

West Coast Fishing Fleet:

Analysis of Commercial Fishing Licence, Quota, and Vessel Values

As at March 31, 2011

Prepared for Fisheries and Oceans Canada, Pacific Region

Stuart Nelson

Nelson Bros Fisheries Ltd

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Introduction

This report offers assessments of licence, quota, lease, and vessel values as of March 31, 2011 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. The depth and quality of data upon which valuations are based varies by fishery – a few fisheries are active, with ample vessel and licence transactions, while others feature few or no transactions per year. 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, 2011 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.

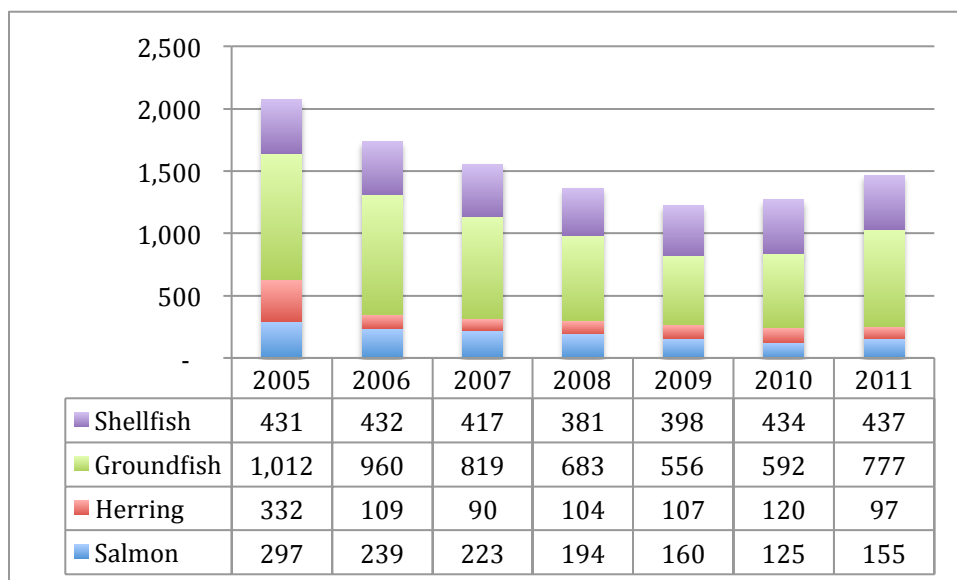
Summary: Year ending March 31, 2011

The market capitalization of commercial licences and quota in the BC fishery at March 31, 2011 is summarized as follows (excludes F licences and relinquished quota in the halibut and sablefish fisheries):

Fishery Grouping	Licence & Quota Value (\$millions)	% Value
Salmon	155	11%
Herring	97	7%
Groundfish	777	53%
Shellfish	437	30%
Schedule II	4	0%
Total	1,469	100%

All Fisheries – Aggregate Licence Value (\$millions)

The improvement in licence and quota values that began in 2010 continued as of the March 31, 2011 valuation date. With the exception of herring, the major fishery categories all saw increases in valuation.



The demand for “wild, sustainable” seafood in the seafood marketplace is growing, and ex-vessel prices for many BC fisheries have risen in response. BC features many species in high demand, and several fisheries have achieved certification by Marine Stewardship Council: salmon, tuna, halibut, sablefish, and hake. Prawn and crab are recognized by SeaChoice as “best choice” recommendations.

Further details for each fishery category are provided below. In all charts, values are un-adjusted for inflation.

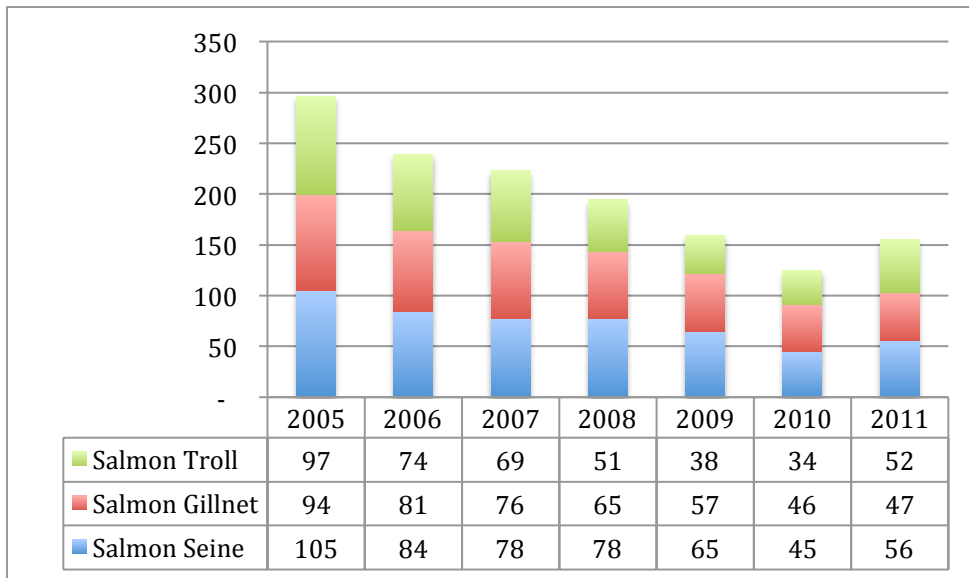
Salmon

The multi-year erosion in salmon licences values was reversed in 2011, with a modest increase seen in gillnet values, and more pronounced rises in seine and troll licences. Two main factors are seen as influencing this firming of values:

- The spectacular return of Fraser River sockeye in 2010, resulting in the best south coast fishing opportunities seen in over a decade.
- The anticipated expenditure by the USA government to purchase Canadian commercial troll fishing capacity as a conservation measure for US salmon stocks (the Mitigation Fund under the Chinook Annex of the Pacific Salmon Treaty).

The mood of the salmon industry is becoming more bullish, as 2011 also saw better-than-forecast returns of sockeye, and improving fish prices, particularly for pink and chum.

Aggregate Salmon Licence Value (\$ millions)

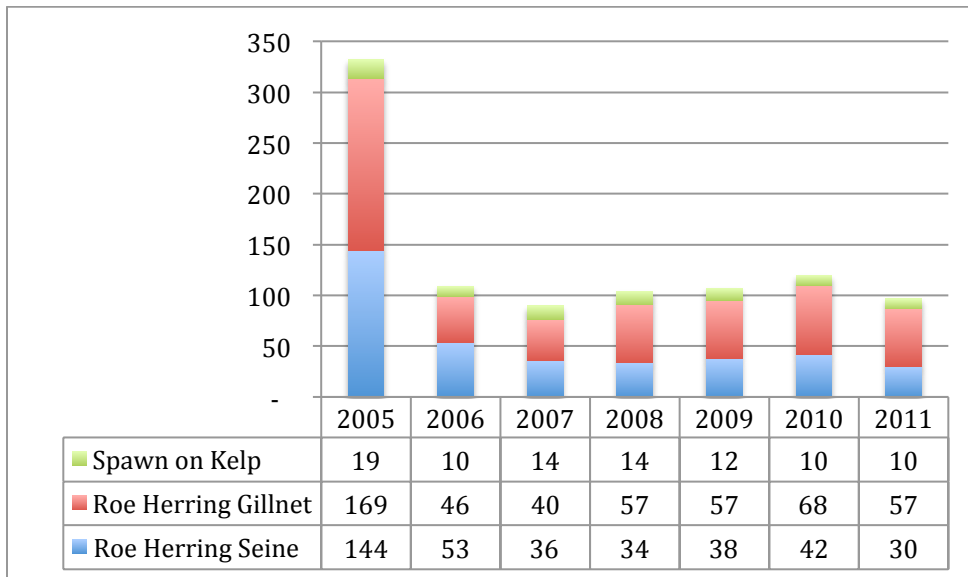


Herring

Both seine and gillnet licences prices weakened slightly compared to prior year levels. The market outlook was extremely soft heading into the 2011 fishery. A mixture of fish behavior and expected market conditions resulted in a large portion of the TAC being forgone. The outlook for the roe fisheries is currently gloomy.

Spawn on kelp economics remain challenging for many operations; some licences were fully utilized and earned satisfactory returns, while others were only partially utilized (or un-utilized). Difficulty accessing stocks, poor market prices, and high operating costs contribute to uneven results.

Aggregate Herring Licence Value (\$ millions)

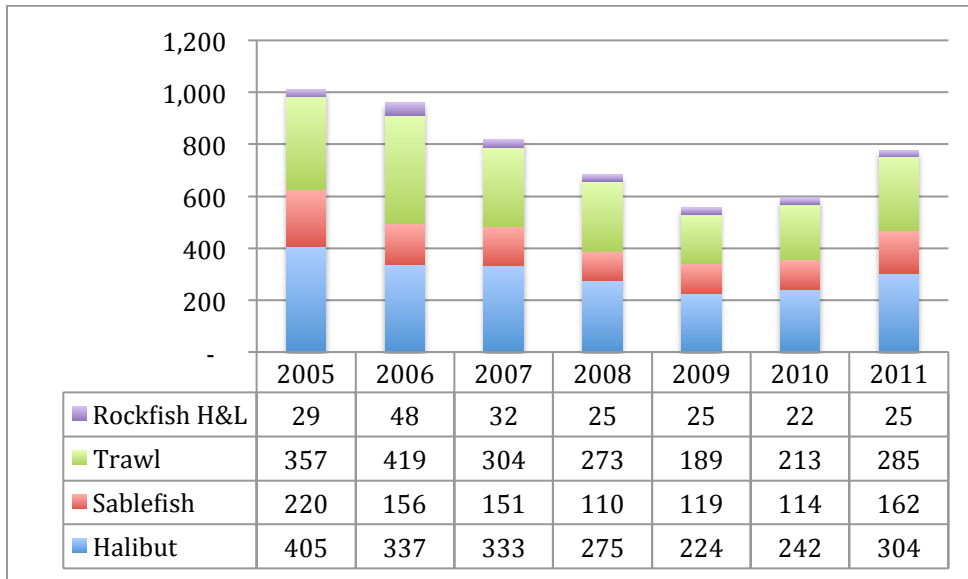


Groundfish

Values rose in each of the groundfish fisheries. The halibut and sablefish fisheries enjoyed dramatic increases in ex-vessel fish prices. Improved demand and prices is translating into escalating quota values and lease rates. In groundfish trawl, hake markets remain strong, though catch-ability of the TAC is challenging, and circumstances in the bottom fish segment have improved modestly.

The frequency of open-market transactions is declining as holdings become more consolidated in the IVQ fisheries.

Aggregate Groundfish Licence and Quota Value (\$ millions)

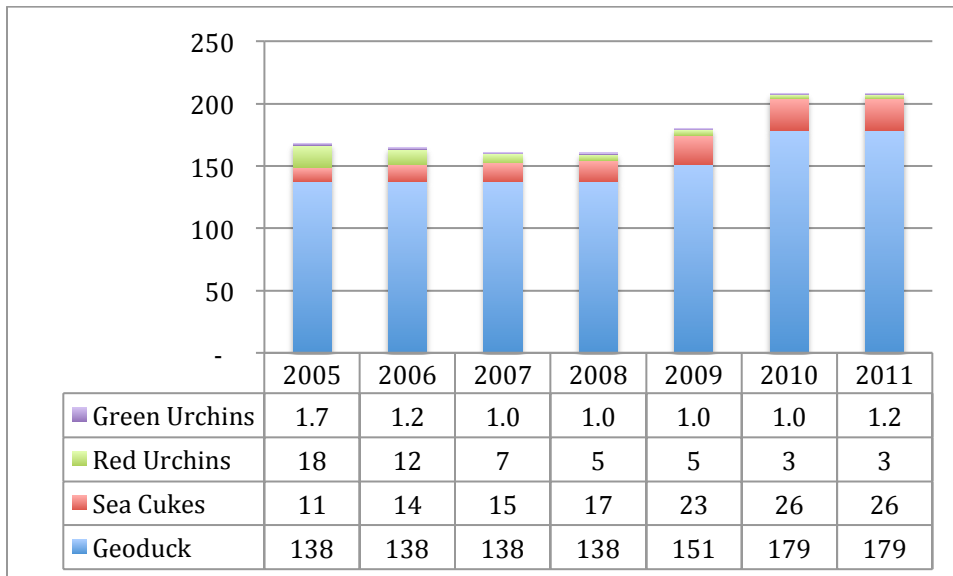


Shellfish

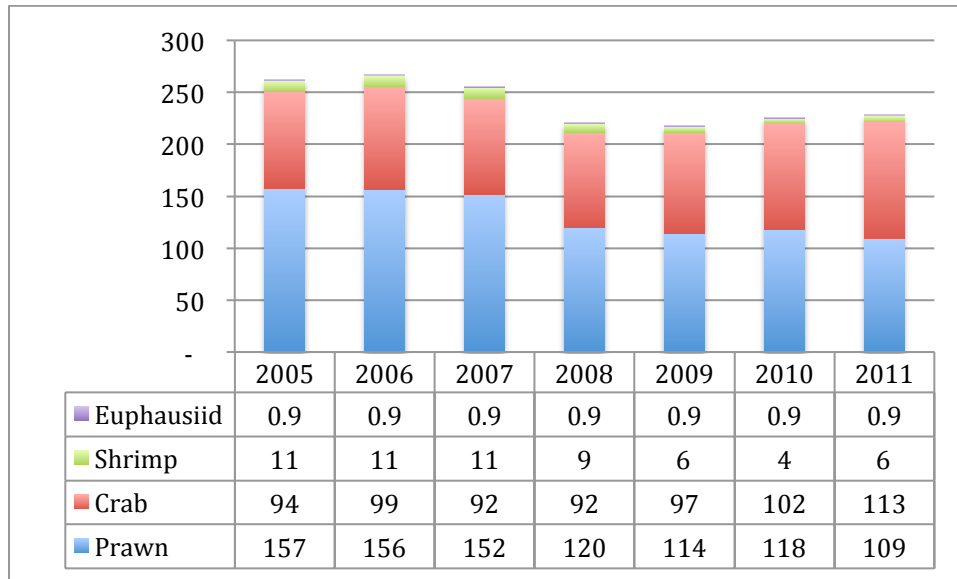
The shellfish category, including the dive species (geoduck, sea cucumber, and red and green sea urchins), and trap/trawl gear (prawn, shrimp, crab, and euphausiid) showed continued stability for the valuation period.

Geoduck, sea cucumber, prawn, and crab remained essentially strong, while red/green urchins shrimp, and euphausiid remained weak.

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



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



Methodology

Valuations Performed

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

Fishery	Gear	VALUATION				
		Average Vessel Value	Average Licence Value		Quota Value	Lease Value
			Full Fee	Reduced Fee		
Salmon	Seine	X	X	X		
	Gillnet	X	X	X		
	Troll	X	X	X		
Herring – Roe	Seine	X	X	X		X
	Gillnet	X	X	X		X
Herring – Spawn on Kelp			X			
Halibut	Longline	X	X		X	X
Sablefish	Longline / Trap	X	X		X	X
Geoduck / Horseclam	Dive	X	X			X
Shrimp	Trawl	X	X			
Prawn	Trap	X	X			X
Groundfish	Trawl	X	X		X	X
Crab	Trap	X	X			
Sea Cucumber	Dive	X	X			X
Red Sea Urchin	Dive	X	X			X
Green Sea Urchin	Dive	X	X			X
Rockfish	Hook & Line	X	X			X
Schedule II Species		X	X			
Euphausiid	Trawl	X	X			
Tuna (USA 68)	Hook & Line		X			X
Sardine	Seine		X			X

Note that partial valuations for the tuna and sardine 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

Prior valuation studies (pre-2009) used a complex vessel stratification approach whereby a vessel in each fishery was assigned to one of ten classifications (see following table):

Vessel Type	Classic Style			Modern Style	
	Wood	Aluminium / Fibreglass	Steel	Aluminium / Fibreglass	Steel
Inside Waters / Smaller Vessel					
Outside Waters / Larger Vessel					

While sound in theory, this stratification approach relied on aging source data and a host of assumptions that suggested a higher level of valuation precision than could be delivered. Given a lack of current source data, a simplified vessel valuation approach is being adopted for this report, described as follows:

1. The number of licensed vessels in each commercial category is identified (source: Commercial Licence Eligibility Counts report for period April 1, 2009 to March 31, 2011).
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, 2011 valuation date. The number of vessels evaluated for each fishery is derived from commercial licensing data.

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 valuation methodology to that applied in prior reports. 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 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-ops2.pac.dfo-mpo.gc.ca/xnet/content/MPLANS/MPlans.htm>
- DFO Licensing: <http://www.pac.dfo-mpo.gc.ca/fm-gp/licence-permis/index-eng.htm>

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>	214
<i>No. of Commercial Communal Lic's (not valued in this study)</i>	62 (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 (2006 was last re-selection). Stacking allowed; currently 108 Area A licences and 168 Area B (includes F licences).
<i>Additional Information</i>	Competitive fishery. 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 2. Vessels
Amount of trading activity underlying valuation:	Very low (particularly in North)
Confidence in valuation:	Low

With very little open-market activity in this category, a confident valuation cannot be offered.

Current Valuation

Licence Value at March 31, 2011

Category	# Licences	Value/Licence (\$)	Total Value (\$)
Full Fee	198	265,000	52,470,000
Reduced Fee	16	215,000	3,440,000
All AS	214	261,262	55,910,000

Valuation Comments

- Few if any transactions have occurred in the north (Area A). Licences values range between \$200,000-250,000 according to estimates.
- A few transactions were researched in the south coast (Area B), with estimated values ranging from \$250,000 to 320,000.
- Southern licences appear to command a greater value than northern ones at the valuation date.
- The full-fee seine licence value is pegged at \$265,000, reflecting a blended value for A and B licences.

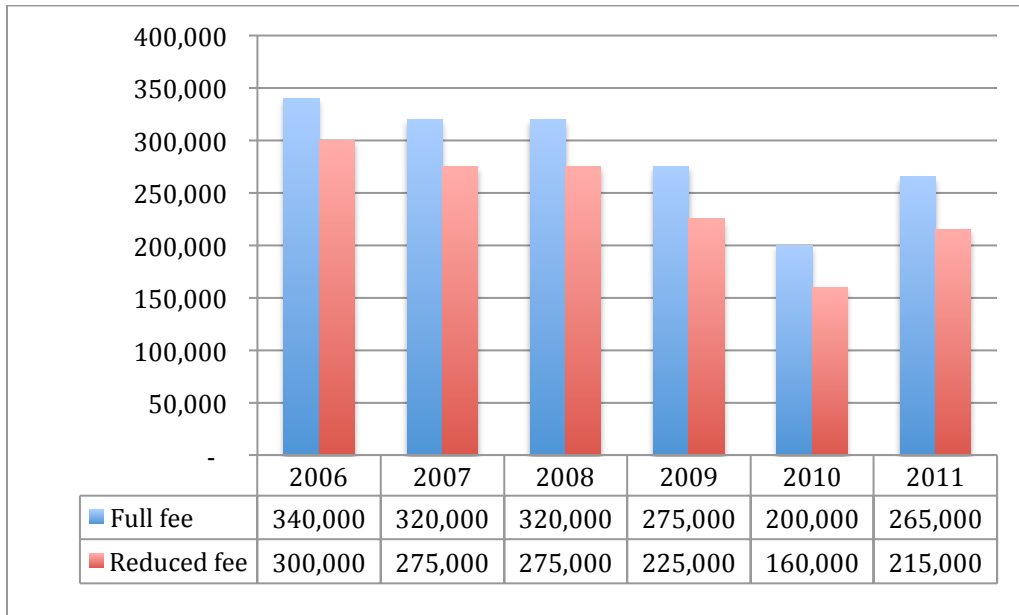
Vessel Value

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.

