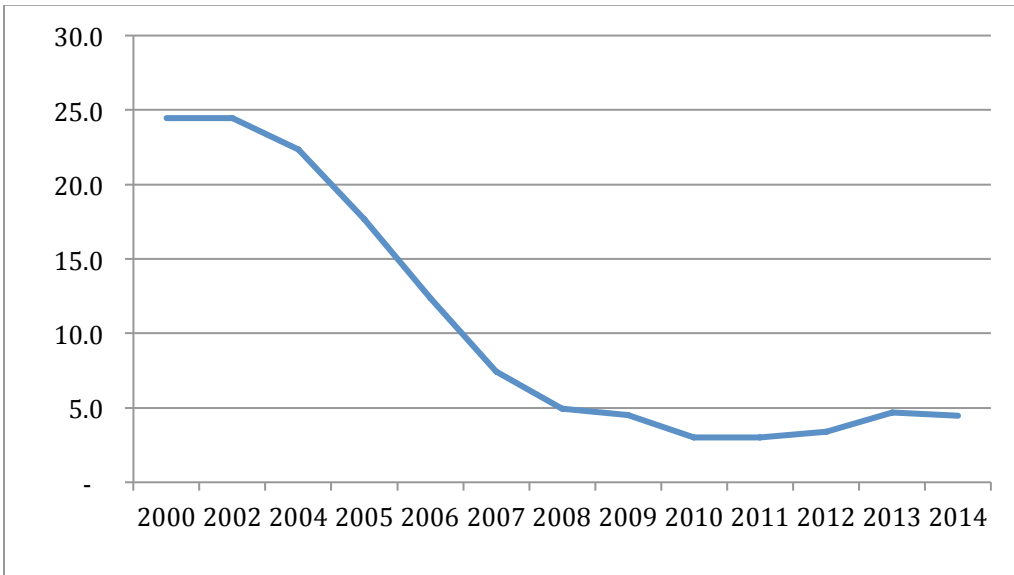
¹⁹ Values in charts are in nominal terms (not adjusted for inflation)

Recent ZC Licence Lease Rates (\$)

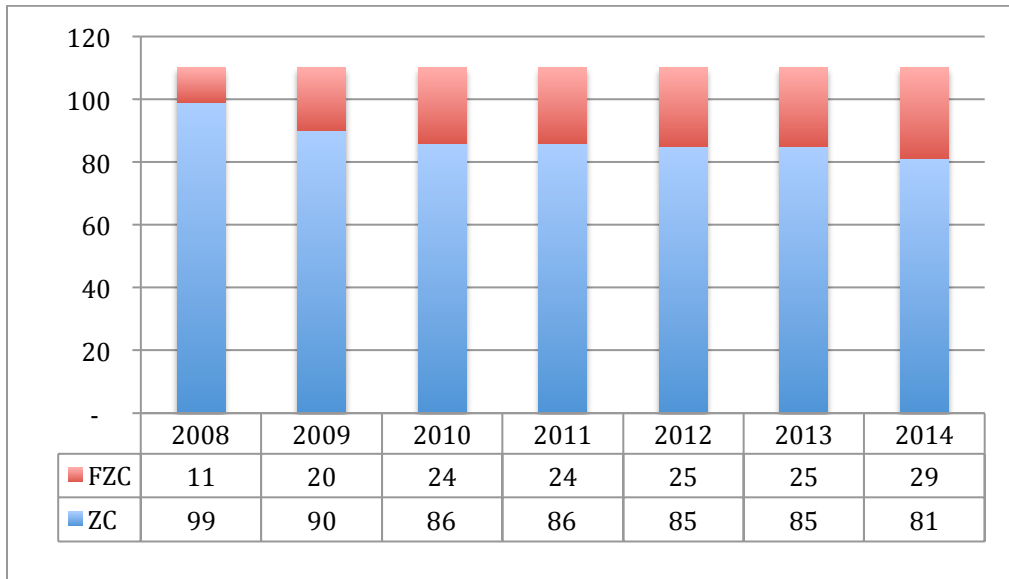


Lease range from \$1,000 to \$2,000 per licence.