Salmon Seine	# Vessels	Avg Vessel Value (\$)	Aggregate Value (\$)
Classic Style	62	144,000	8,928,000
Modern Style	93	567,000	52,731,000
<i>Total</i>	155 ¹	397,800	61,659,000

Licensing Trends²

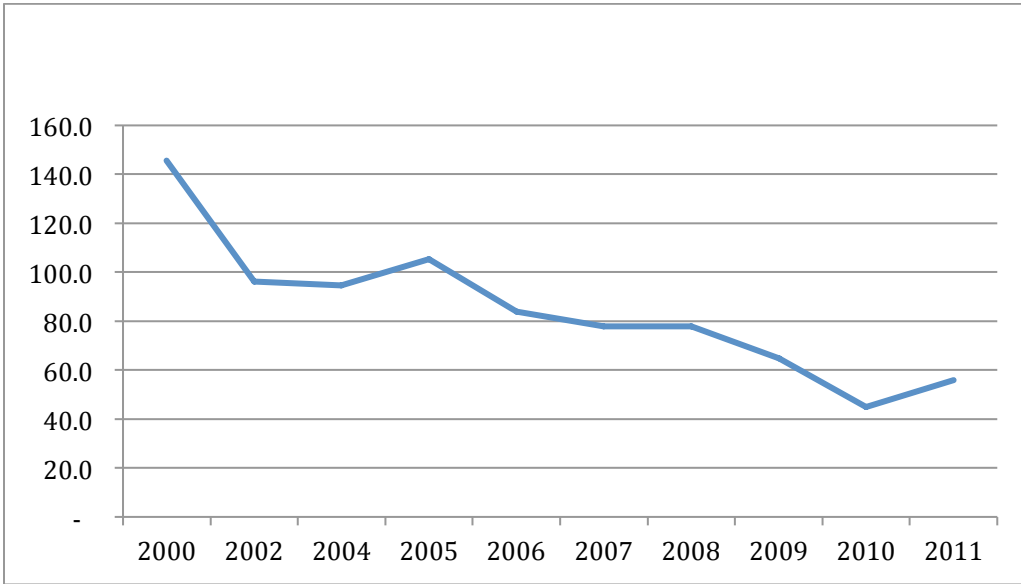
Recent AS Licence Valuations (\$)



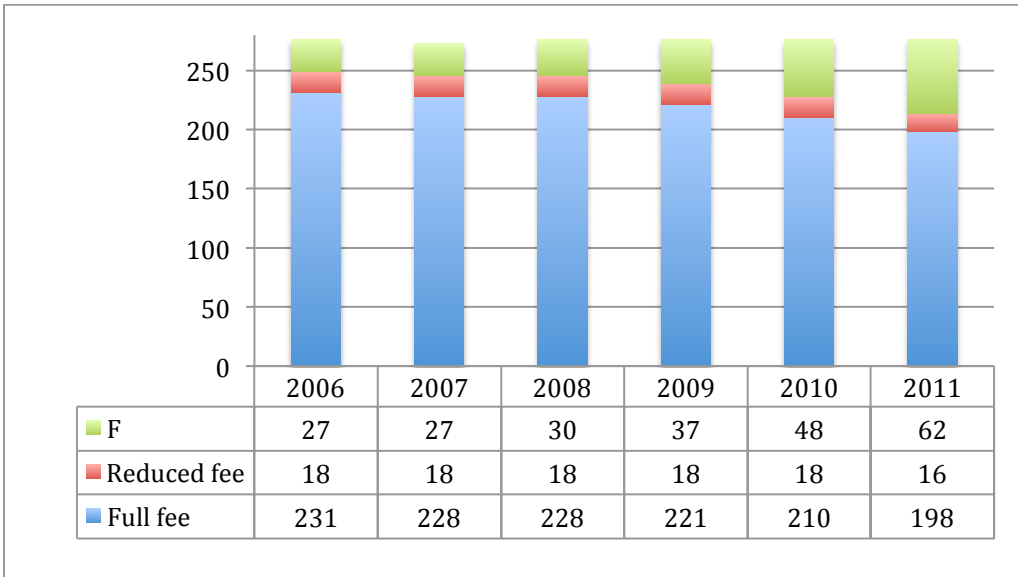
¹ The numbers of vessels and licences may not mesh; see Note on p. 9

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

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

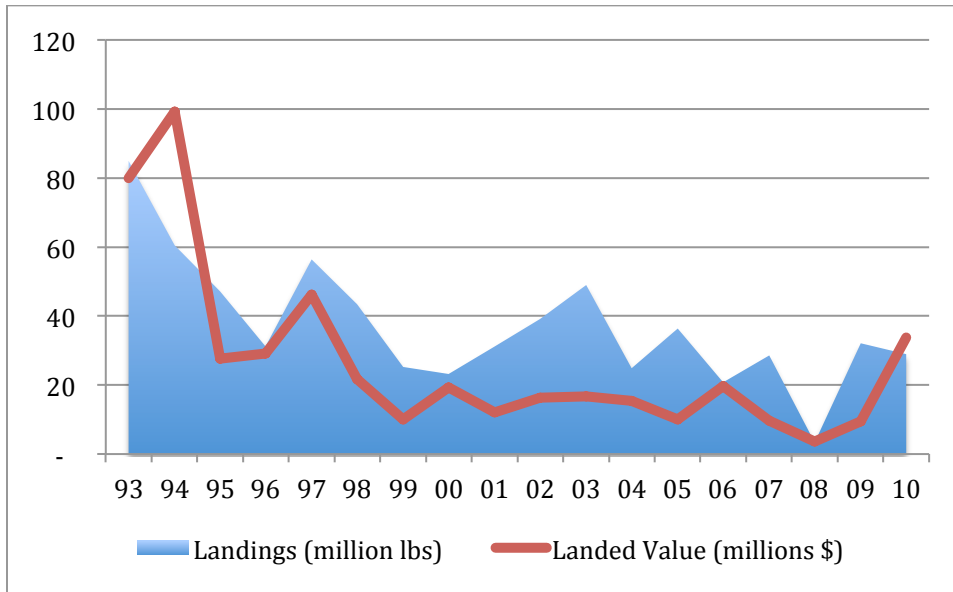


AS Licence Counts by Category



Seine Salmon Landings & Landed Value Trend

Source: DFO Catch Stats



Outlook

- The bumper run of Fraser sockeye in 2010 has restored some optimism to this sector.
- Salmon returns in the last 2-3 seasons have provided more fishing opportunities for seines than have been seen in over a decade.
- Demand for sustainable wild salmon seems to be growing, with wholesale and ex-vessel prices, particularly for pink and chum, up substantially from levels seen in the early 2000s.
- Though still a fraction of its former stature, the salmon seine sector may be on an upward trend.
- Many participants expect the entire salmon fishery to convert to a quota management program in the future (though this remains uncertain).

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>	899
<i>No. of Commercial Communal Lic's (not valued in this study)</i>	253 (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 (2006 was last re-selection). Stacking allowed; currently 654 Area C, 362 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 2. Vessels
Amount of trading activity underlying valuation:	Moderate
Confidence in valuation:	Moderate

Current Valuation

Licence Value at March 31, 2011

Category	# Licences	Value/Licence (\$)	Total Value (\$)
Full Fee	752	55,000	41,360,000
Reduced Fee	147	40,000	5,880,000
All AG	899	52,547	47,240,000

Valuation Comments

- PICFI/ATP was very active in the market in 2011 (71 licences relinquished).
- Values range from lows of \$40,000 to highs of \$65,000 during the valuation period.
- Area C licences appear to be at the low end of the range with D and E at similar values.
- At the time of this report issuance, there appeared to be strong demand for gillnet salmon licences but few vendors.
- The growing pool of F licences (253) is sometimes leased, with values often at nominal rates.

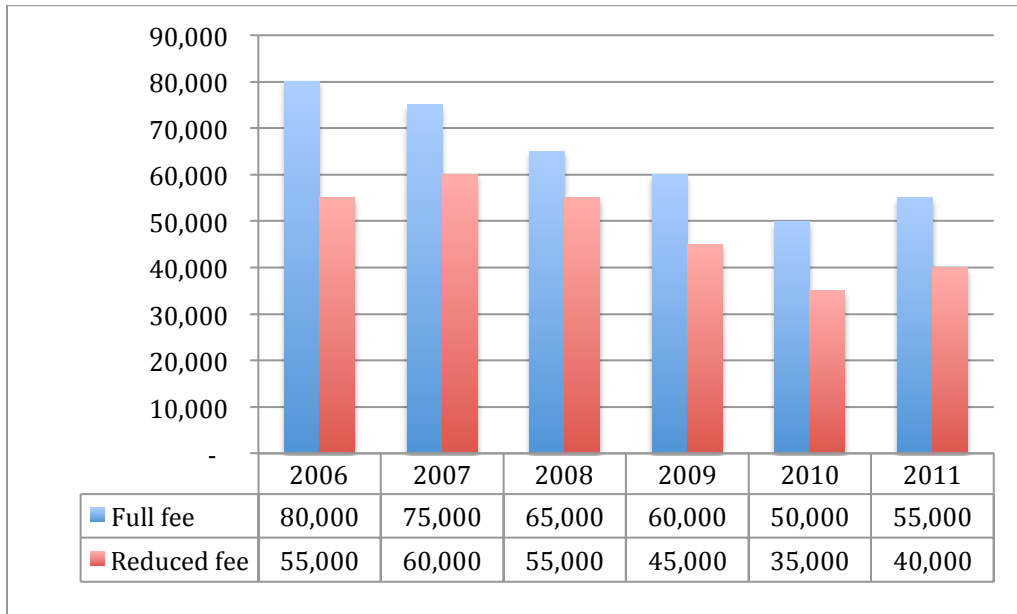
Vessel Value

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.

Salmon Gillnet	# Vessels	Avg Vessel Value (\$)	Aggregate Value (\$)
Classic Style	522	58,000	30,276,000
Modern Style	348	150,000	52,200,000
<i>Total</i>	870 ³	94,800	82,476,000

Licensing Trends⁴

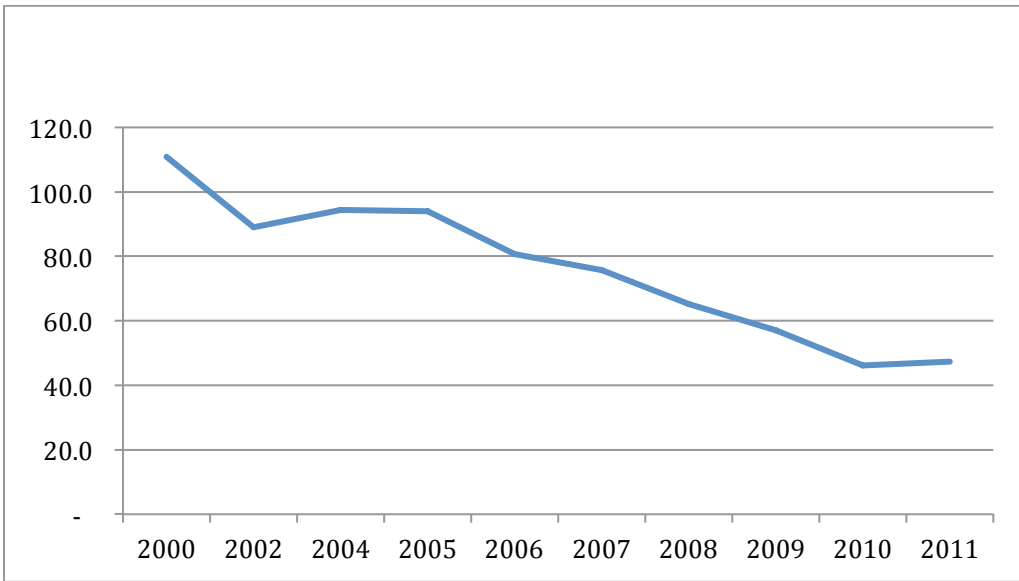
Recent AG Licence Valuations (\$)



³ The numbers of vessels and licences may not mesh; see Note on p. 9

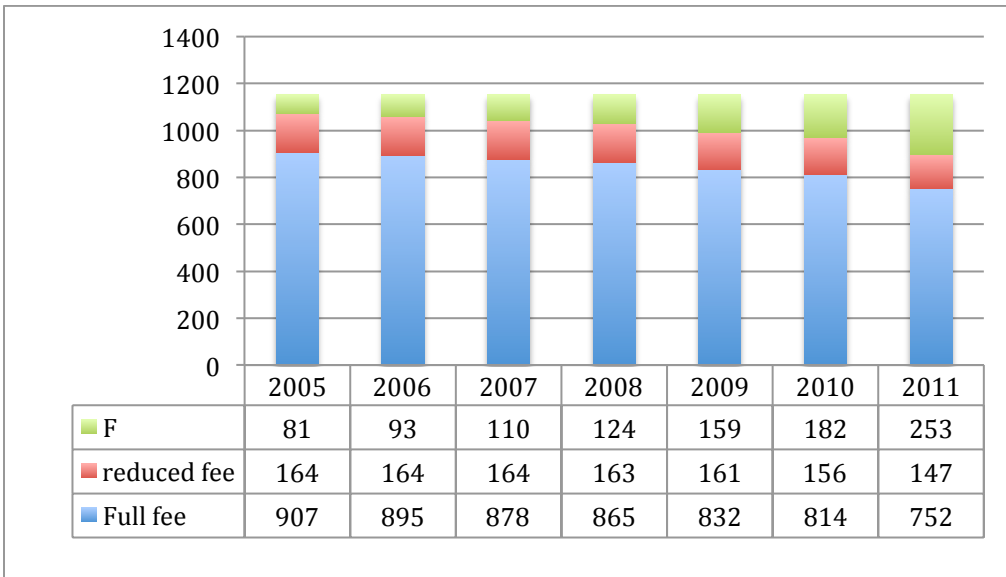
⁴ Values in charts are in nominal terms (not adjusted for inflation)

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



The market capitalization of AG licences has eroded dramatically in the past decade due to continued poor fishery results. Values have at times been propped-up by speculation about a move to quotas in the salmon fishery, and by government licence retirement programs. A growing pool of F licences, not valued, also contributes to the trend.

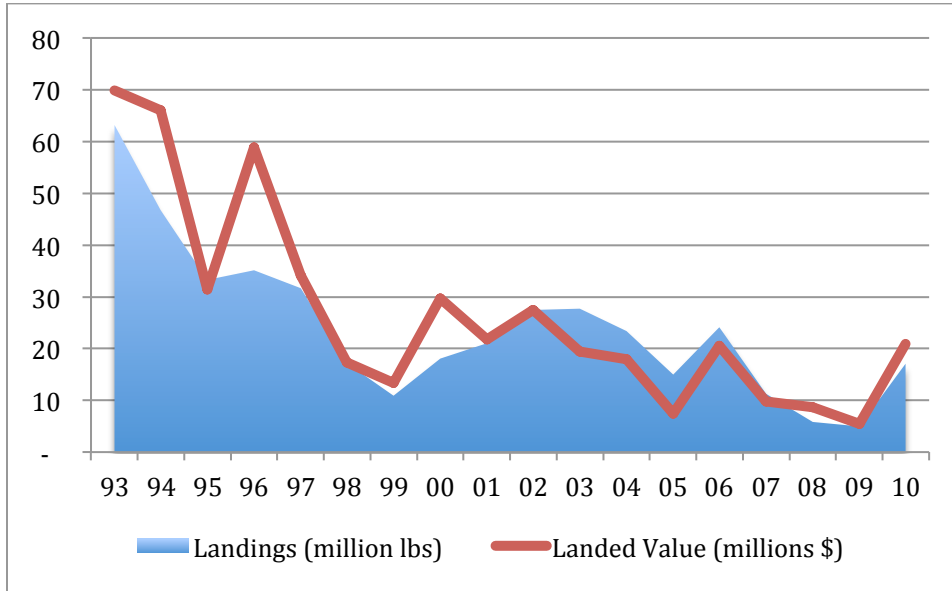
AG Licence Counts by Category



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

- Demand for sustainable wild salmon seems to be growing, with wholesale and ex-vessel prices, particularly for pink and chum, up substantially from levels seen in the early 2000s.
- Many participants expect the entire salmon fishery to convert to a quota management program in the future (though this remains uncertain).

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>	454
<i>No. of Commercial Communal Lic's (not valued in this study)</i>	64 (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 283 Area F, 165 Area G, 90 Area H (includes FAT licences).
<i>Additional Information</i>	Competitive fishery. 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 2. Vessels
Amount of trading activity underlying valuation:	Moderate
Confidence in valuation:	Moderate

Current Valuation

Licence Value at March 31, 2011

Category	# Licences	Value/Licence (\$)	Total Value (\$)
Full Fee	454	110,000	49,940,000
Reduced Fee	20	95,000	1,900,000
All AT	474	109,367	51,840,000

Valuation Comments

- Troll licence values rose appreciably over the valuation period.
- Prices rose through the spring. The range of values from the Jan, 2011 to Sept, 2011 period is \$75,000 to \$130,000.
- A significant number of private market transactions occurred.
- Differences in licence value by area seem to be evaporating due to expectations of a USA buy-back and potential implementation of a quota program in all areas.
- Area F (north coast) is managed on an IVQ basis. Chinook salmon are leased amongst participants for prices ranging from \$10-15 per fish.

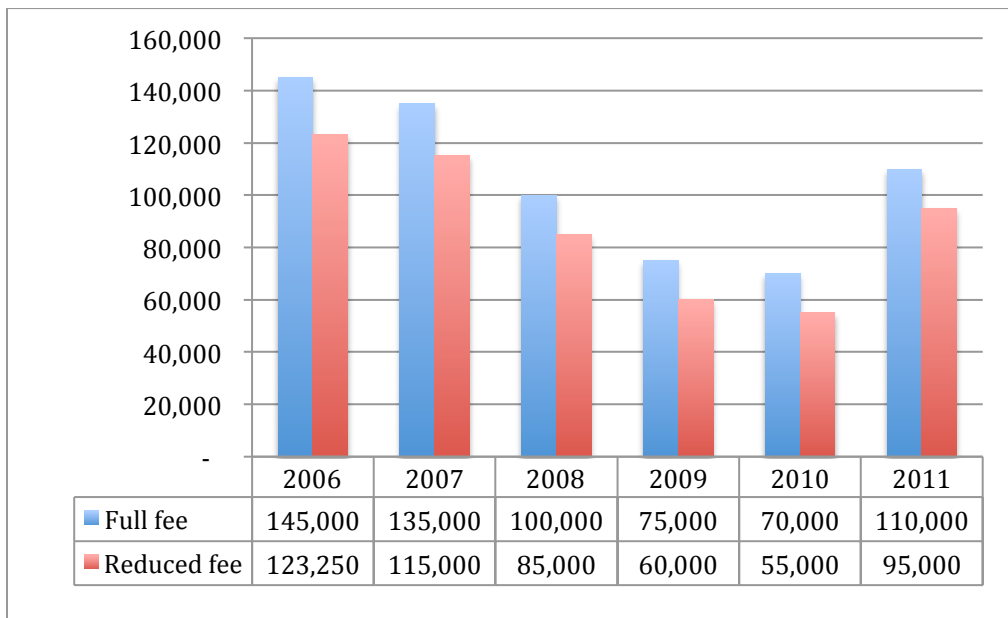
Vessel Value

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.

Salmon Troll	# Vessels	Avg Vessel Value (\$)	Aggregate Value (\$)
Classic Style	287	86,000	24,682,000
Modern Style	123	188,000	23,124,000
<i>Total</i>	410 ⁵	116,600	47,806,000

Licensing Trends⁶

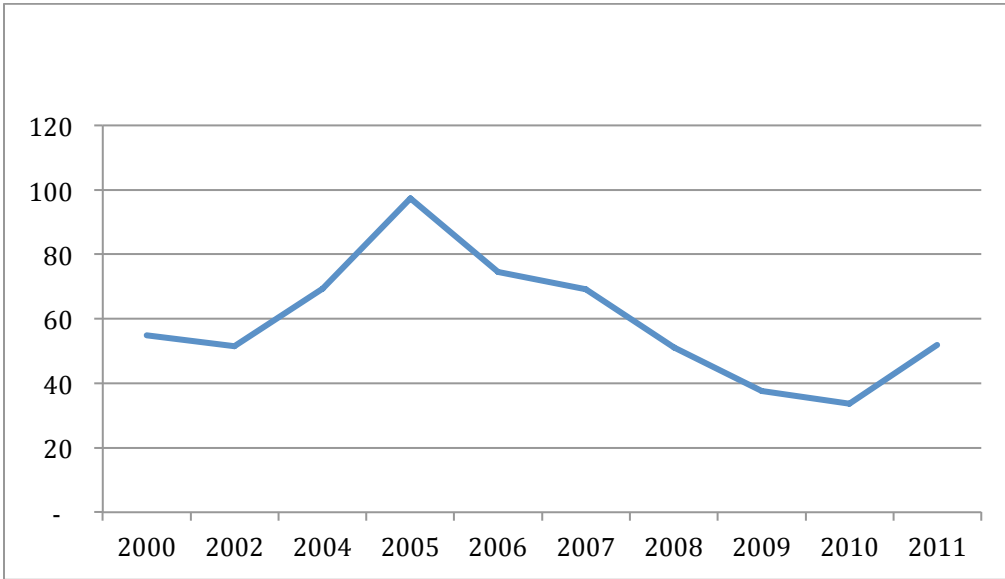
Recent AT Licence Valuations (\$)



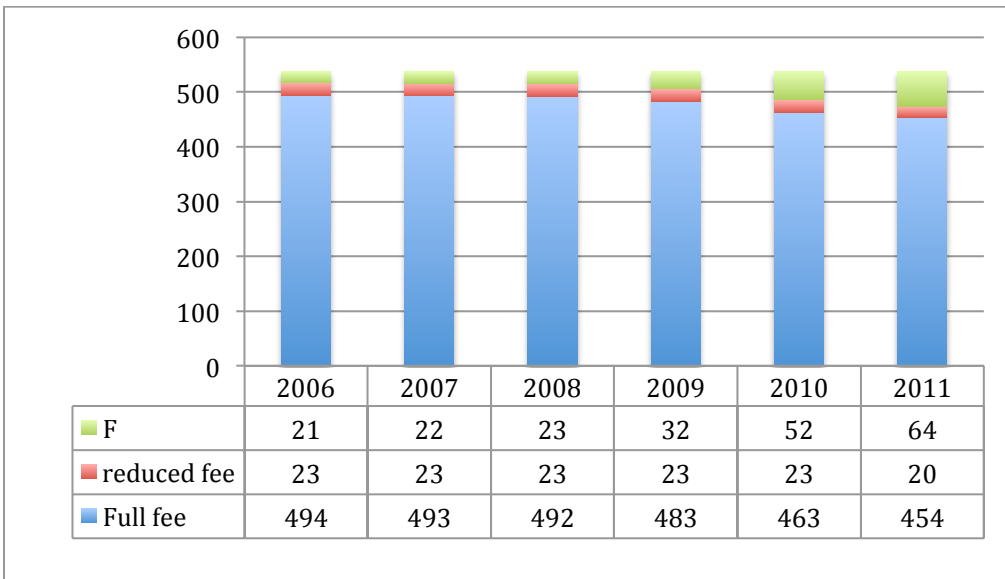
⁵ The numbers of vessels and licences may not mesh; see Note on p. 9

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

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

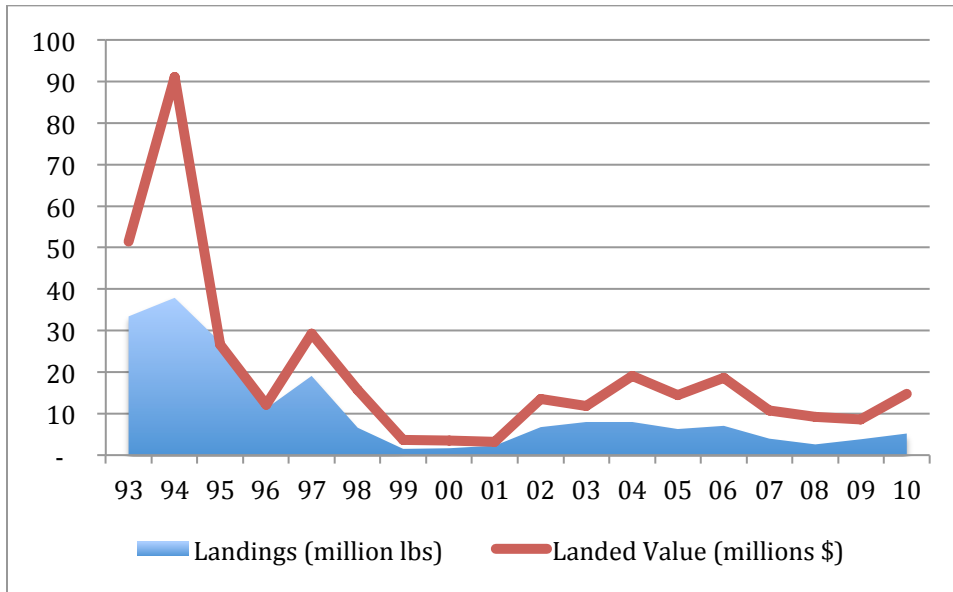


AT Licence Counts by Category



Troll Salmon Landings & Landed Value Trends

Source: DFO Catch Stats



Outlook

- The primary driver of value appreciation appears to be the Mitigation Fund, whereby the USA will retire BC troll licences as a Chinook conservation measure.
- Many participants expect the entire salmon fishery to convert to a quota management program in the future.
- Whether or not the speculation in the private licence market is warranted remains to be seen.

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>	247
<i>No. of Commercial Communal Lic's (not valued in this study)</i>	5 (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 2. Annual lease rate 3. Vessels
Amount of trading activity underlying valuation:	Low (transactions) High (lease)
Confidence in valuation:	Moderate (transactions) High (lease)

Current Valuation

Licence Value at March 31, 2011

Category	# Licences	Value/Licence (\$)	Total Value (\$)
Full Fee	195	125,000	24,375,000
Reduced Fee	52	110,000	5,720,000
All HS	247	121,842	30,095,000

Valuation Comments

- Prices dropped leading up to the valuation date. Prices in late 2010 and early 2011 were in the \$140,000-175,000 range.
- As the poor expectations leading up to the 2011 fishery were realized (low catches, weak market) demand for herring seine licences eroded.
- Values likely dropped as 2011 progressed, perhaps to as low as \$100,000 currently.

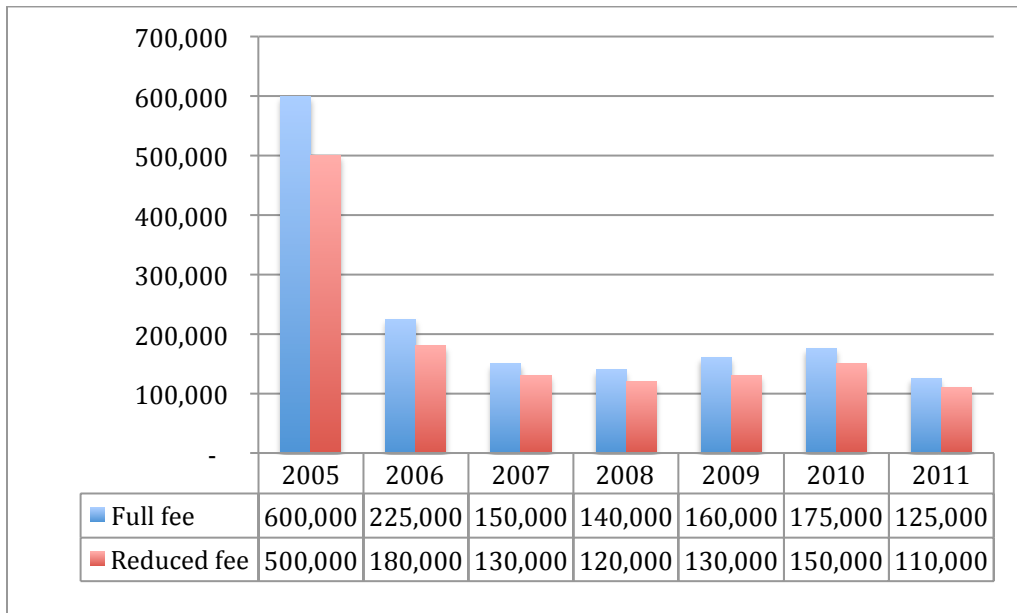
Vessel Value

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.

Herring Seine	# Vessels	Avg Vessel Value (\$)	Aggregate Value (\$)
Classic Style	35	215,000	7,525,000
Modern Style	105	733,000	76,965,000
<i>Total</i>	140 ⁷	603,500	84,490,000

Licensing Trends⁸

Recent HS Licence Valuations (\$)

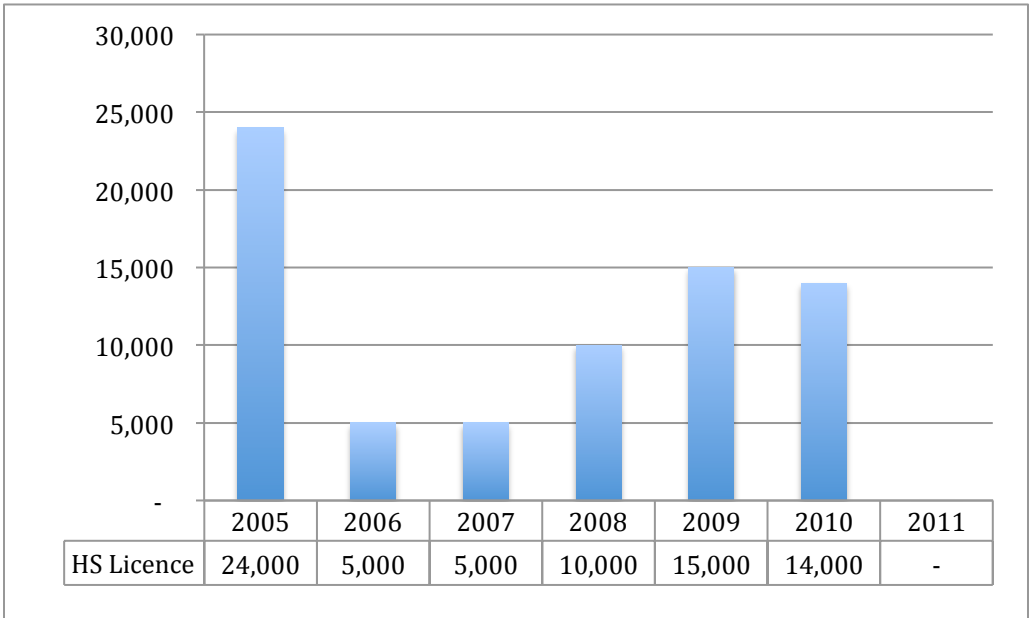


The low-level valuations for recent years reflect both low TACs for roe herring and relatively low fish prices.

⁷ The numbers of vessels and licences may not mesh; see Note on p. 9

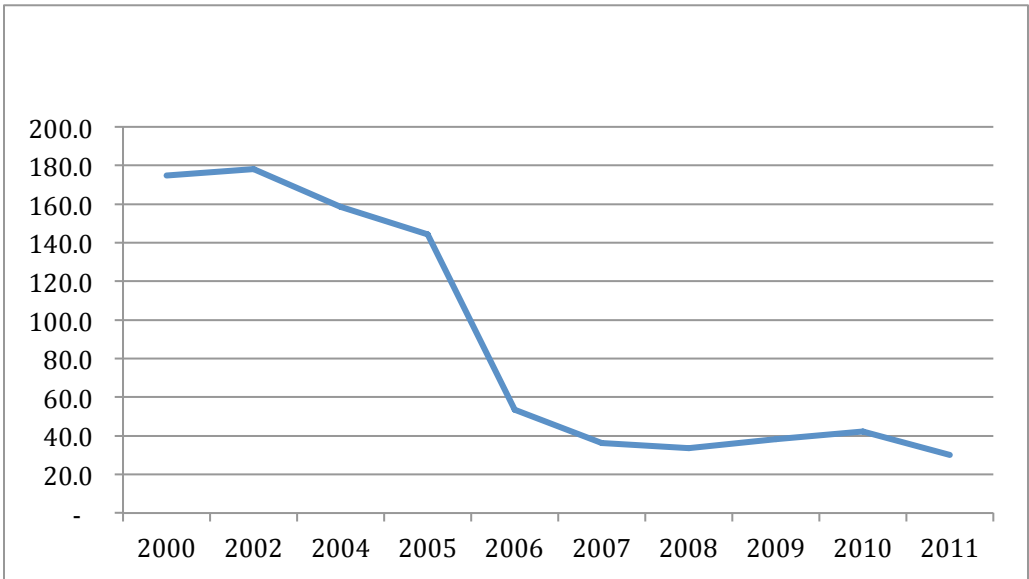
⁸ Values in charts are in nominal terms (not adjusted for inflation)

Recent HS Licence Lease Rates (\$)



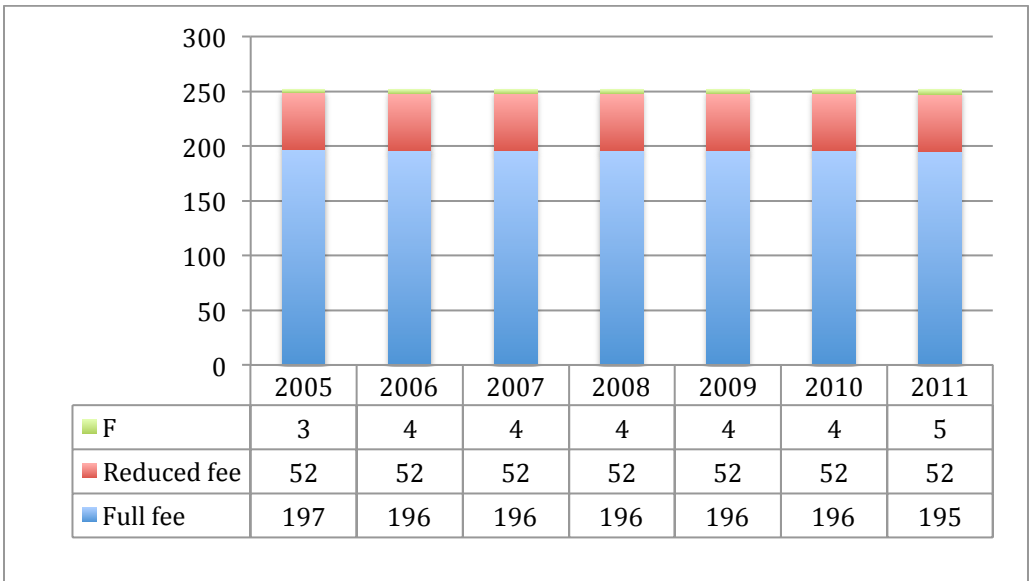
The HS licence lease rate has rallied from historic lows, though it remains far below historic levels.

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



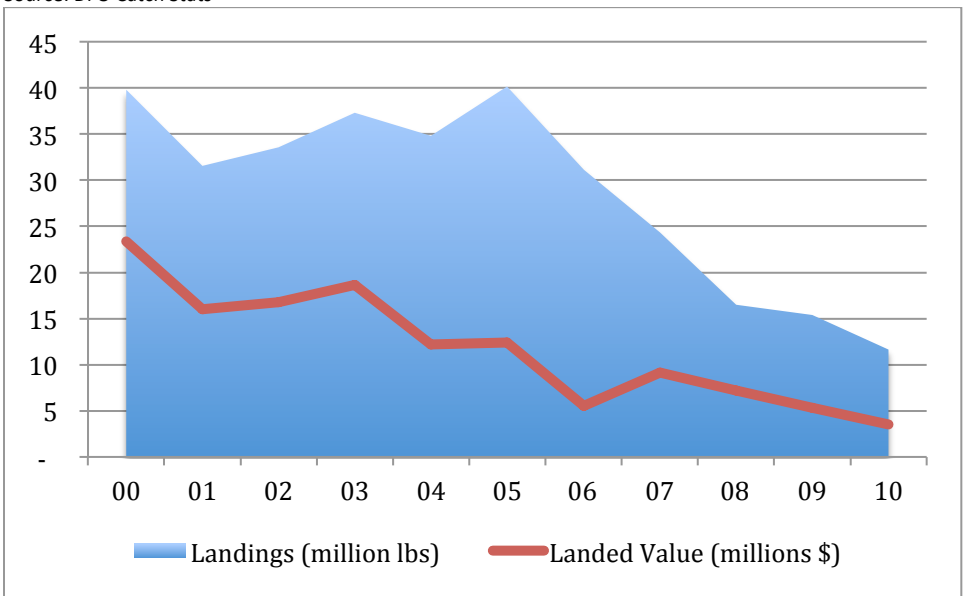
Values have stabilized, and firmed slightly, following a precipitous dip through the early 2000s.

HS Licence Counts by Category



Seine Roe Herring Landings & Landed Value Trends

Source: DFO Catch Stats



Outlook

- A combination of fish quality and weak market conditions made for an exceptionally poor season in 2011; not all of the available TAC was harvested.
- Herring abundance remains at low levels. The only fishery management areas providing regular opportunities are the Strait of Georgia and Prince Rupert District.
- Herring has become a relatively low margin fishery, where harvesters utilize multiple licences to make a worthwhile contribution to their operations.
- The 2011 season marked the low point of the roe herring fishery.
- The prospects for a rally, given the state of the Japanese market, are uncertain.

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>	1196
<i>No. of Commercial Communal Lic's (not valued in this study)</i>	72 (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 2. Annual lease rate 3. Vessels
Amount of trading activity underlying valuation:	Low (transactions) High (lease)
Confidence in valuation:	Moderate (transactions) High (lease)

Current Valuation

Licence Value at March 31, 2011

Category	# Licences	Value/Licence (\$)	Total Value (\$)
Full Fee	887	50,000	44,350,000
Reduced Fee	309	40,000	12,360,000
All HG	1196	47,416	56,710,000

Valuation Comments

- The market is weak for gillnet herring licences.
- Values range from \$40,000 to \$53,000 for full fee licences.
- After the poor 2011 season, values have no-doubt fallen from the \$50,000 pegged at the valuation date because of a very poor fishery in 2011.

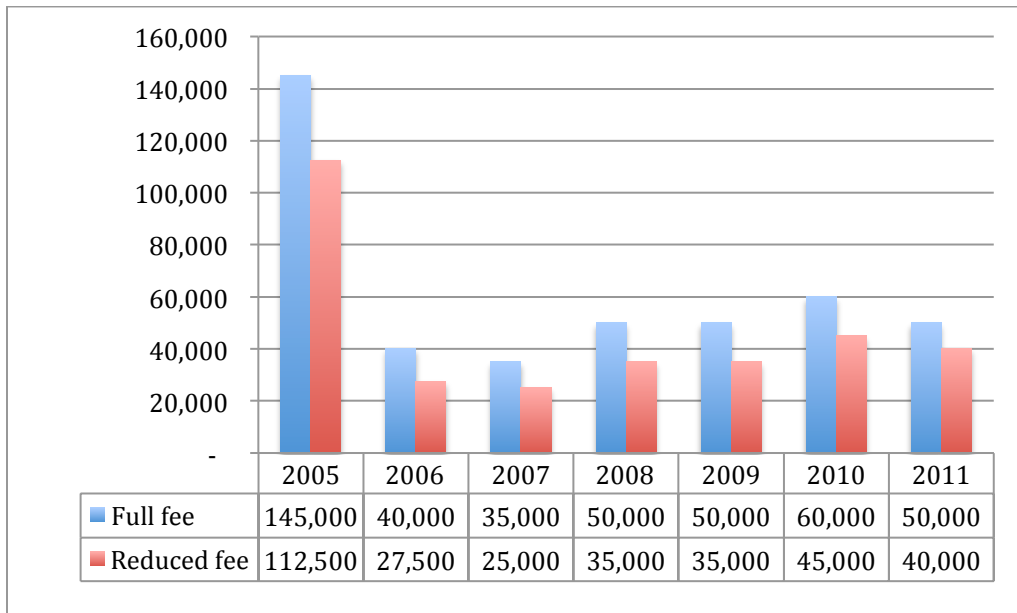
Vessel Value

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 ⁹	103,800	31,140,000

Licensing Trends¹⁰

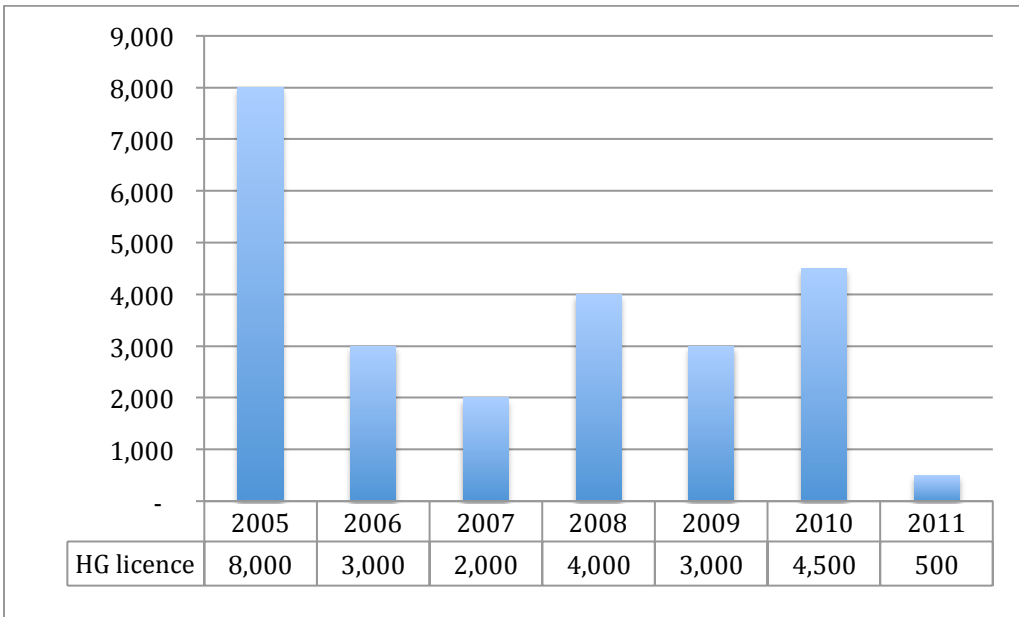
Recent HG Licence Valuations (\$)



⁹ The numbers of vessels and licences may not mesh; see Note on p. 9

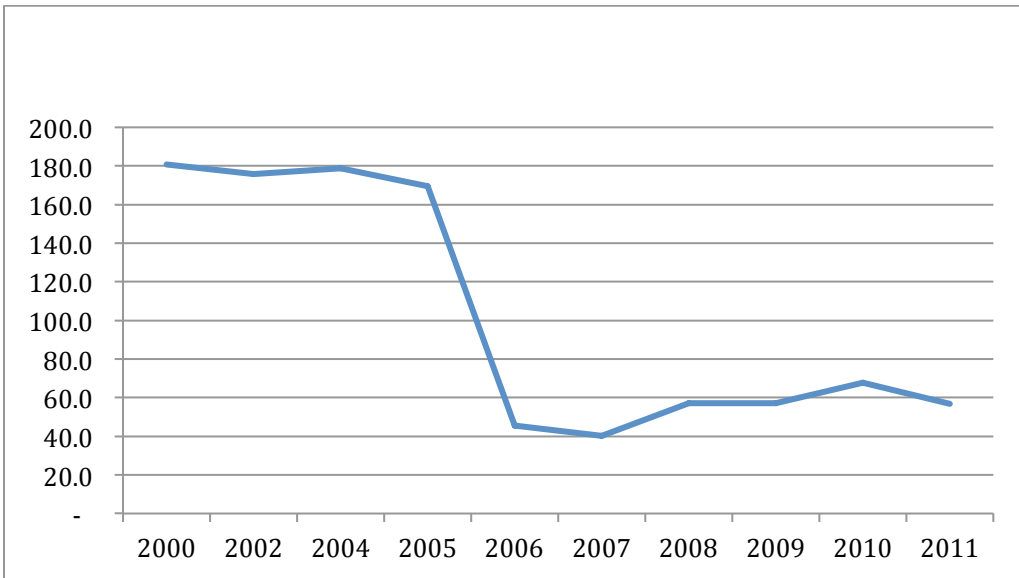
¹⁰ Values in charts are in nominal terms (not adjusted for inflation)

Recent HG Licence Lease Rates (\$)

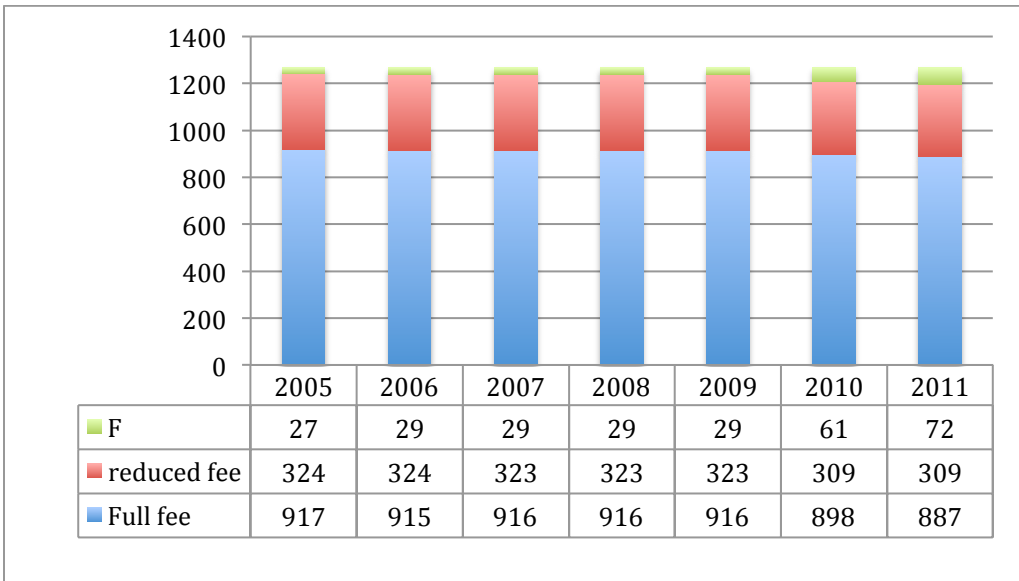


The lease rate dropped to a mere \$500 in 2011, reflecting poor fishery prospects.