Aggregate Value of ZC Licences (\$ millions by year)

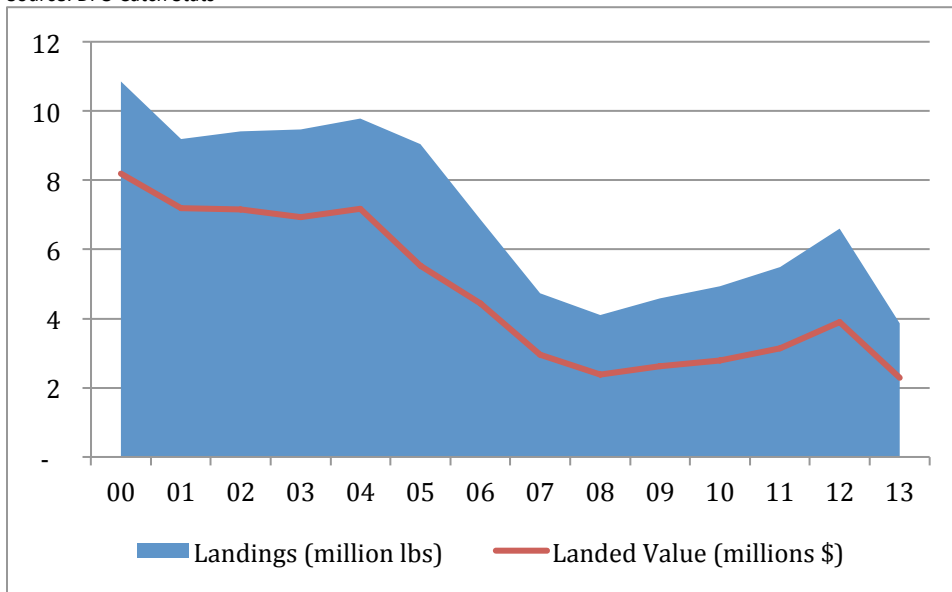


ZC Licence Counts by Category



Red Sea Urchin Landings & Landed Value Trends

Source: DFO Catch Stats



The 2013 landings and landed value data is believed to be incomplete, as anecdotal reports do not suggest such a pronounced dip in landings for 2013 compared to 2012.

Outlook/Commentary

While the market for red sea urchins remains soft, the value of licences, and ability of hard-working fishermen to earn a contribution from the fishery, seems to be improving.

SHELLFISH: Green Sea Urchin

General Description

<i>Licence Designation</i>	ZA
<i>Nature of Licence</i>	Party based – individual, corporation, or band may make annual application for issuance of licence
<i>Number of Commercial Licences (valued in this study)</i>	49
<i>No. of Communal Commercial Lic's (not valued in this study)</i>	0
<i>Licensing/Management Framework</i>	Quota management – each licence receives an equal share of the TAC – 9,126 pounds per licence under current fishing plan (447,174 lbs coastwide). Area Licensing – the bulk of quota is allocated to five areas (in the Johnstone Strait and lower Strait of Georgia) Stacking allowed – maximum 5 licences per vessel.
<i>Additional Information</i>	The fishing season is Sept 1 to August 31. Quotas not divisible Currently 19 vessels (est.) fishing 49 licences.

Valuation Parameters

Valuations performed:	ZA licence Annual lease rate Vessels
Basis for valuation:	< 3 transactions Anecdotal information
Confidence in valuation:	Low

Current Valuation

Licence Value at March 31, 2014

Category	# Licences	Value/ Licence (\$)	Total Value (\$)
ZA Licences	49	30,000	1,470,000

Valuation Comments

There was limited transactions activity during the valuation period.

The range of licence values is estimated at \$25,000 to \$40,000 per licence.

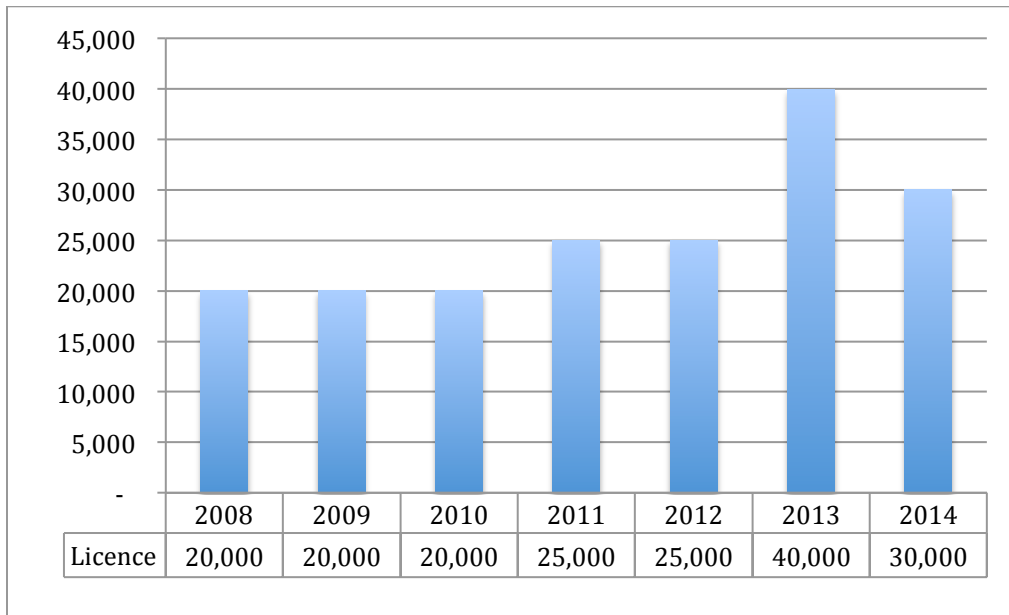
Vessel Value

Vessel counts exclude F licences. Fleet composition is arrived at by using past data as a baseline. By nature, fleet vessel valuation is very imprecise and results should be used for general purposes only. The number of licensed vessels is drawn from current DFO data (may not be precise).

Green Sea Urchin	# Vessels	Avg Vessel Value (\$)	Aggregate Value (\$)
Classic Style	5	81,000	405,000
Modern Style	7	200,000	1,400,000
<i>Total</i>	12	150,417	1,805,000

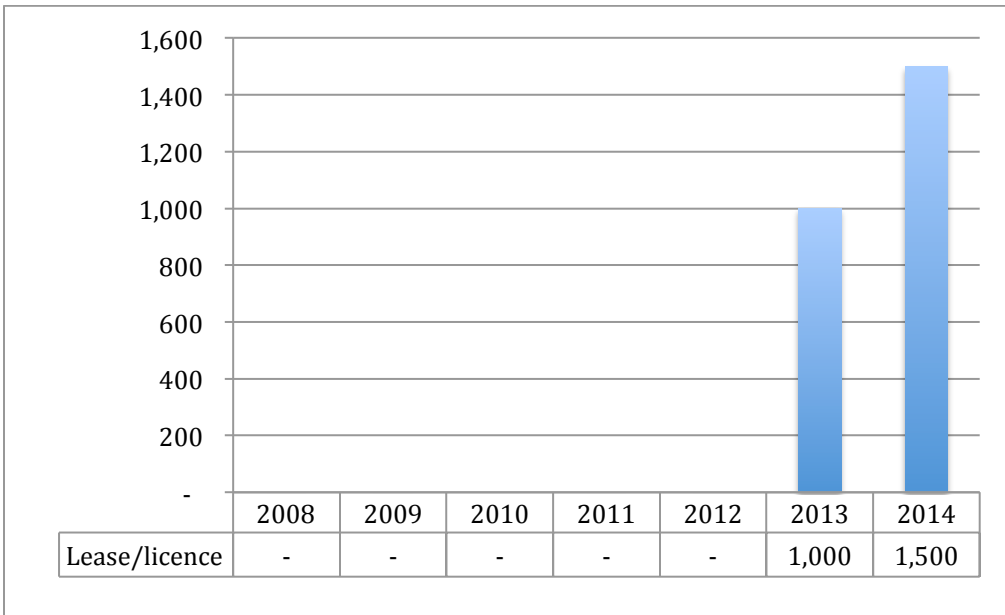
Licensing Trends²⁰

Recent ZA Licence Valuations (\$)



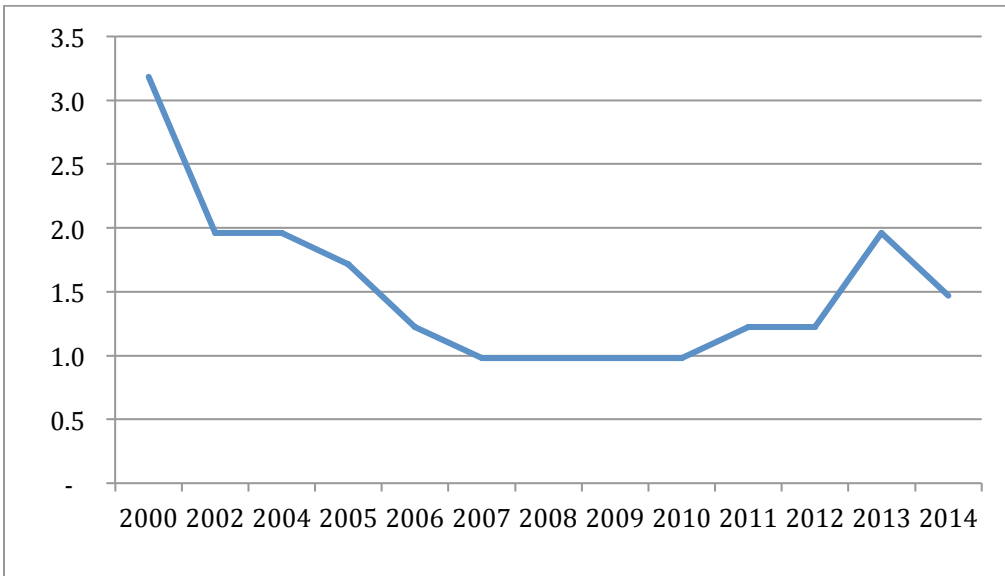
²⁰ Values in charts are in nominal terms (not adjusted for inflation)

Recent ZA Licence Lease Rates (\$)



Leases ranged from nil to \$1,500 per licence.