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

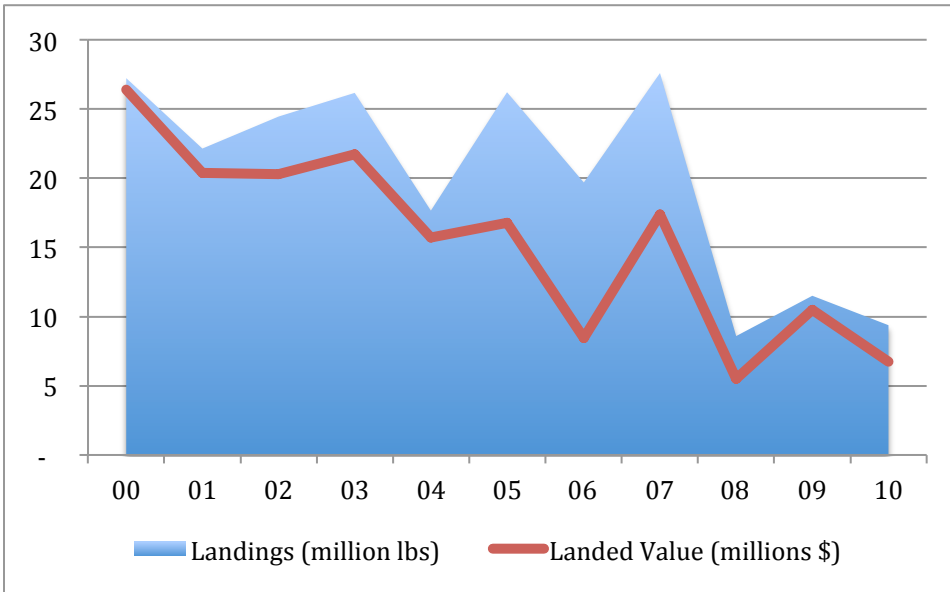


Licence Counts by Category



Gillnet Roe Herring Landings & Landed Value Trends

Source: DFO Catch Stats



Outlook

- A combination of fish quality and weak market conditions made for an exceptionally poor season in 2011; not all of the available TAC was harvested.
- Herring abundance remains at low levels. The only fishery management areas providing regular opportunities are the Strait of Georgia and Prince Rupert District.
- Herring has become a relatively low margin fishery, where harvesters utilize multiple licences to make a worthwhile contribution to their operations.
- With no immediate rebound in stocks expected, and given the maturity of the Japanese herring roe market, similar conditions can be expected to prevail for the foreseeable future.

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 Commercial Communal Lic's (not valued in this study)</i>	3 (FJ designation) An additional 7 FJ licences are issued annually to the Heiltsuk.
<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
Amount of trading activity underlying valuation:	None
Confidence in valuation:	Very Low

Current Valuation

Licence Value at March 31, 2011

Category	# Licences	Value/ Licence (\$)	Total Value (\$)
J Licences	36	275,000	9,900,000

Valuation Comments

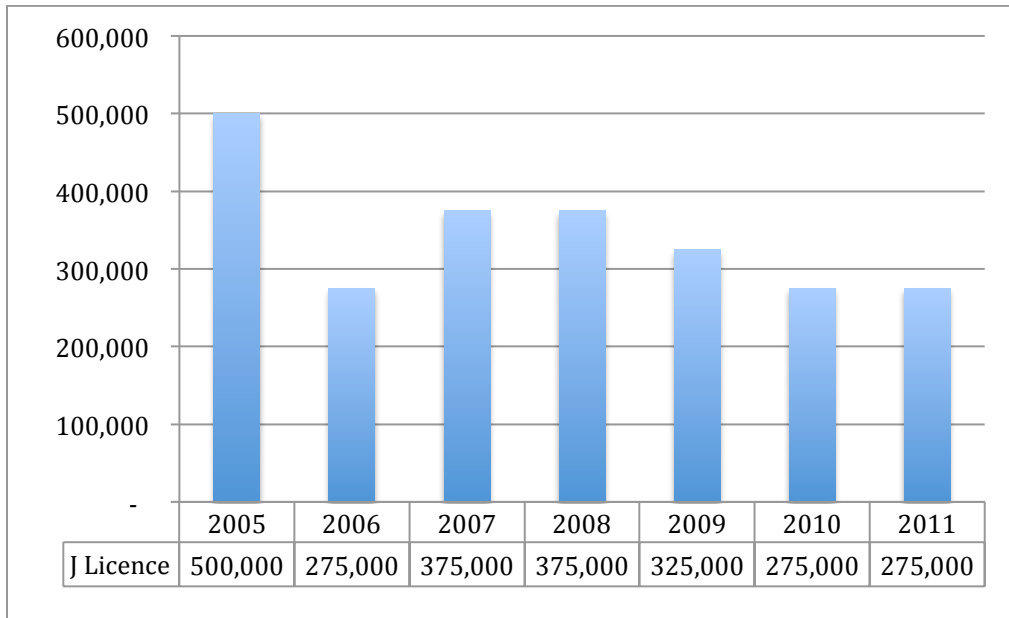
- No known transactions during the valuation period.
- Selected licences (depending on access to stocks and other factors) that are able to operate profitably may have substantially higher value.

Vessel Value

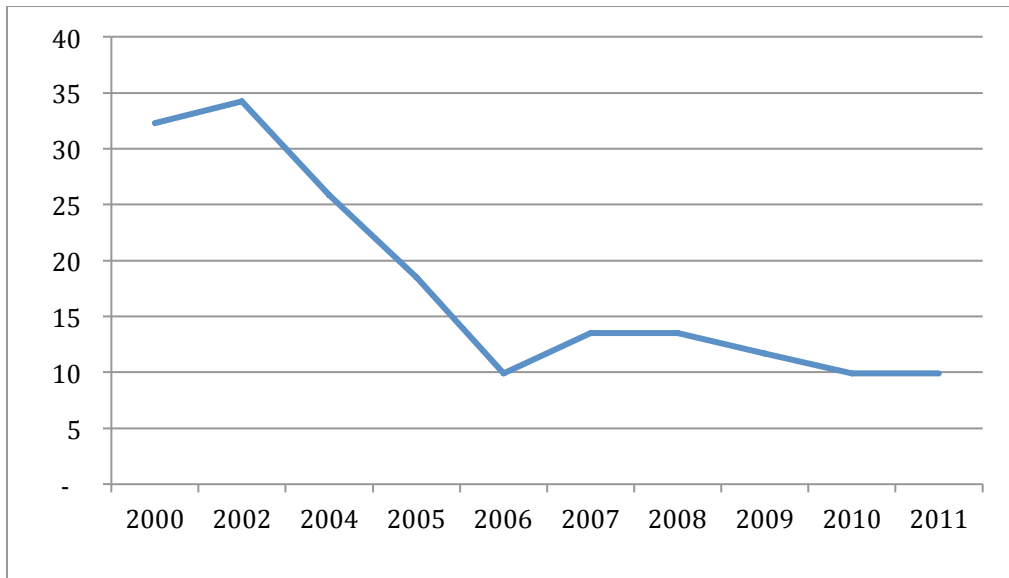
Not valued. There is no single vessel type associated with the spawn on kelp fishery, nor are licences assigned to a vessel.

Licensing Trends¹¹

Recent J Licence Valuations (\$)



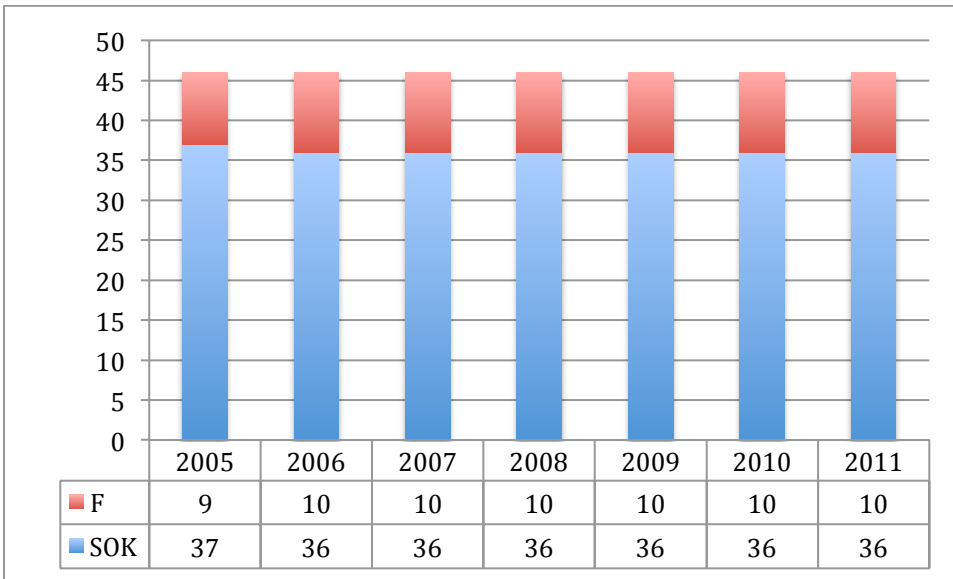
Aggregate Value of J Licences (\$ millions by year)



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

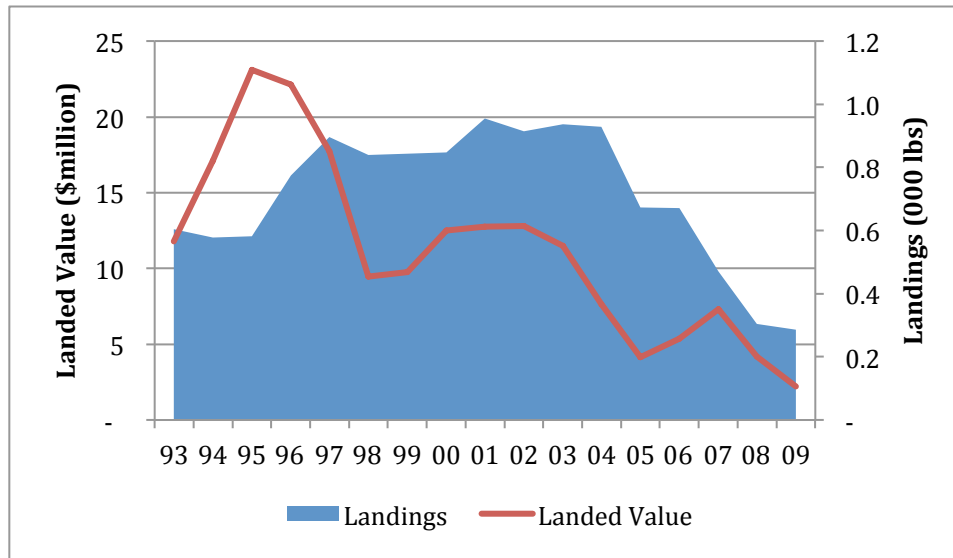
¹¹ Values in charts are in nominal terms (not adjusted for inflation)

J Licence Counts by Category



Spawn on Kelp Landings & Landed Value Trends

Source: DFO Catch Stats



Note: no new data for the 2010 season.

Outlook

- Prices for some operators were reported to rise this year, from \$4.25/lb last year to around the \$6.50 per pound level.
- The spawn on kelp fishery faces severe challenges due to increasing production from other areas (most notably Alaska), and an extremely limited market. In addition, low stock levels make it difficult for SOK operators to garner all allowable product.
- Because of poor economics, many licences were un-utilized or not fully utilized again in 2011.
- Though economic/resource conditions are generally challenging, some licence holders in some areas are able to operate profitably, given favorable stock conditions, production methods, and market access.
- The prospects for a rally in the spawn on kelp is highly uncertain.

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>	350
<i>No. of Commercial Communal Lic's (not valued in this study)</i>	85 (FL designation, Party-based)
<i>Licensing/Management Framework</i>	<p>Quota management system. 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). Vessel must hold a halibut licence to hold or fish halibut. 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>About 150 L-licensed vessels actively fish for halibut. Quotas have declined in recent years due to stock fluctuation and distribution.</p> <p>Quota in the 2011 management plan for the commercial fishery is 6.7 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) 2. Quota value per pound 3. Lease rate per pound 4. Vessels
Amount of trading activity underlying valuation:	<p>A moderate number of quota transactions (the # trades each year seems to decline)</p> <p>There is a high degree of leasing activity</p>
Confidence in valuation:	<p>Moderate (transactions)</p> <p>Moderate (lease)</p>

Current Valuation

Licence and Quota Value at March 31, 2011

Category	# Licences/ lbs quota	Value per Licence/ lb quota (\$)	Total Value (\$)
L	350	1,500	22,365,000
Quota	6,701,984	50.00	335,099,200
Total Value			357,464,200

Valuation Comments

- Average licence value pegged at \$63,900 (\$1,500 per foot x 42.6 average vessel length). Licences are generally sold with minimum quota.
- Quota value per pound pegged at \$50.00. Estimated range: \$48.00-55.00. Prices rose after the valuation period, reportedly to the \$57-60/lb range.
- Escalating quota prices appear to be fuelled by strong market conditions and fish prices, coupled with a scarcity of quota. Quota is in high demand in part because of demand from sectors outside the halibut fishery, including other groundfish categories, the recreational sector, and First Nations (through the PICFI program).
- Fish companies and fishermen continue to try to resist high quota purchases and lease prices, but with very limited success.

Vessel Value

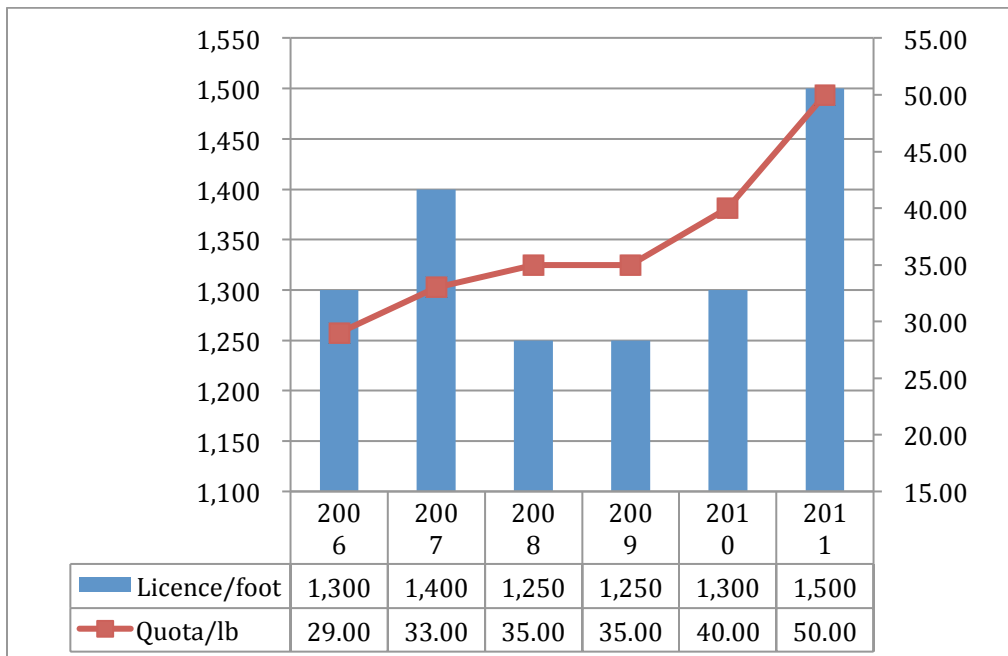
Fleet composition is arrived at by using past data as a baseline. By nature, fleet vessel valuation is very imprecise and results should be used for general purposes only.

Halibut	# Vessels	Avg Vessel Value (\$)	Aggregate Value (\$)
Classic Style	231	88,000	20,328,000
Modern Style	154	219,000	33,726,000
Total	385 ¹²	140,400	54,054,000

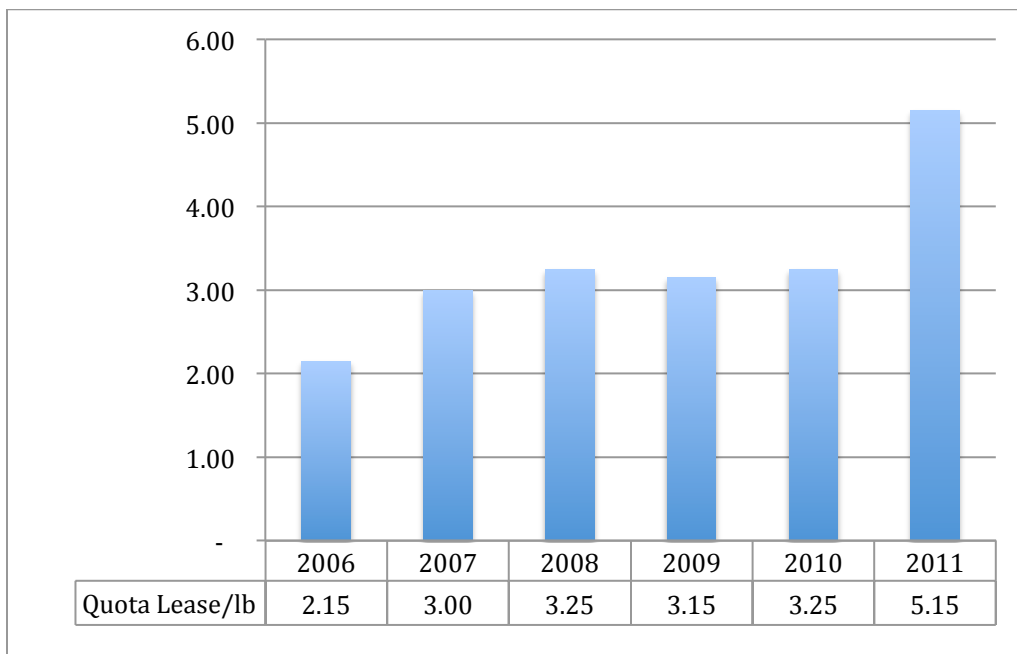
¹² The numbers of vessels and licences may not mesh; see Note on p. 9

License & Quota Trends¹³

Recent L Licence and Halibut Quota Valuations (\$)



Recent Halibut Quota Lease Rates (\$ per lb)

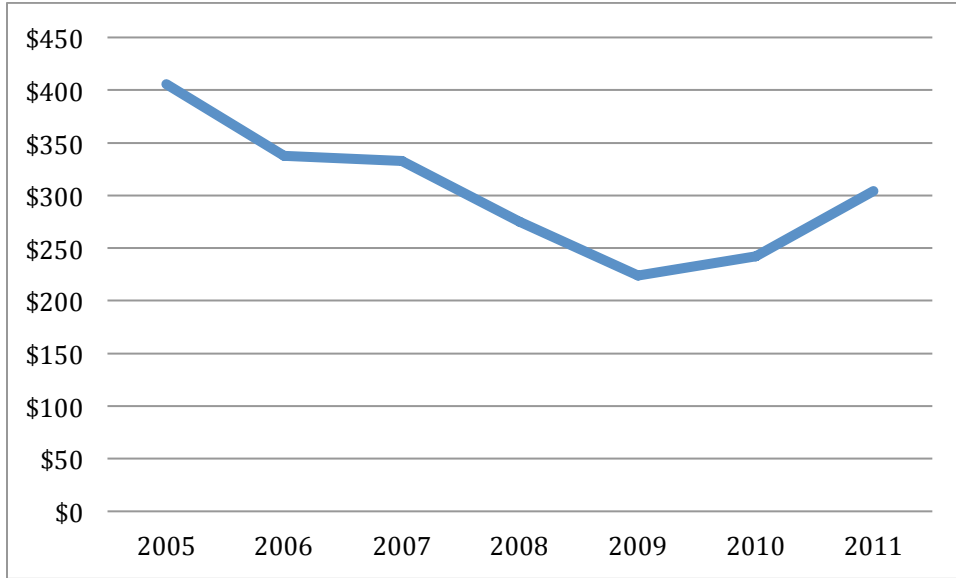


¹³ Values in charts are in nominal terms (not adjusted for inflation)

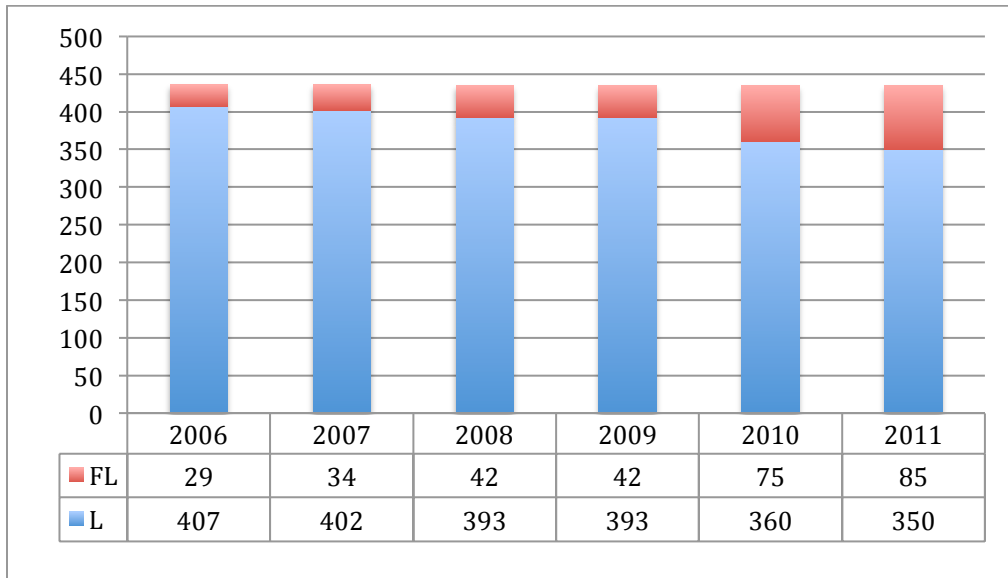
PACIFIC FLEET LICENCE, QUOTA, AND VESSEL VALUATION: AT MARCH 31, 2011

Quota lease price is pegged at \$5.15 at March 31, 2011. This rate reflects leases within the halibut sector for blocks of quota, with a range from \$5.00-5.50. Halibut quota is also leased in-season amongst halibut vessels, and to (and amongst) vessels in other groundfish sectors.