Aggregate Value of ZA Licences (\$ millions by year)

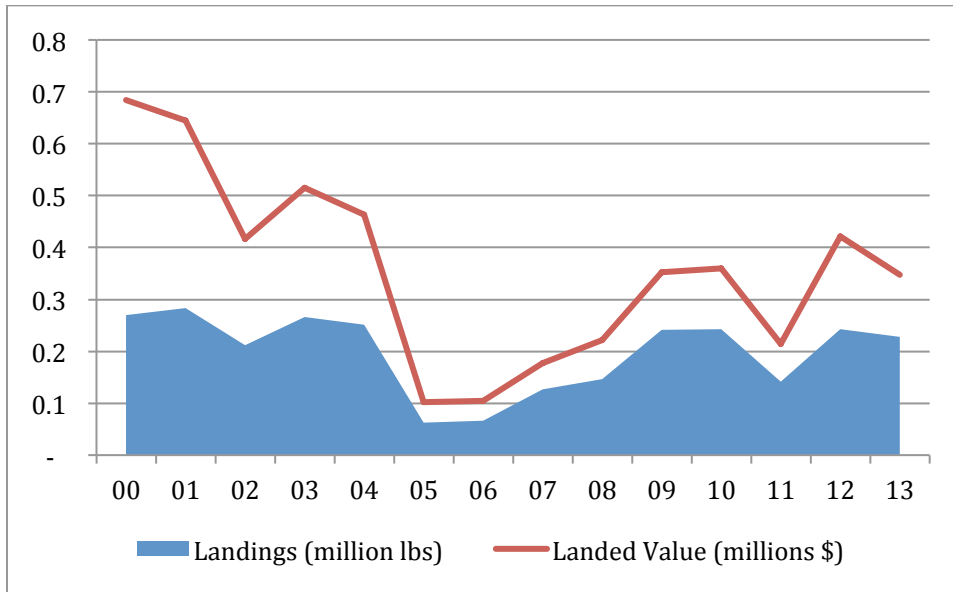


Licence Counts by Category

No chart shown: all 49 licences are category ZA.

Green Sea Urchin Landings & Landed Value Trends

Source: DFO Catch Stats



No updated landings & landed value data has been available from DFO Catch Stats since 2012.

Outlook/Commentary

Despite a slight firming in lease prices, the valuation for green sea urchin licences declined in 2014.

This likely reflects lack of a liquid market for green urchins more than a change in the fundamentals of the fishery. Circumstances in the green urchin fishery tend to mirror those in the red sea urchin fishery.

SHELLFISH: Euphausiid

General Description

<i>Licence Designation</i>	ZF
<i>Nature of Licence</i>	Party based – individual, corporation, or band may make annual application for issuance of licence
<i>Number of Commercial Licences (valued in this study)</i>	16
<i>No. of Communal Commercial Lic's (not valued in this study)</i>	1 (FZF designation)
<i>Licensing/Management Framework</i>	Competitive plankton (krill) fishery using trawl gear. Vessels vie for share of the annual 500 ton TAC.
<i>Additional Information</i>	Fishery primarily in mainland inlets of Georgia Strait

Valuation Parameters

Valuations performed:	1. ZF licence 2. Vessels
Basis for valuation:	Anecdotal information
Confidence in valuation:	Low

Current Valuation

Licence Value at March 31, 2014

Category	# Licences	Value/ Licence (\$)	Total Value (\$)
ZF Licences	16	40,000	640,000

Valuation Comments

No transactions activity for the year. Anecdotal information indicates values in the \$40,000 to \$50,000 range