Aggregate Value of L Licences and Halibut Quota (\$ millions by year)¹⁴

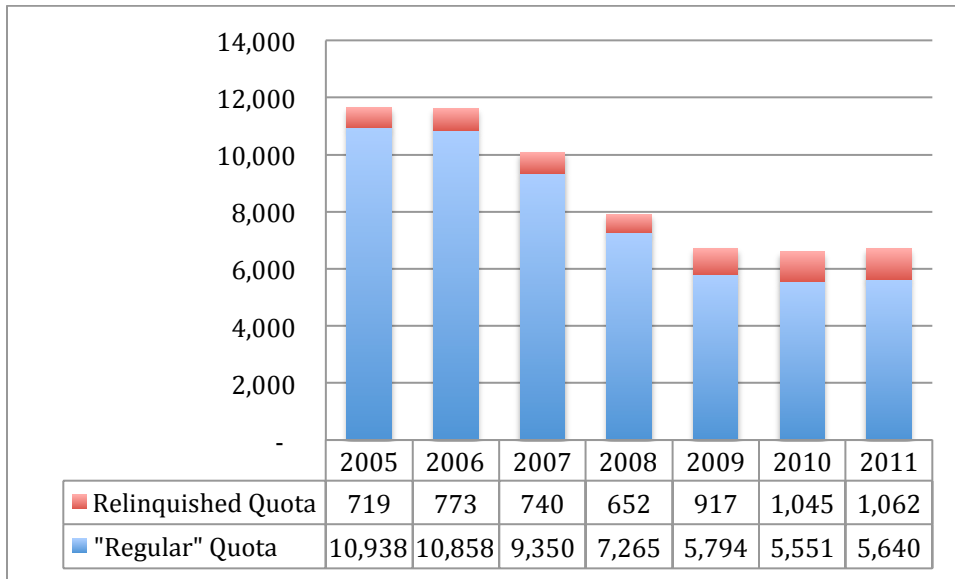


L Licence Counts by Category



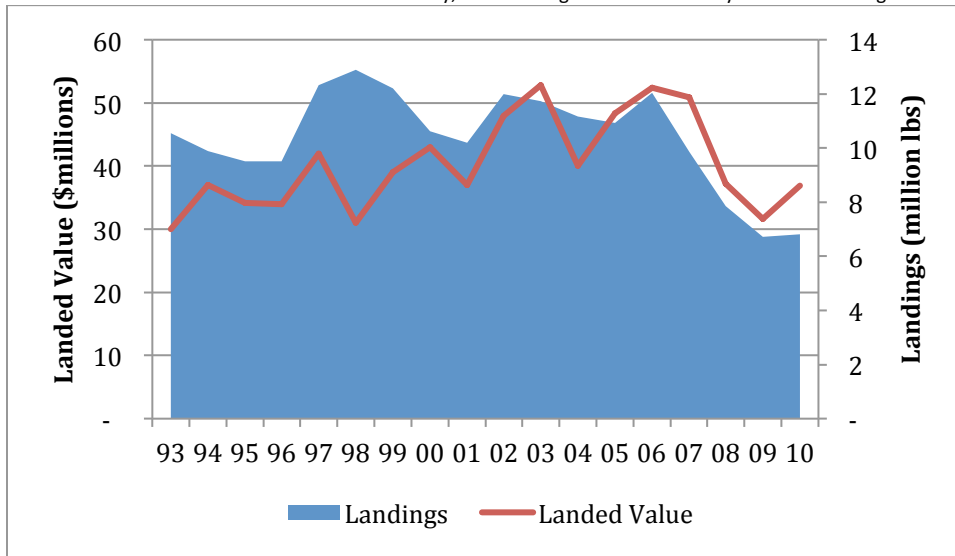
¹⁴ Excludes F licences and relinquished quota

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.



Outlook

- Fish prices were at record levels during the valuation period, resulting in rising IVQ and lease rate valuations.
- The BC halibut fishery received Marine Stewardship Council (MSC) certification during 2009. This provides 3rd party confirmation that the fishery is sustainably managed, and preserves/enhances marketing opportunities for BC product.
- Halibut quota is in high demand from First Nations seeking enhanced commercial fishery resource access.
- Whether or not recent inflation of IVQ prices and lease rates is a “bubble” due to burst, or reflective of robust business prospects remains to be seen.

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>	43
<i>No. of Commercial Communal Lic's (not valued in this study)</i>	5 (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 foot) 2. Quota value per pound 3. Lease rate per pound 4. Vessels
Amount of trading activity underlying valuation:	<p>Very few licence or quota transactions in the open market</p> <p>A substantial amount of leasing activity</p>
Confidence in valuation:	<p>Low (licence and quota transactions)—because of few transactions</p> <p>Low (lease)—because of the wide range in lease rates seen during the period</p>

Current Valuation

Licence and Quota Value at March 31, 2011

Category	# Licences/ lbs quota	Value per Licence/ lb quota (\$)	Total Value (\$)
K Licence	43	200,000	8,600,000
Quota	3,043,230	55.00	167,377,650
Total Value			175,977,641

Valuation Comments

- Average licence value pegged at \$200,000.
- Quota value per pound pegged at \$55.00, with the very few transactions reported clustered around that value.
- In the months following the valuation date the quota price rose to the \$60.00/lb range.
- Sablefish quota value is considered to be very similar to halibut.
- Fewer transactions apparent than in prior years (continuation of a trend). The low level of transactions is not seen as reflecting poor prospects, but rather, the relatively tight holdings pattern of quota.

Vessel Value

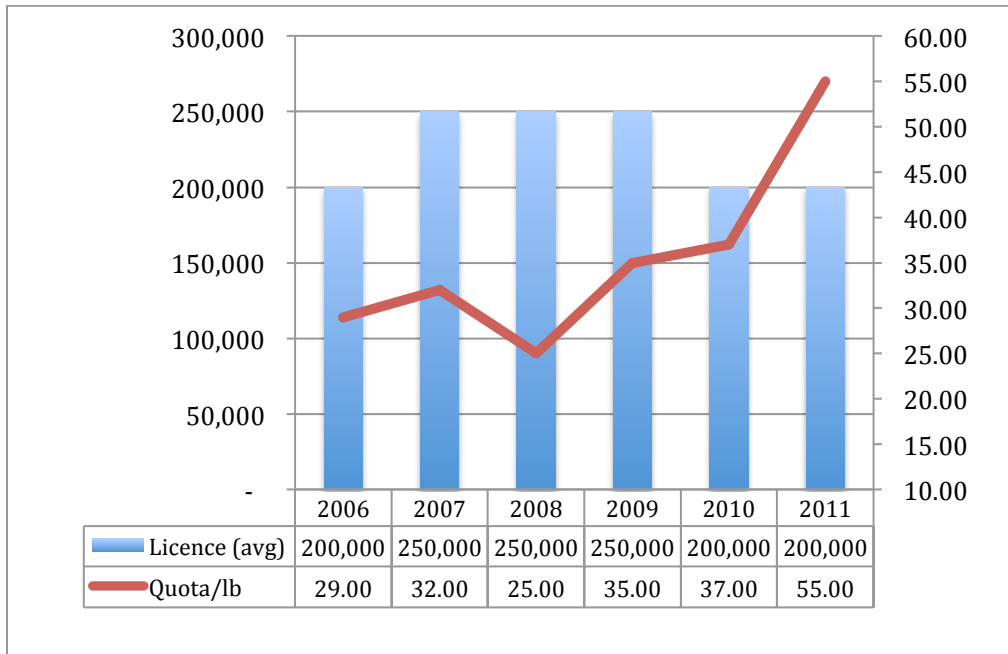
Fleet composition is arrived at by using past data as a baseline. By nature, fleet vessel valuation is very imprecise and results should be used for general purposes only.

Sablefish	# Vessels	Avg Vessel Value (\$)	Aggregate Value (\$)
Classic Style	24	188,000	4,512,000
Modern Style	24	825,000	19,800,000
<i>Total</i>	48 ¹⁵	506,500	24,312,000

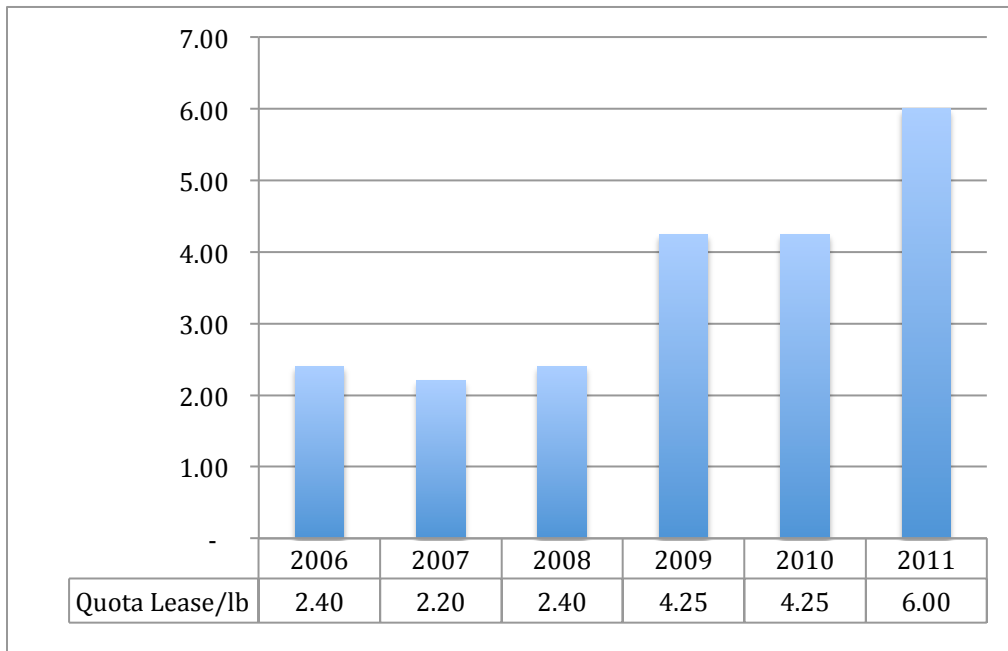
¹⁵ The numbers of vessels and licences may not mesh; see Note on p. 9

License & Quota Trends¹⁶

Recent K Licence and Sablefish Quota Valuations (\$)



Recent Sablefish Quota Lease Rates (\$ per lb)

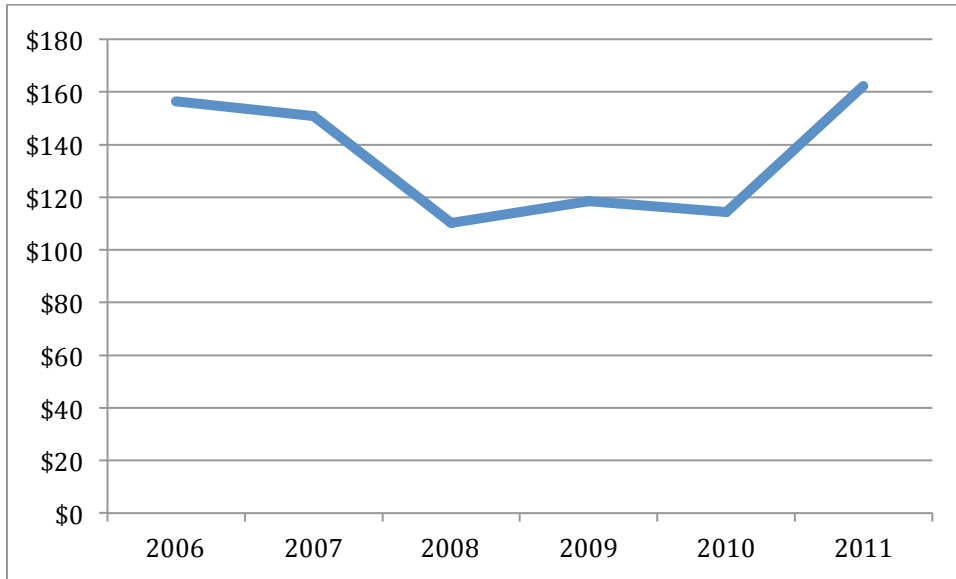


¹⁶ Values in charts are in nominal terms (not adjusted for inflation)

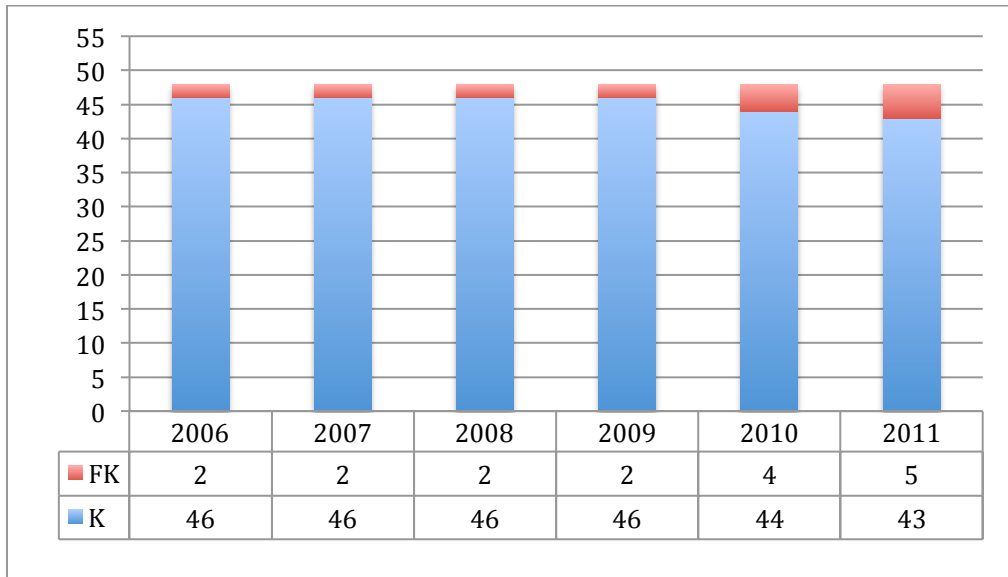
PACIFIC FLEET LICENCE, QUOTA, AND VESSEL VALUATION: AT MARCH 31, 2011

Lease rates ranged from \$3.75 (prior to the commencement of the season) to \$4.60, with a pegged value of \$4.25. There is leasing both within the sablefish sector, and to other groundfish sectors. Lease rates for longline fishing (often, small increments of quota) may be at higher rates than larger blocks of quota leased within the “K fleet.”

Aggregate Value of K Licences and Sablefish Quota (\$ millions by year)¹⁷

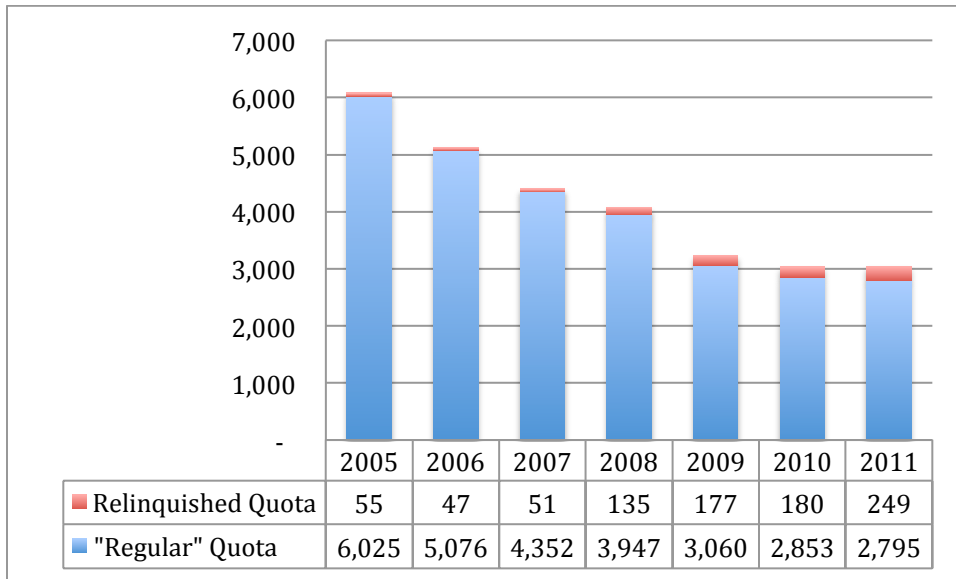


K Licence Counts by Category



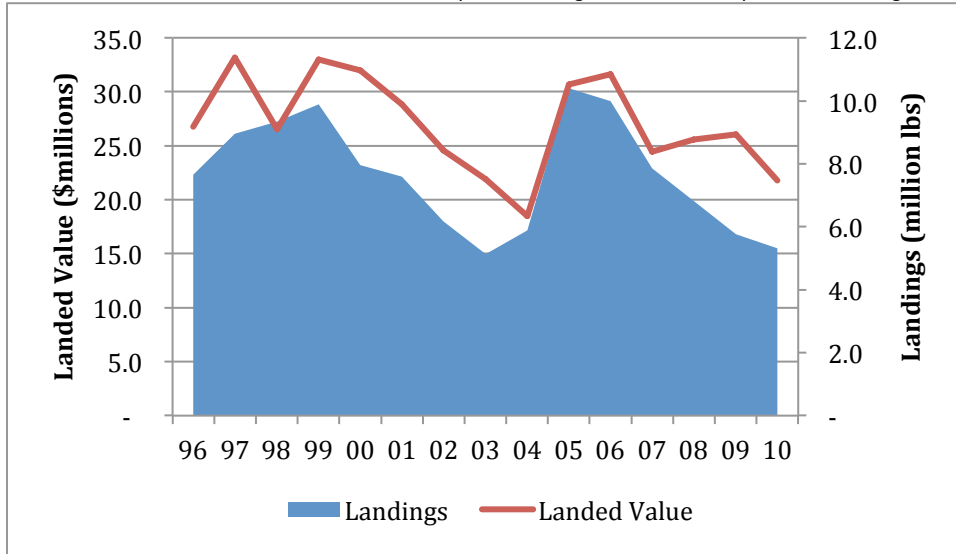
¹⁷ excludes F licences and relinquished quota

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



Sablefish Landings & Landed Value Trends

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



Note that the 2006 data point appears to be incorrect (too high). Sablefish seasons straddle calendar years and at times exceed a 12-month period. The actual trend for the last few years should be a gradual decline, reflecting reductions in sablefish TAC.

Outlook

- Conditions in the sablefish fishery closely mirror those in the halibut fishery.
- Fish prices were at record levels during the valuation period, resulting in rising IVQ and lease rate valuations.
- The BC sablefish fishery is Marine Stewardship Council (MSC) certified. This provides 3rd party confirmation that the fishery is sustainably managed, and preserves/enhances marketing opportunities for BC product.
- Though traditionally reliant on the Japanese market, BC sablefish is making inroads in a host of other domestic and export markets.
- Sablefish quota is in high demand from First Nations seeking enhanced commercial fishery resource access.
- Whether or not recent inflation of IVQ prices and lease rates is a “bubble” due to burst, or reflective of robust business prospects remains to be seen.

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>	55
<i>No. of Commercial Communal Lic's (not valued in this study)</i>	nil
<i>Licensing/Management Framework</i>	<p>Area Licensing: three areas, the north coast, WCVI, and inside waters of Vancouver Island. Each of the 55 “G” licence eligibilities selects an area annually. The number of licence eligibilities fishing each area may change annually according to the proportion of the total quota assigned to each area.</p> <p>Licence stacking allowed, 3 licences maximum per vessel.</p> <p>Quota management – each licence may harvest 1/55 of the total quota, or 62,500 lbs in 2011. Quotas unchanged last several years.</p>
<i>Additional Information</i>	<p>Dive fishery.</p> <p>39 vessels currently operating the 55 licences. Quotas not divisible.</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. G licence 2. Annual lease rate 3. Vessels
Amount of trading activity underlying valuation:	<p>Low (transactions)</p> <p>Low-Moderate (lease)</p>
Confidence in valuation:	<p>Low (transactions)—because of lack of open market transactions</p> <p>Low (lease)—because of limited data and wide variety of arrangements</p>

Current Valuation

Licence Value at March 31, 2011

Category	# Licences	Value/ Licence (\$m)	Total Value (\$)
G Licences	55	3.25	178.8

Valuation Comments

- Licence value is pegged at \$3.25 million, the same level as last year.
- There are anecdotal reports that the PICFI program relinquished three G licences around the valuation date, but the price level is unknown at this time.
- No other transaction information was unearthed.