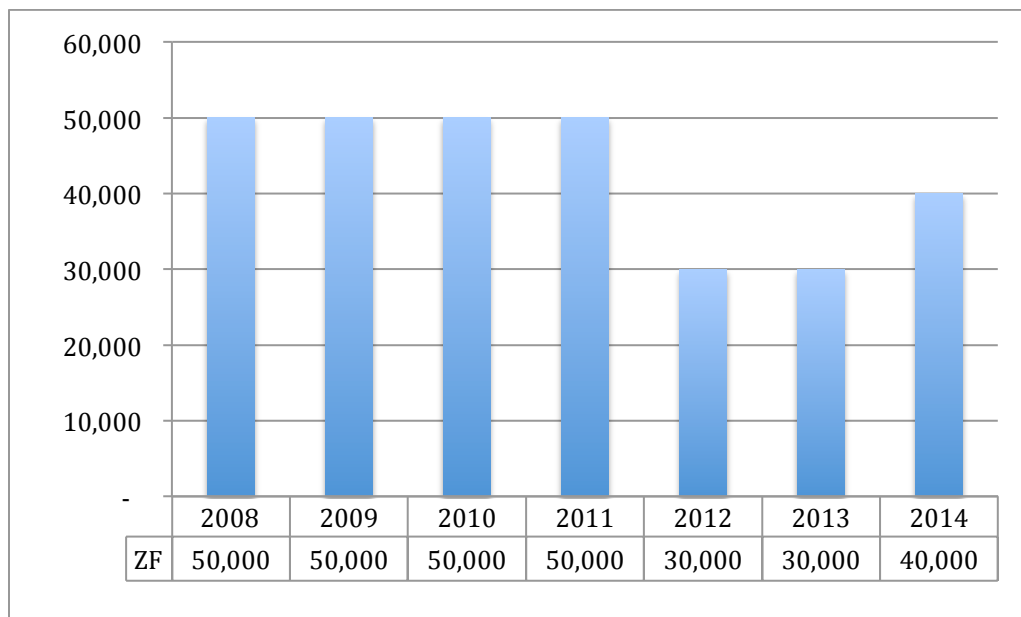
Vessel Value

Vessel counts exclude F licences. Fleet composition is arrived at by using past data as a baseline. By nature, fleet vessel valuation is very imprecise and results should be used for general purposes only. The number of licensed vessels is drawn from current DFO data (may not be precise).

Euphausiid	# Vessels	Avg Vessel Value	Aggregate Value
Classic Style	6	184,000	1,104,000
Modern Style	10	646,000	6,460,000
<i>Total</i>	16	472,750	7,564,000

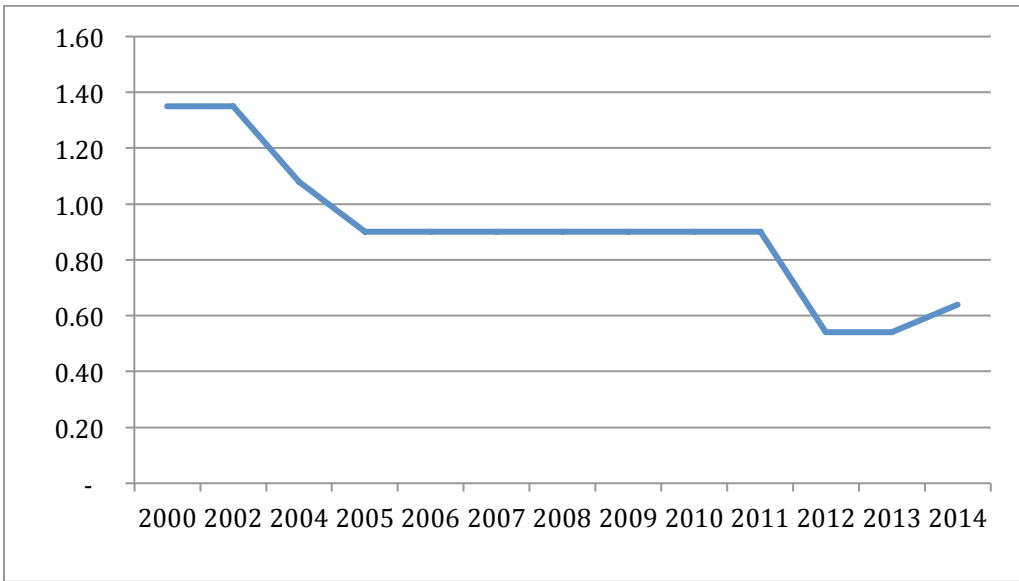
Licensing Trends²¹

Recent ZF Licence Valuations (\$)

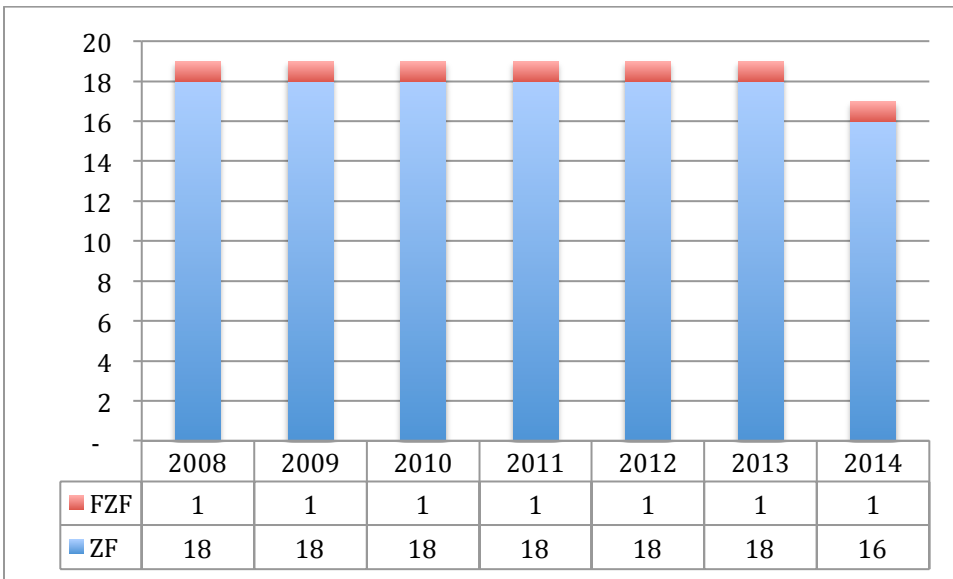


²¹ Values in charts are in nominal terms (not adjusted for inflation)

Aggregate Value of ZF Licences (\$ millions by year)



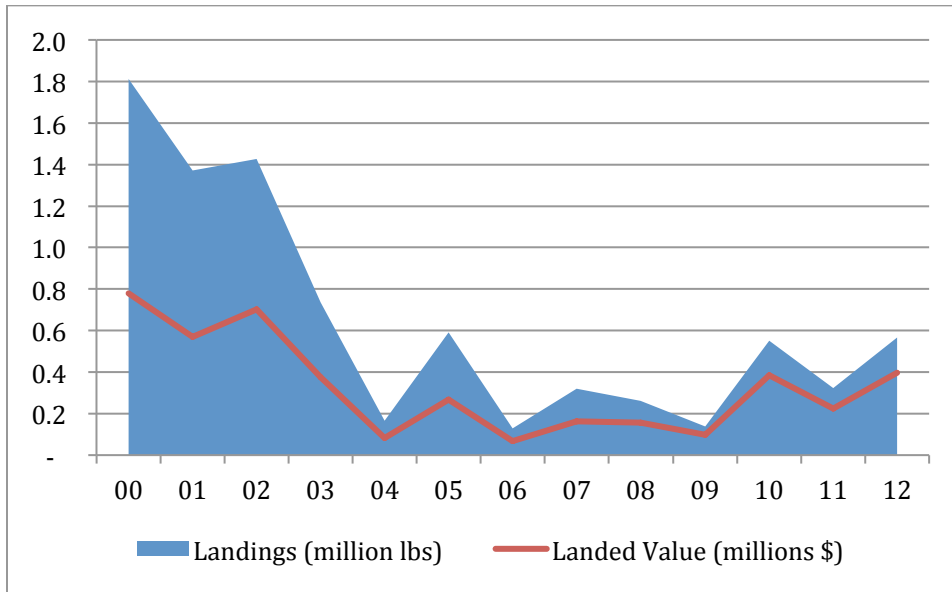
Licence Counts by Category



The above data shows a decrease of two general-category licences in 2014; it is not confirmed if this is a data error or an actual development.

Euphausiid Landings & Landed Value Trends

Source: DFO Catch Stats



No updated landings & landed value data has been available from DFO Catch Stats since 2012.

Outlook/Commentary

This is a very small-scale fishery with sporadic participation and marginal returns to harvesters.

No change in the outlook for the fishery was reported by informants.

Schedule II Species

General Description

<i>Licence Designation</i>	C
<i>Nature of Licence</i>	Vessel based – vessel owner may make annual application for issuance of licence
<i>Number of Commercial Licences (valued in this study)</i>	456
<i>No. of Communal Commercial Lic's (not valued in this study)</i>	12 (FC designation – Party-based)
<i>Licensing/Management Framework</i>	Allows participation in Schedule II fisheries and transporting. Various time, area, gear, TAC, trip limit, and IVQ measures in place.
<i>Additional Information</i>	One C licence (or FC) per vessel. C licence cannot be held on a vessel with any other vessel based licence in most circumstances. List of Schedule II species: Smelt, Spiny Dogfish, Skate, Sole & Flounder, Pacific Cod, Lingcod & Tuna (Canadian & International Waters only). Dogfish and lingcod operating under groundfish integration program.

Valuation Parameters

Valuations performed:	1. C licence 2. Vessels
Basis for valuation:	Approx. 10 open market transactions Anecdotal information
Confidence in valuation:	Moderate

Current Valuation

Licence Value at March 31, 2014

Category	# Licences	Value/ Licence Ft (\$)	Total Value (\$)
C Licences	385	300	3,927,000

Valuation Comments

Transactions range from \$150 to \$500 per foot.