Vessel Value

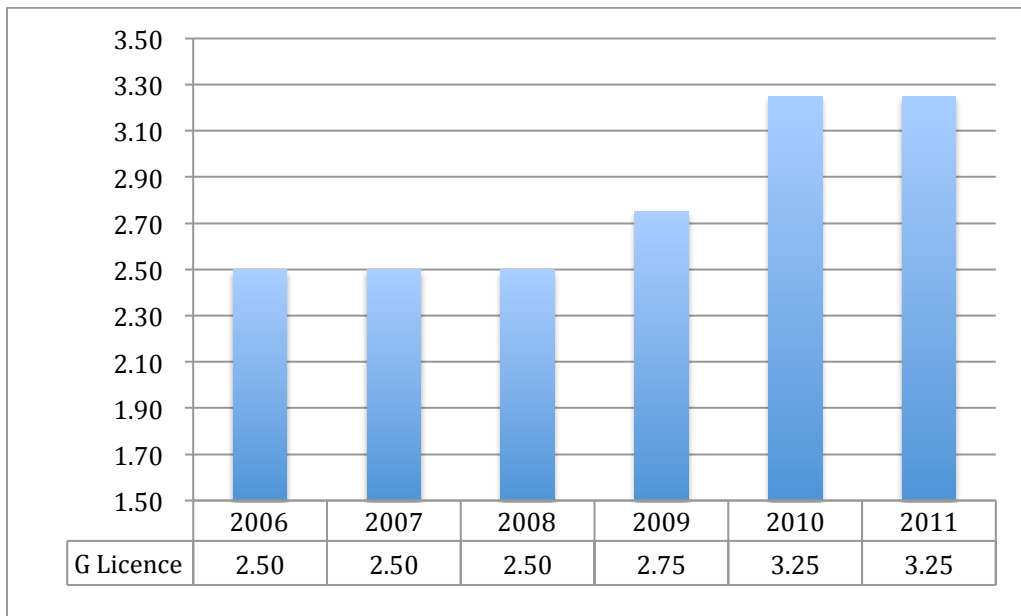
Fleet composition is arrived at by using past data as a baseline. By nature, fleet vessel valuation is very imprecise and results should be used for general purposes only.

Geoduck	# Vessels	Avg Vessel Value (\$)	Aggregate Value (\$)
Classic Style	23	63,000	1,449,000
Modern Style	16	188,000	3,008,000
<i>Total</i>	39 ¹⁸	114,282	4,457,000

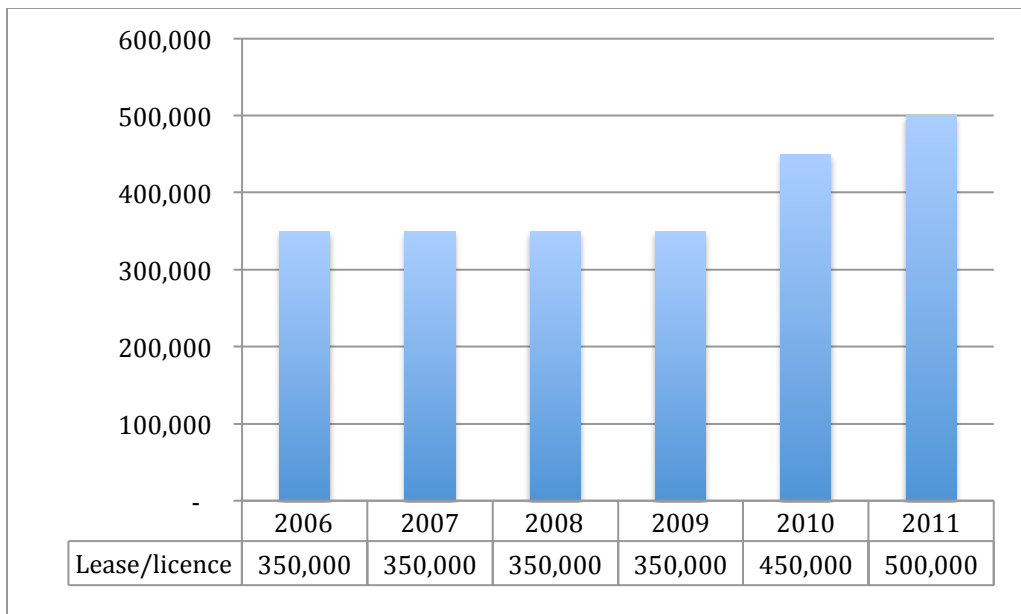
¹⁸ The numbers of vessels and licences may not mesh; see Note on p. 9

Licensing Trends¹⁹

Recent G Licence Valuations (\$ millions)



Recent G Licence Lease Rates (\$)

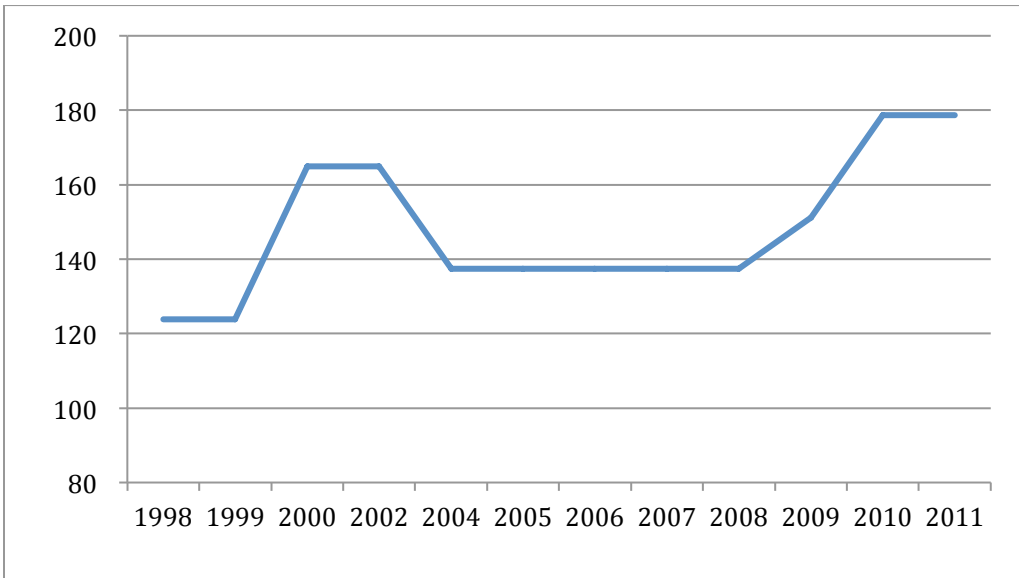


A lease rate of \$500,000 is pegged for G licences. Leases generally take the form of profit sharing arrangements. The increase from prior years is based on higher revenues arising from

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

improved fish prices. A variety of leasing and a scarcity of quality information make a precise valuation difficult.

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

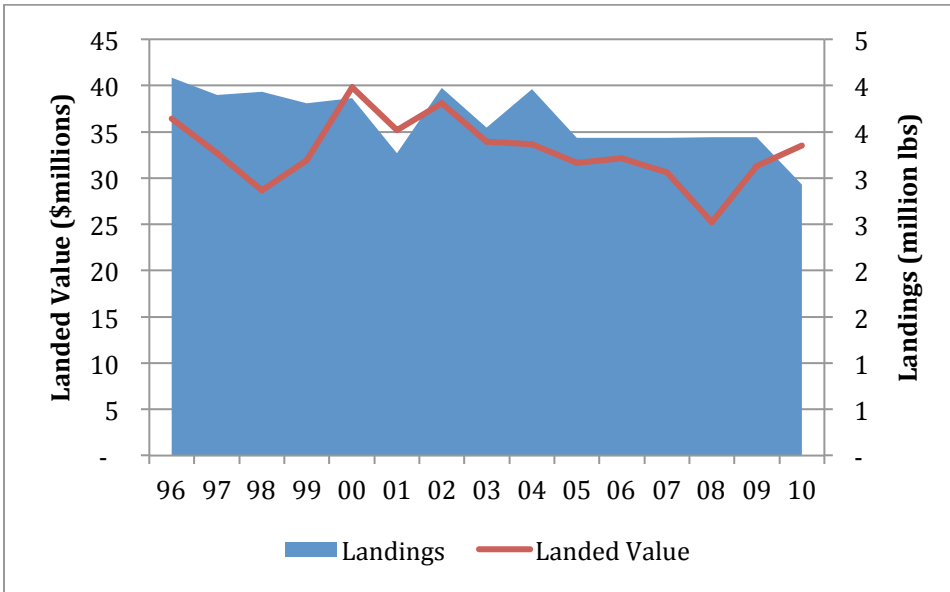


G Licence Counts by Category

No chart shown: all 55 licences are category G.

Geoduck Landings & Landed Value Trends

Source: DFO Catch Stats



Outlook

- Lack of access to capital for potential purchasers has remained an impediment to a higher frequency of transactions. Fishing licences are not considered strong security by potential lenders, and few potential purchasers can summon the funds to purchase a G licence.
- The Underwater Harvester's association is developing a proposal to split G licences into a number of sub-segments. If this proposal is adopted, this could improve the marketability of these licences and further enhance their market value.
- Growth in Mexican geoduck exports is a concern. BC geoduck marketers are focusing on product quality in order to differentiate themselves in the marketplace.
- The primary challenges to continued resource access are the potential proliferation of marine parks and protected areas, thus displacing geoduck fishing grounds, and the growth in sea otter populations. Sea otter predation on the West Coast of Vancouver Island has already caused some geoduck licences to re-locate to other areas.
- Stock enhancement activities by the Underwater Harvester's Association are intended to offset resource access erosion as described above.

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>	228
<i>No. of Commercial Communal Lic's (not valued in this study)</i>	16 (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
Amount of trading activity underlying valuation:	Few transactions reported
Confidence in valuation:	Low to moderate

Current Valuation

Licence Value at March 31, 2011

Category	# Licences	Value/ Foot (\$)	Total Value (\$)
S Licences	228	600	5,608,800

Valuation Comments

- Average licence pegged at \$24,600 (\$600/ft x 41 foot average vessel length). Licence values range from \$450-850 per foot. The range in transactions reflects a wide variety of vessel/licence sizes and types.
- That the valuation has risen from the prior year level of \$450/ft is more reflective of greater general prosperity and optimism in the industry than it is an indication of improving results in the shrimp trawl fishery.

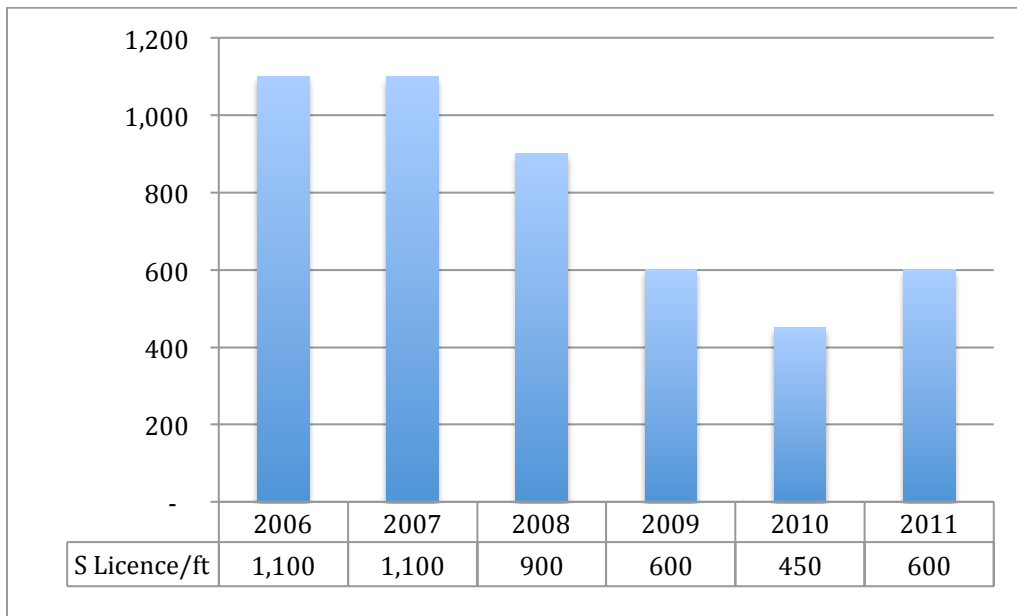
Vessel Value

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.

Shrimp Trawl	# Vessels	Avg Vessel Value (\$)	Aggregate Value (\$)
Classic Style	160	43,000	6,880,000
Modern Style	69	133,000	9,177,000
<i>Total</i>	229 ²⁰	70,118	16,057,000

Licensing Trends²¹

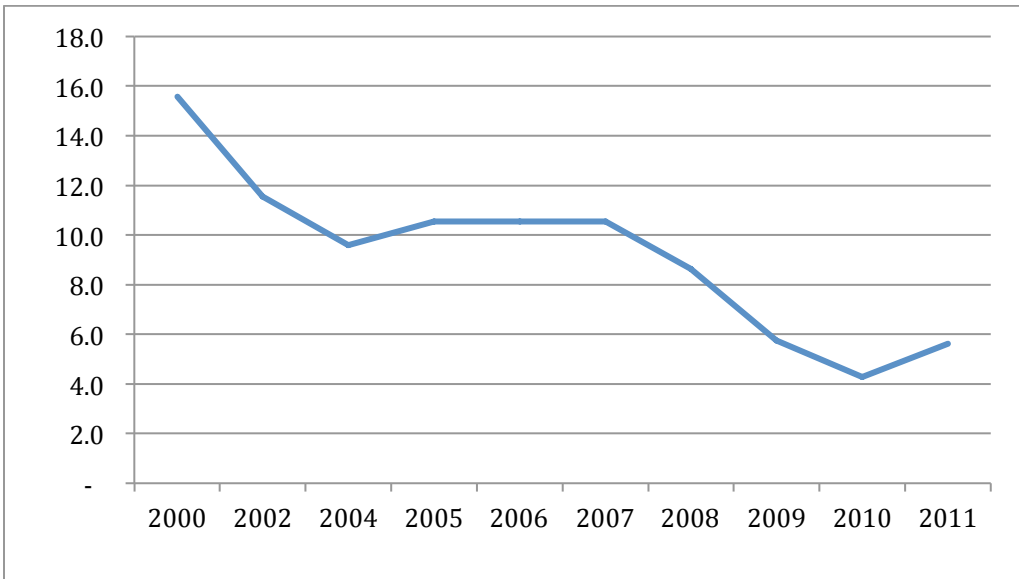
Recent S Licence Valuations (\$)



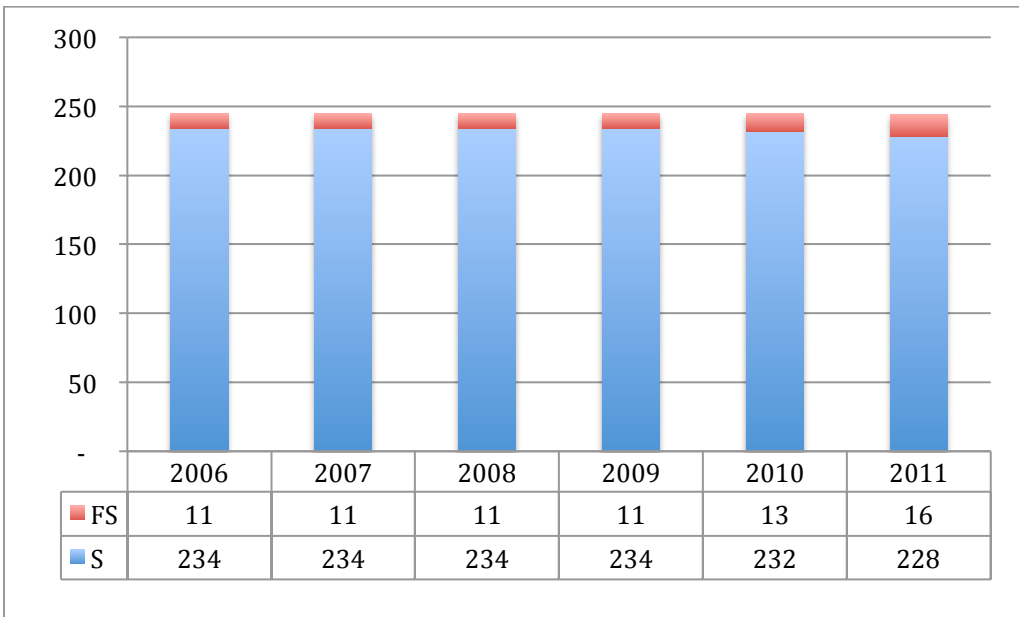
²⁰ The numbers of vessels and licences may not mesh; see Note on p. 9

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

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

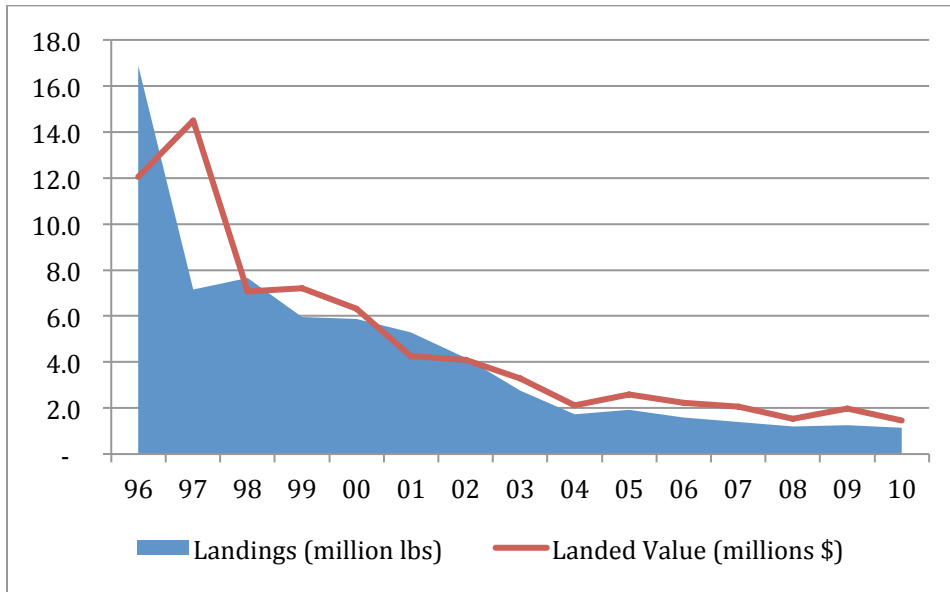


S Licence Counts by Category



Shrimp Landings & Landed Value Trends

Source: DFO Catch Stats



Outlook

- The fundamentals of the shrimp fishery continue to be poor. Only a small portion of the fleet actively participates in the fishery.
- Shrimp is a labour intensive fishery and product prices are low.
- International competition is strong.
- Industry has yet to devise and implement a turnaround strategy to improve the prospects for this fishery.

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>	199
<i>No. of Commercial Communal Lic's (not valued in this study)</i>	52 (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
Amount of trading activity underlying valuation:	Low activity in the licence market Leasing activity is moderate
Confidence in valuation:	Low (transactions). A more confident valuation is confounded by the fact that multiple assets are often involved and apportionment of values can be arbitrary. Also, there were few private market transactions during the valuation period. High (lease)

Current Valuation

Licence Value at March 31, 2011

Category	# Licences	Value/ Foot (\$)	Total Value (\$)
W Licences	199	15,000	108,952,500

Valuation Comments

- Average licence value pegged at \$547,500 (\$15,000/ft x 36.5 foot average vessel length). Licence values range from \$14,000-17,000 per foot.
- Many view prawn licence values on a per-licence (rather than per-foot) basis; licences tend to be in the \$550,000 ballpark, regardless of length. This implies a higher per-foot value for shorter licences than longer one.
- The 2011 fishing season saw improved ex-vessel prices, so licence values may have risen to the \$17,000 per foot level in the months following the valuation date.
- PICFI/ATP were reasonably active, with 16 retirements in the valuation period. Few private market transactions were unearthed.

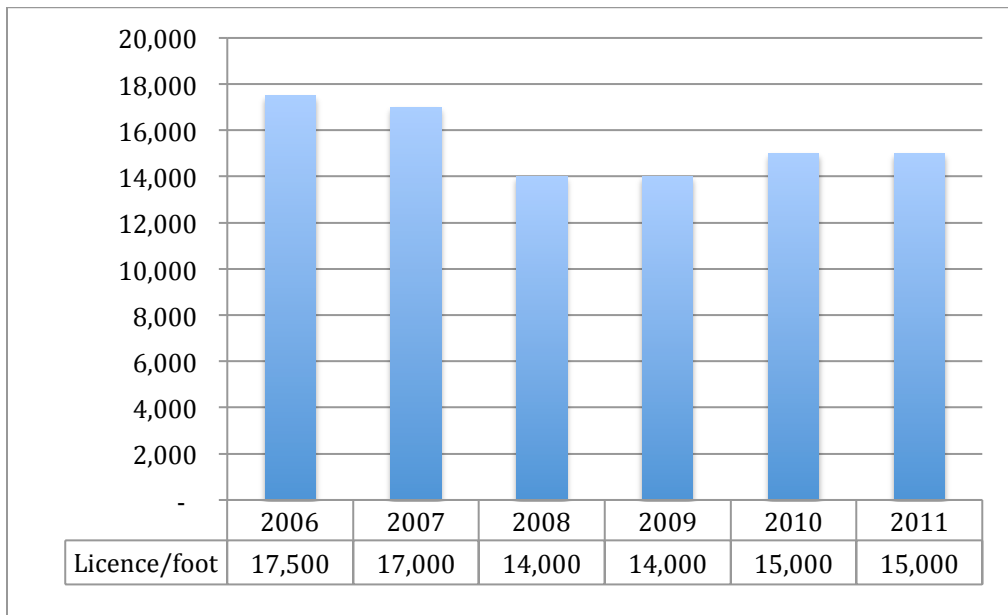
Vessel Value

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.