These licences are sometimes acquired and then relinquished to allow un-marrying of vessel based licences. As the pool of C licences declines, there may be upward pressure on prices.

No valuation information for leasing of F category C licences was uncovered.

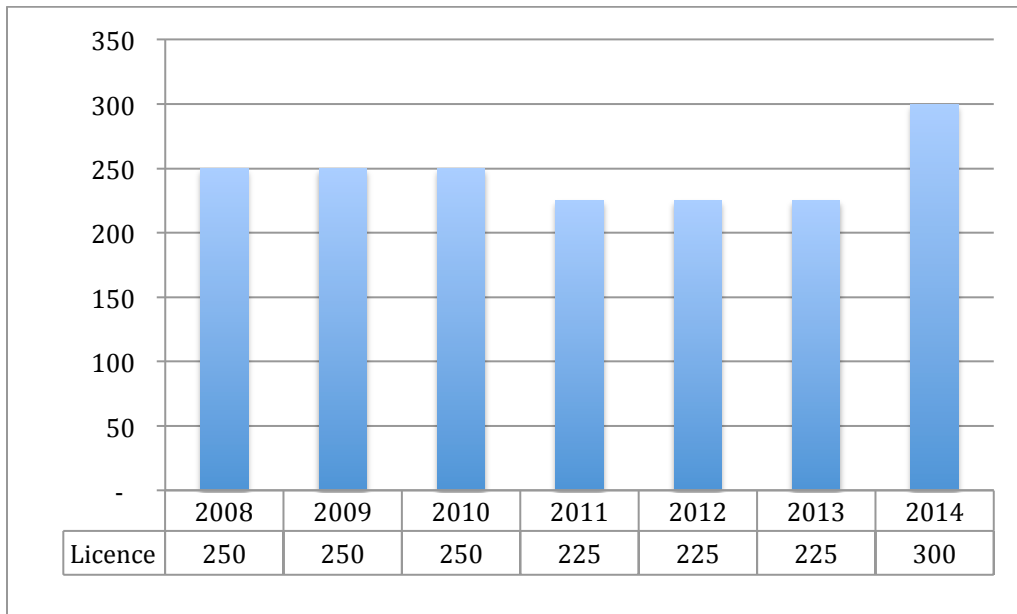
Vessel Value

Vessel counts exclude F licences. Fleet composition is arrived at by using past data as a baseline. By nature, fleet vessel valuation is very imprecise and results should be used for general purposes only.

Schedule II	# Vessels	Avg Vessel Value (\$)	Aggregate Value (\$)
Classic Style	237	40,000	9,480,000
Modern Style	127	143,000	18,161,000
<i>Total</i>	364	75,937	27,641,000

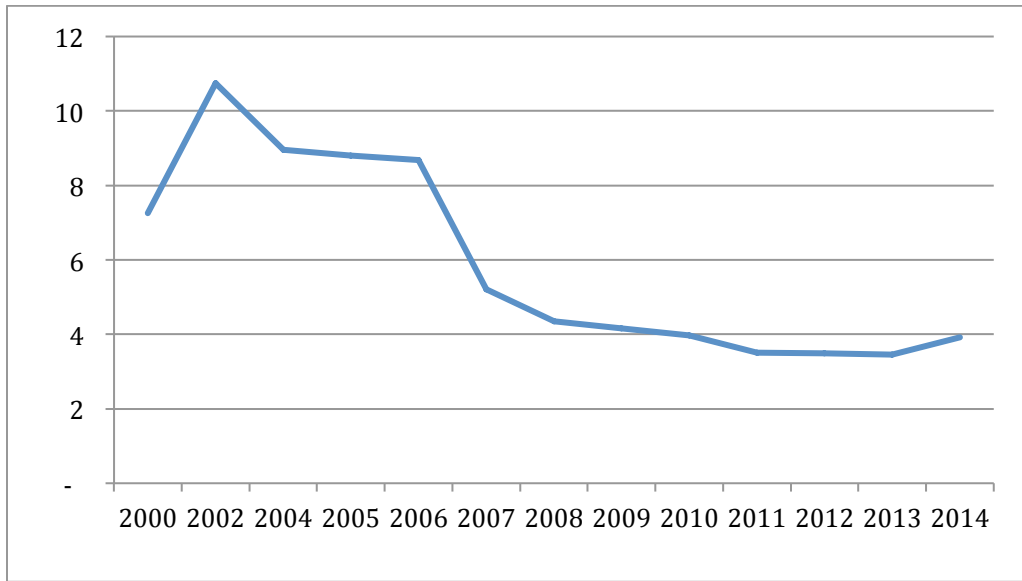
Licensing Trends²²

Recent C Licence Valuations (\$ per foot)