Prawn	# Vessels	Avg Vessel Value (\$)	Aggregate Value (\$)
Classic Style	112	110,000	12,320,000
Modern Style	113	230,000	25,990,000
<i>Total</i>	225 ²²	170,267	38,310,000

Licensing Trends²³

Recent W Licence Valuations (\$)



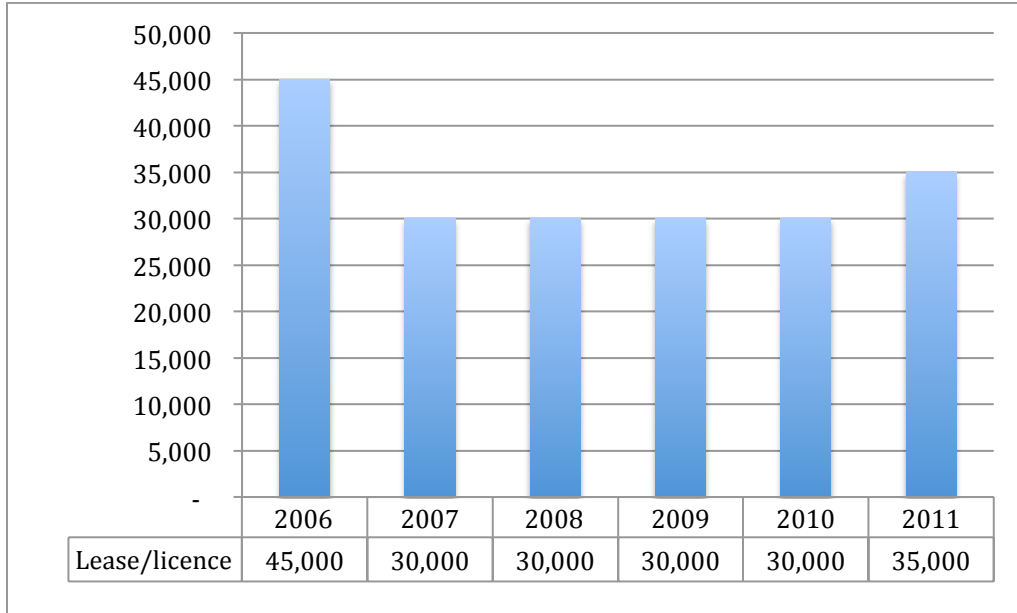
²² The numbers of vessels and licences may not mesh; see Note on p. 9

²³ Values in charts are in nominal terms (not adjusted for inflation)

PACIFIC FLEET LICENCE, QUOTA, AND VESSEL VALUATION: AT MARCH 31, 2011

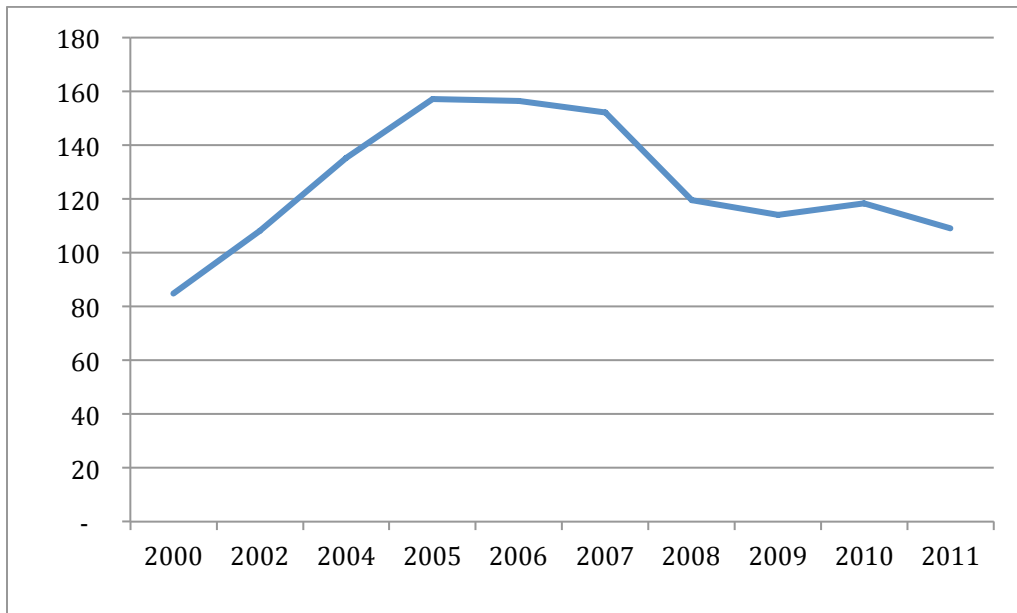
The drop in values in 2008 is linked to a reduction in prices for BC spot prawns in the Japanese market. Licence values have firmed somewhat since, as a result of either improving catch levels, ex-vessel prices, or both.

Recent W Licence Lease Rates (\$)

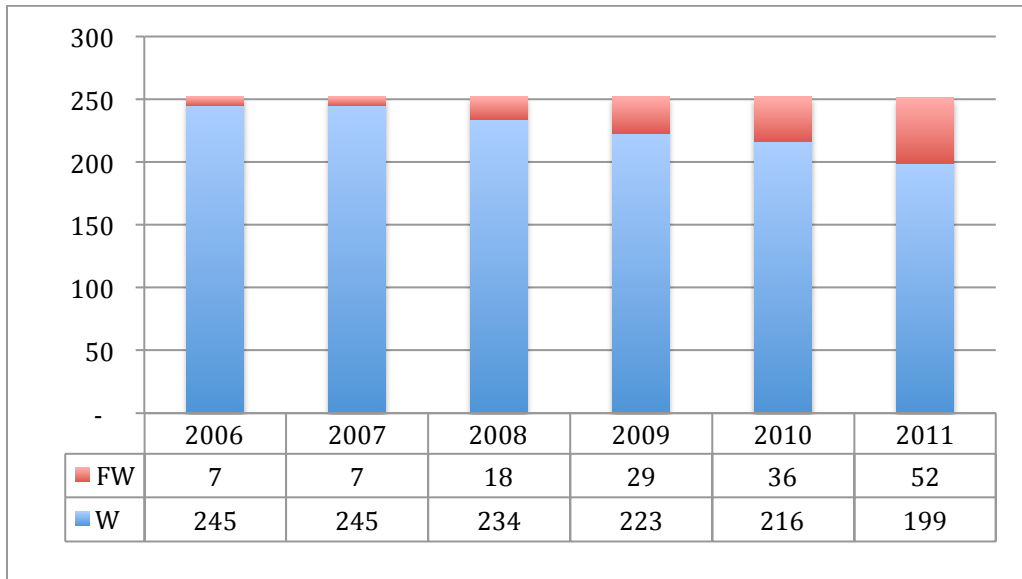


Lease rate in 2011 is pegged at \$35,000 per licence. Lease rates range from \$30,000-40,000.

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

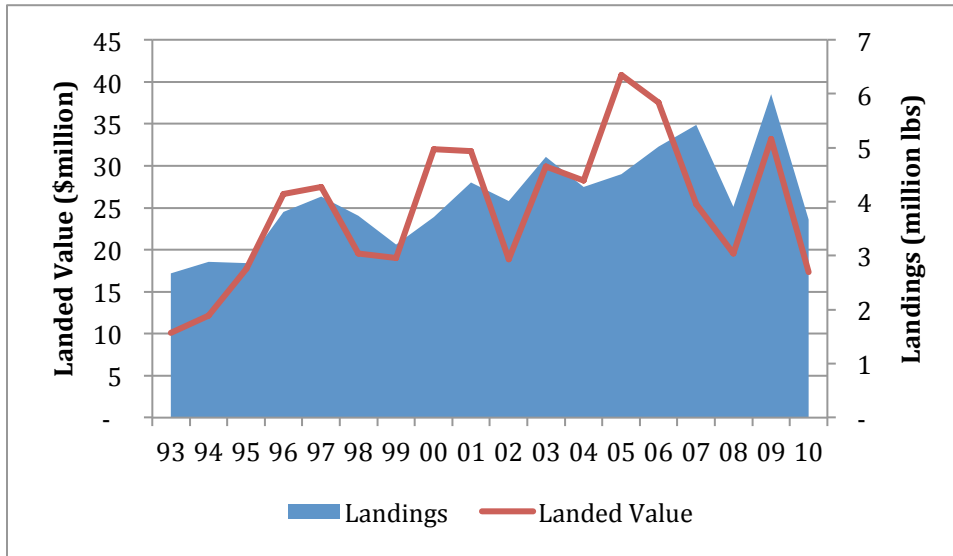


W Licence Counts by Category



Prawn Landings & Landed Value Trends

Source: DFO Catch Stats



Outlook

- Ex-vessel prices for the 2011 season seem to have improved over 2010 levels, to about \$7.50 per pound.
- BC spot prawns are recognized as a sustainable fishery by certain eco-groups, creating marketing opportunities.
- Once almost totally reliant on the Japanese market, the Prawn sector has diversified its market channels and now enjoys high profile in local, domestic, and other export markets.
- Growth in recreational sector prawn fisheries are a concern for the commercial sector.

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>	139
<i>No. of Commercial Communal Lic's (not valued in this study)</i>	3 (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 quota b. Offshore hake c. Gulf hake d. Arrowtooth flounder 3. Lease rate per pound for above quotas 4. Vessels
Amount of trading activity underlying valuation:	Very few licence or quota transactions during the valuation period High (lease)
Confidence in valuation:	Low for all categories due to a lack of transactions Moderate (leases)

Current Valuation

Licence and Quota Value at March 31, 2011

Category	# Licences/ lbs quota, millions	Value per Foot/ lb quota (\$)	Total Value (\$ thousands)
T	139	\$1,500	13,136
Uncut quota	92,400	\$1.35	124,740
Hake outside	226,743	\$0.65	147,383
Hake gulf	18,594	\$-	-
Arrowtooth	39,500	\$-	-
Total Value			285,259

Valuation Comments

- Average licence value pegged at \$94,500 (\$1,500 per foot x 63 foot average vessel length). Licence values range from \$1,000-1,500 per foot, depending on length, the holdings cap associated with the licence, and the needs of the parties.
- Licence values are up this year reflecting somewhat of a rebound in the results and prospects for this fishery.
- Uncut quota value pegged at \$1.35 per pound, ranging from \$1.15 to \$1.50.
- Some sources believe that improving circumstances in the fishery have caused uncut quota values to rise beyond the \$1.50 per lb level.
- Hake quota (offshore) value pegged at \$0.65 per pound, with transactions in the \$0.60-0.70 range.
- Arrowtooth flounder and gulf hake are accorded no value, since there appears to be limited marketability for these species.

Vessel Value

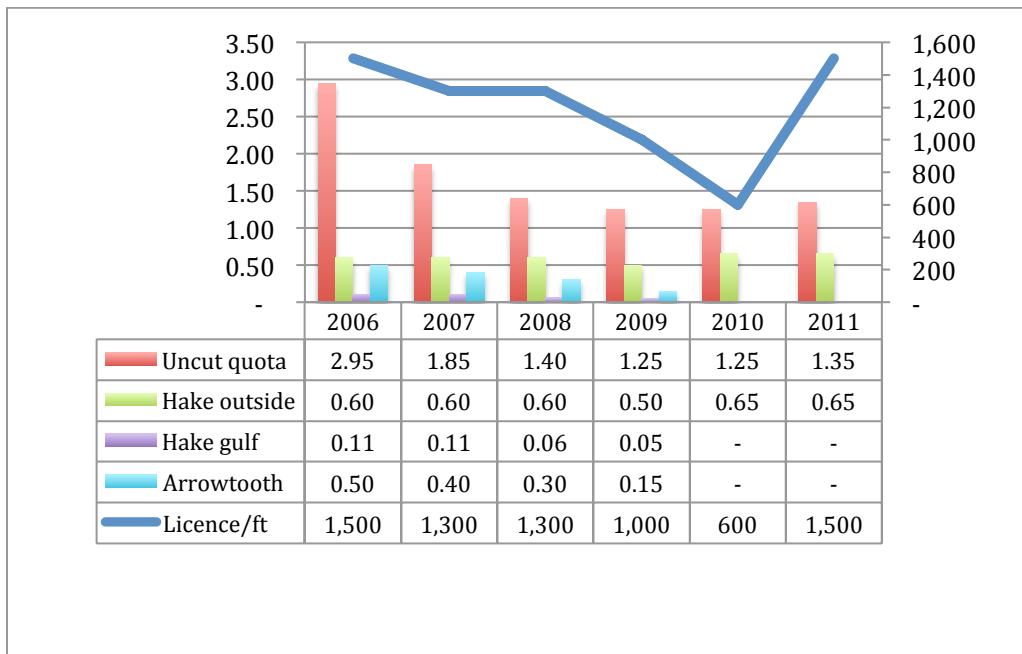
Fleet composition is arrived at by using past data as a baseline. By nature, fleet vessel valuation is very imprecise and results should be used for general purposes only.

Trawl	# Vessels	Avg Vessel Value (\$)	Aggregate Value (\$)
Classic Style	68	440,000	29,920,000
Modern Style	69	1,125,000	77,625,000
<i>Total</i>	137 ²⁴	785,000	107,545,000

²⁴ The numbers of vessels and licences may not mesh; see Note on p. 9

License & Quota Trends²⁵

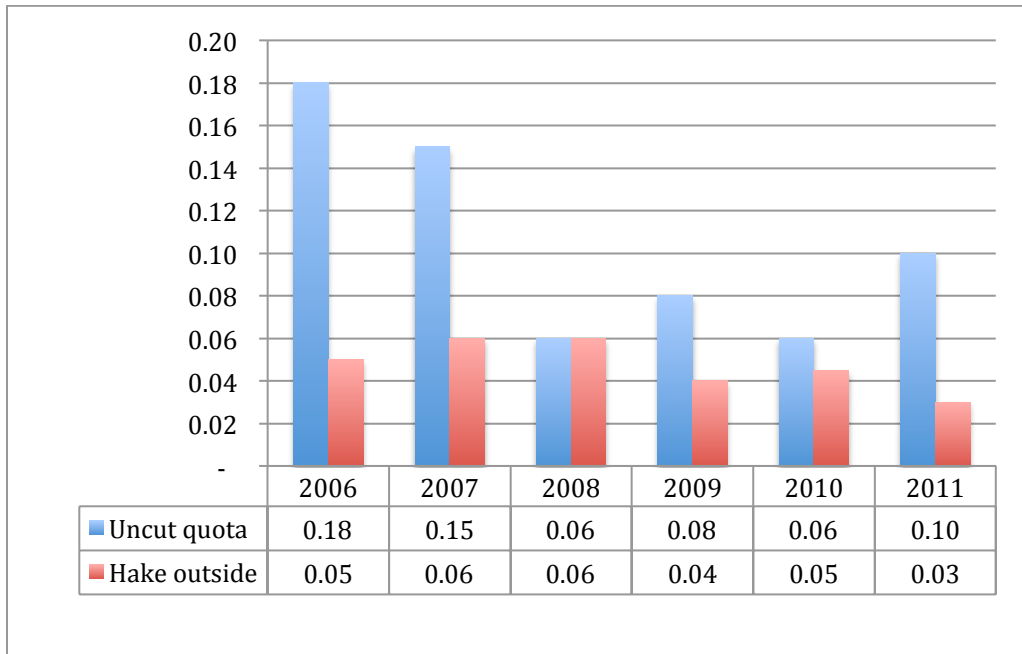
Recent T Licence and Trawl Quota Valuations (\$)



- Gulf hake and Arrowtooth flounder (turbot) are accorded virtually no value presently. Market conditions have rendered target fisheries on these species un-economic. Gulf hake was formerly considered for surimi production, but this processing activity has all but ceased.

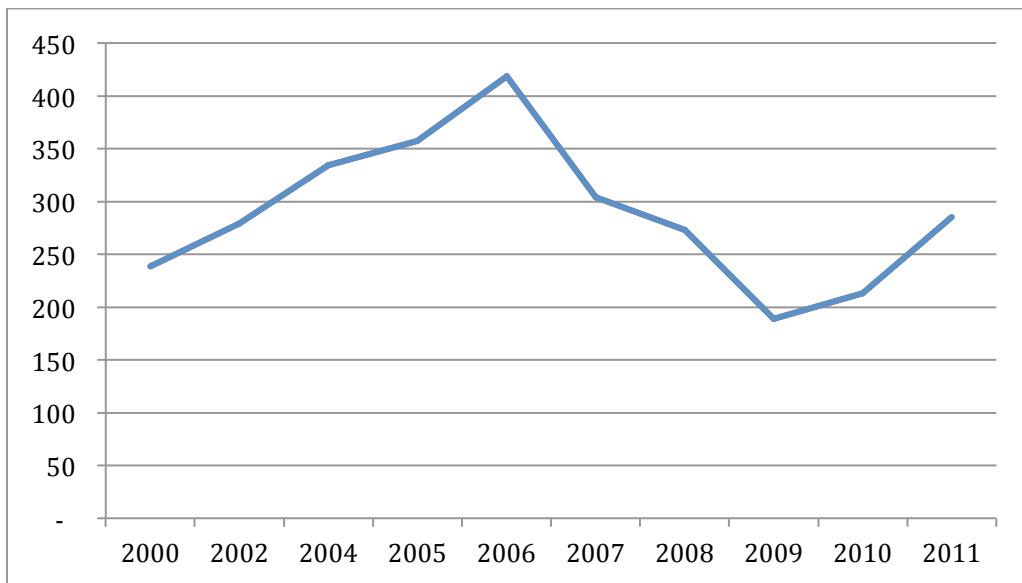
²⁵ Values in charts are in nominal terms (not adjusted for inflation)

Recent Trawl Quota Lease Rates (\$ per lb)



- Uncut quota leases for 2011 ranged from 6-12 cents.
- A hake lease price is difficult to ascertain this year, as the industry is concerned about the ability of the fleet to harvest the (larger) TAC for 2011. Fish distribution and catch-ability has been volatile in recent years. Many participants were taking a “wait and see” approach to hake leases this season.

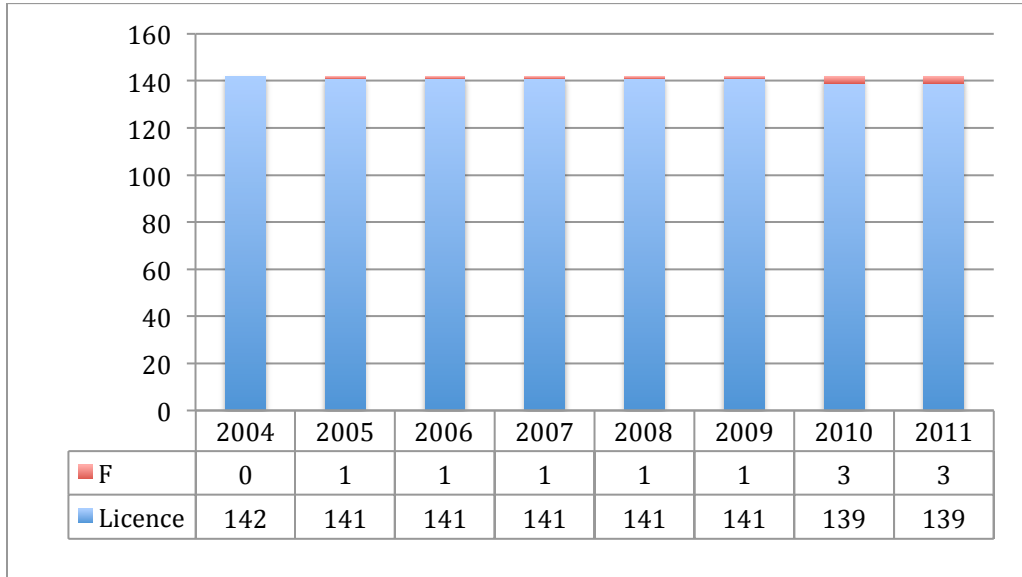
Aggregate Value of T Licences and Trawl Quota (\$ millions by year)²⁶



²⁶ 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)

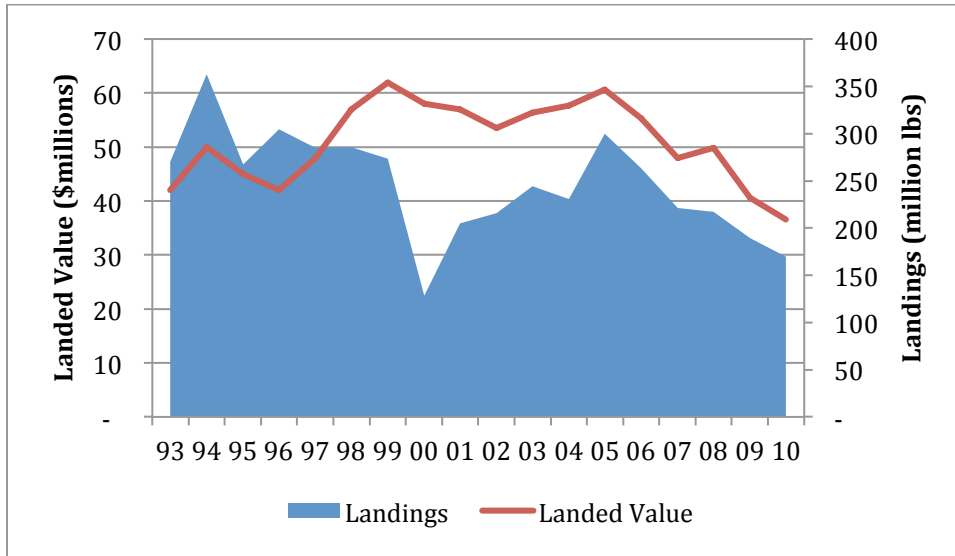
The uptick since 2009 is due to a firming hake quota price and slightly improving prospects for the bottom-fish fishery.