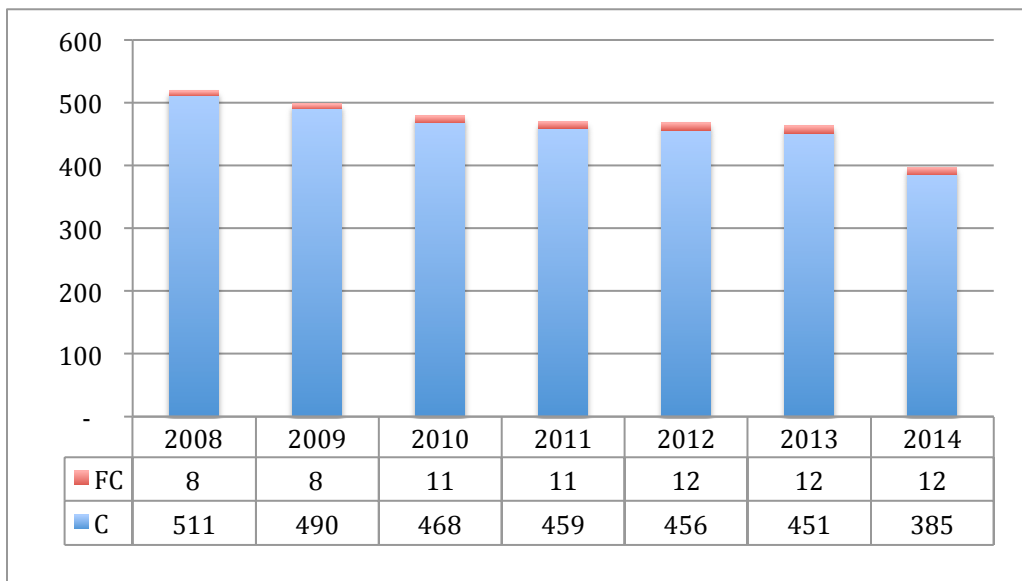
²² Values in charts are in nominal terms (not adjusted for inflation)

Aggregate Value of C Licences (\$ millions by year)



The value of licences in this category has declined appreciably, driven by both falling licence prices, and a diminishing pool of C licences (caused by licences being extinguished).

Licence Counts by Category



Landings & Landed Value Trends

No information is provided, since a wide range of species may be landed under Schedule II licences.

Outlook/Commentary

C licences bring few fishing rights. Values are propped-up primarily because of a declining pool of licences.

Summary

Aggregate Value of Licences and Quota at March 31, 2014

Fishery Grouping	Fishery	Licence Designation	# Licences	Average Licence Value (\$)	Aggregate Licence Value (\$)	Aggregate Quota Value (\$)	Total Licence & Quota Value (\$)
Salmon	Seine	AS	210	296,429	62,250,000	-	62,250,000
	Gillnet	AG	815	53,638	43,715,000	-	43,715,000
	Troll	AT	356	119,382	42,500,000	-	42,500,000
Pelagics	Herring - Roe Seine	HS	241	79,004	19,040,000	-	19,040,000
	Herring - Roe Gillnet	HG	1,100	38,755	42,630,000	-	42,630,000
	Herring - Spawn on Kelp	J	36	250,000	9,000,000	-	9,000,000
	Tuna	USA 68	110	n/a	n/a	-	n/a
	Sardine	ZS	25	n/a	n/a	-	n/a
Groundfish	Halibut	L	344	42,800	14,723,200	342,737,010	357,460,210
	Sablefish	K	42	250,000	10,500,000	169,161,232	179,661,232
	Groundfish Trawl	T	135	45,080	6,085,800	245,470,085	251,555,885
	Rockfish Inside	ZN	56	30,000	1,680,000	-	1,680,038
	Rockfish Outside	ZN	163	145,000	23,635,000	-	23,635,037
	Lingcod Hook & Line		-	-	-	21,862,000	21,862,000
	Dogfish Hook & Line		-	-	-	2,518,535	2,518,535
Shellfish	Prawn	W	195	678,950	132,395,250	-	132,395,250
	Crab	R	189	620,000	117,180,000	-	117,180,000
	Shrimp	S	215	33,520	7,206,800	-	7,206,800
	Geoduck	G	50	5,250,000	262,500,000	-	262,500,000
	Sea Cucumber	ZD	85	675,000	57,375,000	-	57,377,009
	Red Sea Urchin	ZC	81	55,000	4,455,000	-	4,455,065
	Green Sea Urchin	ZA	49	30,000	1,470,000	-	1,470,057
	Euphausiid	ZF	16	40,000	640,000	-	642,009
Schedule II	Schedule II Species	C	385	10,200	3,927,000	-	3,927,000
					862,908,050	781,748,862	1,644,656,912