Licence Counts by Category



Groundfish Trawl Landings & Landed Value Trends

Source: DFO Catch Stats



Outlook

- The groundfish trawl fishery enjoyed a modest rally during the valuation period.
- Markets for hake continue to be strong. The hake fishery is Marine Stewardship Council certified.
- Marketability of fresh groundfish in the western USA (the primary market) may have been helped by the adoption by the west Coast USA groundfish trawl fishery of an IVQ plan. Groundfish production was down/sporadic as the USA fishery adapted to a complex new management system (similar in many ways to the BC system).
- The trawl industry remains concerned about potential effects of COSEWIC/SARA listings. Severe constraints on certain bottomfish species could impair catches of target species.

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>	196
<i>No. of Commercial Communal Lic's (not valued in this study)</i>	25 (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 took place applying for the 2010-2012 seasons. 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 small market is emerging for FR (commercial communal party-based) licences.

Valuation Parameters

Valuations performed:	1. R licence 2. Vessels
Amount of trading activity underlying valuation:	Moderate
Confidence in valuation:	Moderate—precise valuations are difficult because of multi-areas and uncertain apportionment of asset values.

Current Valuation

Licence Value at March 31, 2011

Category	# Licences	Value/ Foot (\$)	Total Value (\$)
R Licences	196	18,000	112,896,000

Valuation Comments

- Average licence value pegged at \$576,000 (\$18,000 per foot x 32 foot average vessel length). Licence values range from \$14,000-20,000 per foot.
- The increase in value vs. the 2010 valuation (\$16,000/ft) appears to be driven by the thinness of the market, not by improved performance of the fishery.
- Many view crab licences on a per-licence (rather than per-foot) basis.
- The north coast fisheries (areas A & B) have not performed well the past two seasons, eroding some of the premium for these licences.
- Few transactions this year.
- There is some leasing of FR licences, with values in the \$25,000-30,000 range.

Vessel Value

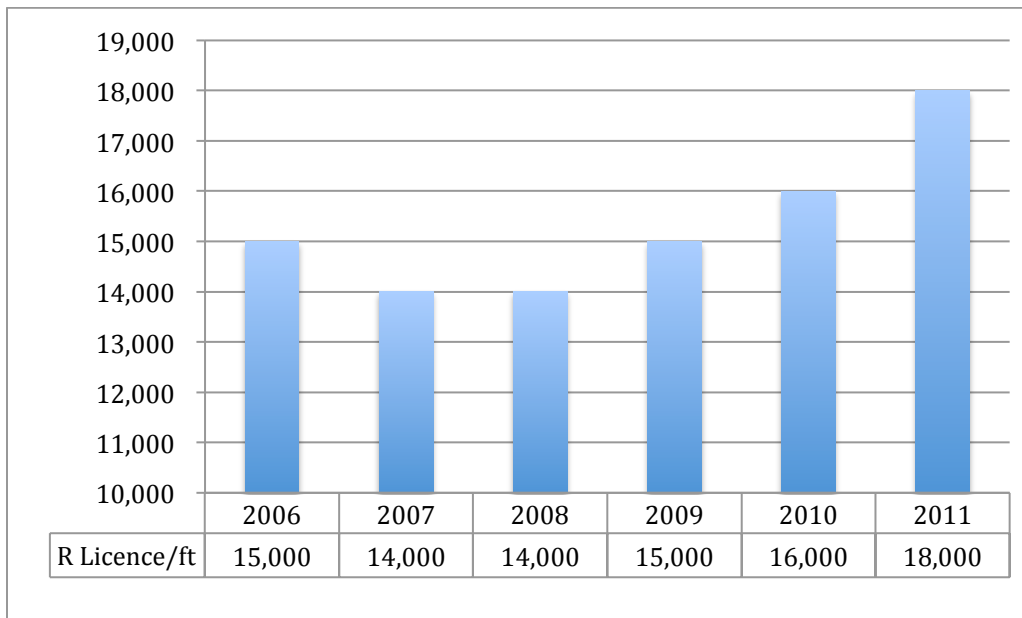
Fleet composition is arrived at by using past data as a baseline. By nature, fleet vessel valuation is very imprecise and results should be used for general purposes only.

Crab	# Vessels	Avg Vessel Value (\$)	Aggregate Value (\$)
Classic Style	85	81,000	6,885,000
Modern Style	127	367,000	46,609,000
<i>Total</i>	212 ²⁷	252,330	53,494,000

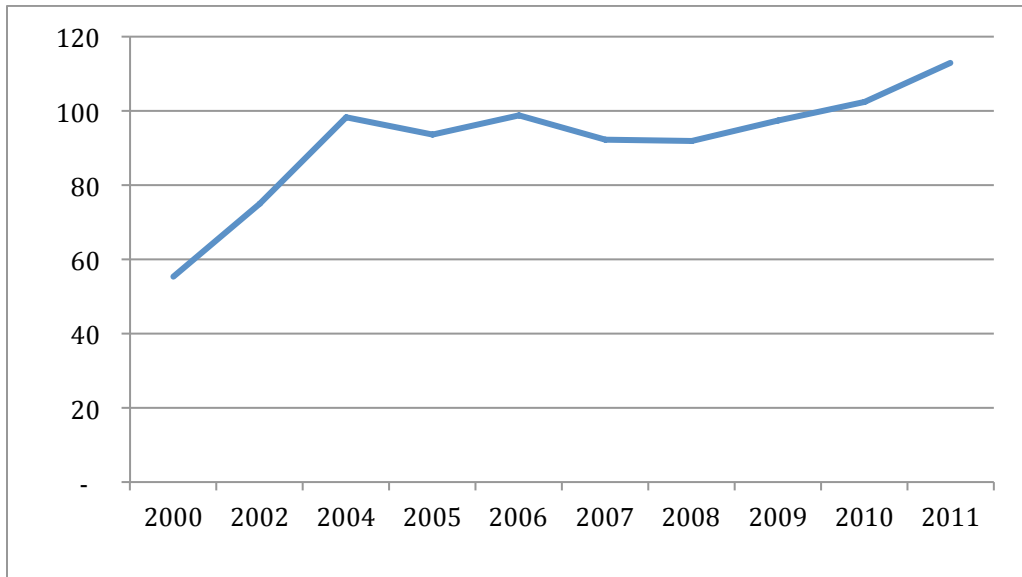
²⁷ The numbers of vessels and licences may not mesh; see Note on p. 9

Licensing Trends²⁸

Recent R Licence Valuations (\$)

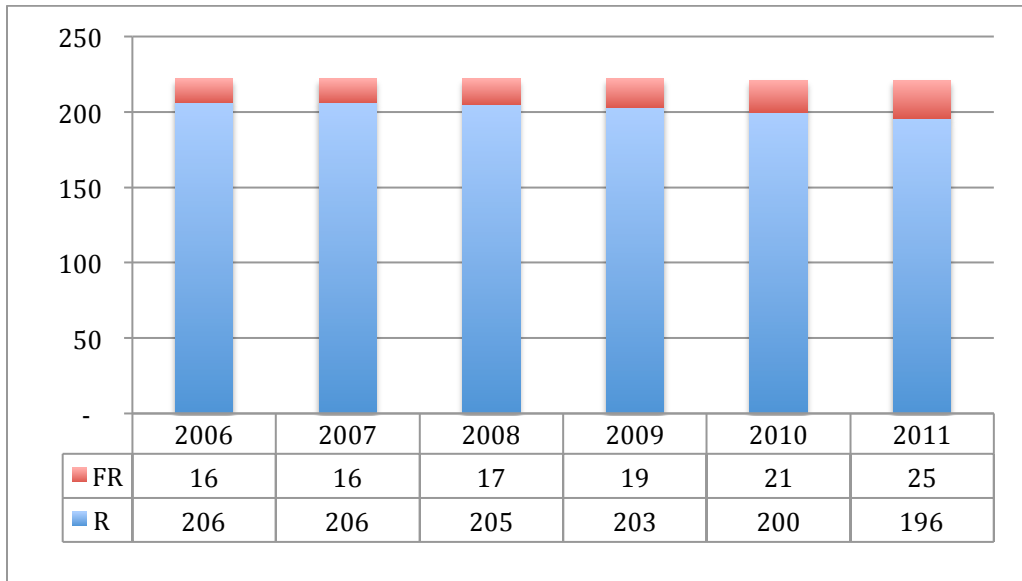


Aggregate Value of R Licences (\$ millions by year)



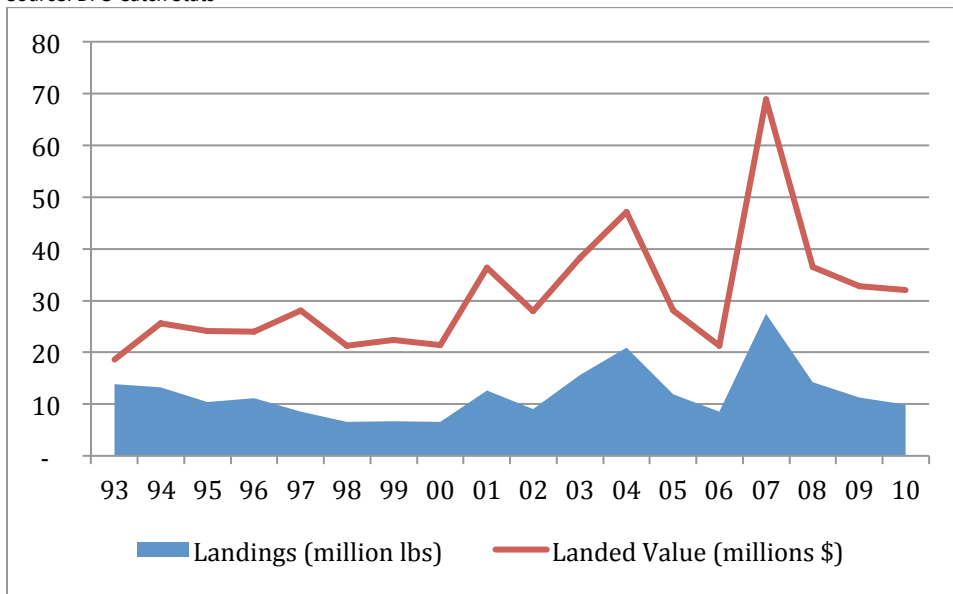
²⁸ Values in charts are in nominal terms (not adjusted for inflation)

Licence Counts by Category



Crab Landings & Landed Value Trends

Source: DFO Catch Stats



Outlook

- Markets for Dungeness crab are generally healthy. The product is consumed in many markets worldwide.
- There are seven distinct management areas in the crab fishery and no cohesive industry organization, making the industry somewhat fractured. Area re-selections provide flexibility for licence holders to move between management areas, but compromise stability in each of the areas.
- Crab is generally a fishery that generates satisfactory financial returns for harvesters, though the crab sector faces some organizational and conservation challenges.

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 Commercial Communal 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 – 14,615 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. Currently 33 vessels operating the 85 licences.

Valuation Parameters

Valuations performed:	1. ZD licence 2. Annual lease rate 3. Vessels
Amount of trading activity underlying valuation:	None (transactions) Low (lease)
Confidence in valuation:	Low (transactions) Low (lease)

Current Valuation

Licence Value at March 31, 2011

Category	# Licences	Value/ Licence (\$)	Total Value (\$)
ZD Licences	85	300,000	25,500,000

Valuation Comments

- Valuation pegged at \$300,000 based on anecdotal information. Estimates of value range from \$300,000-\$350,000.
- Sea cucumber is a tightly knit, tightly held category. Valuation intelligence is difficult to gather.

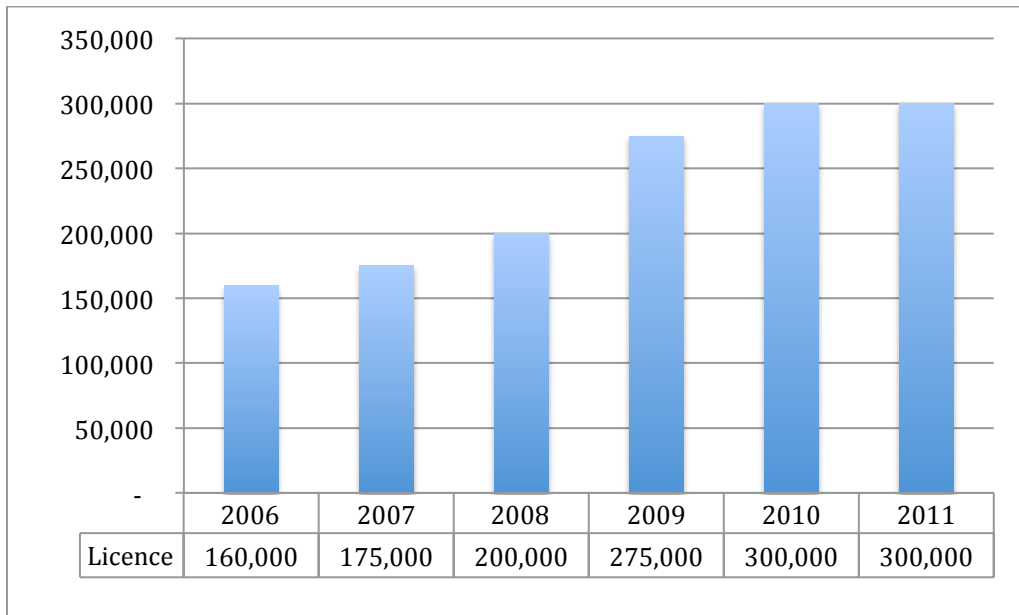
Vessel Value

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.

Sea Cucumber	# Vessels	Avg Vessel Value (\$)	Aggregate Value (\$)
Classic Style	12	66,000	792,000
Modern Style	18	188,000	3,384,000
<i>Total</i>	30 ²⁹	139,200	4,176,000

Licensing Trends³⁰

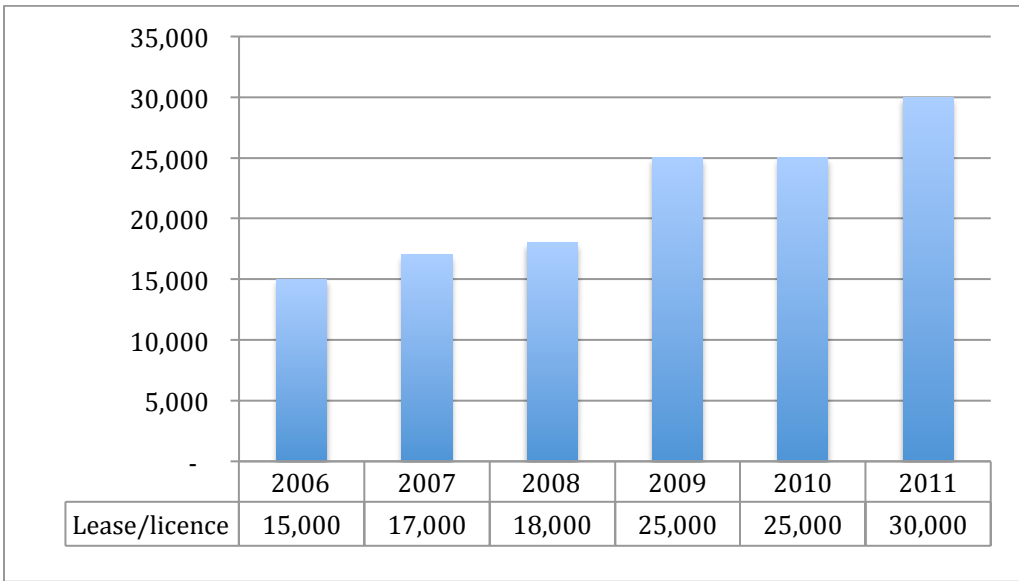
Recent ZD Licence Valuations (\$)



²⁹ The numbers of vessels and licences may not mesh; see Note on p. 9

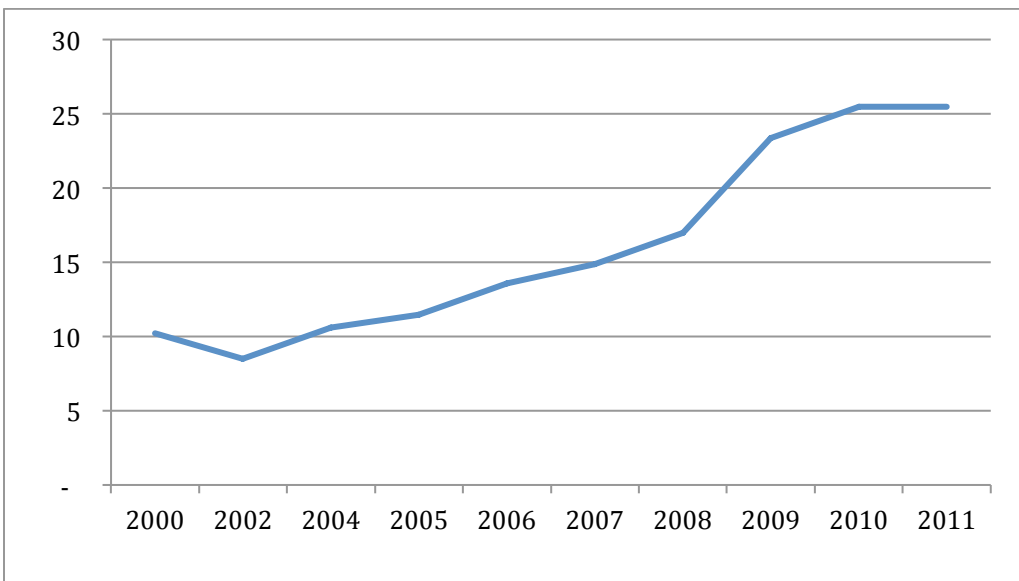
³⁰ Values in charts are in nominal terms (not adjusted for inflation)

Recent ZD Licence Lease Rates (\$)



- Lease price for 2011 pegged at \$30,000. Lease rates range from \$25,000 - \$30,000. Some leases are profit sharing arrangements.

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

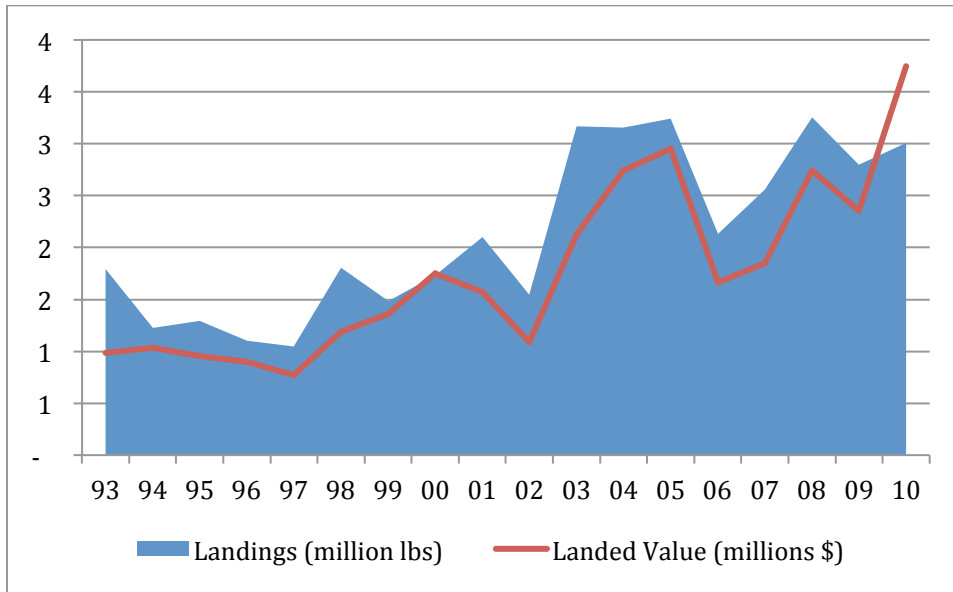


ZD Licence Counts by Category

No chart shown: all 85 licences are category ZD.

Sea Cucumber Landings & Landed Value Trends

Source: DFO Catch Stats



Some of the peaks and valleys in the trend chart may be related to incomplete data. A very gradually ascending trend line would better represent developments in the fishery.

Outlook

- Although a relatively small fishery in absolute terms, the sea cucumber industry has done an admirable job of improving both landings and values of the past several years.
- Quotas tend to be fully utilized, and no compliance issues have arisen in recent years.
- Continued conservative management combined with stock assessment work and improving product care are keys to future success.

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>	86
<i>No. of Commercial Communal Lic's (not valued in this study)</i>	24 (FZC designation – Party-based)
<i>Licensing/Management Framework</i>	Quota management – average quota per licence for the 10/11 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 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
Amount of trading activity underlying valuation:	Low (transactions) Low (lease)
Confidence in valuation:	Low (transactions) Low-Med (lease)

Current Valuation

Licence Value at March 31, 2011

Category	# Licences	Value/Licence (\$)	Total Value (\$)
ZC Licences	86	35,000	3,010,000

Valuation Comments

- Licence value is pegged at \$35,000 based on anecdotal information.
- No transactions were uncovered this year in either the open market or PICFI.
- This is a depressed fishery that stimulates little transaction volume.

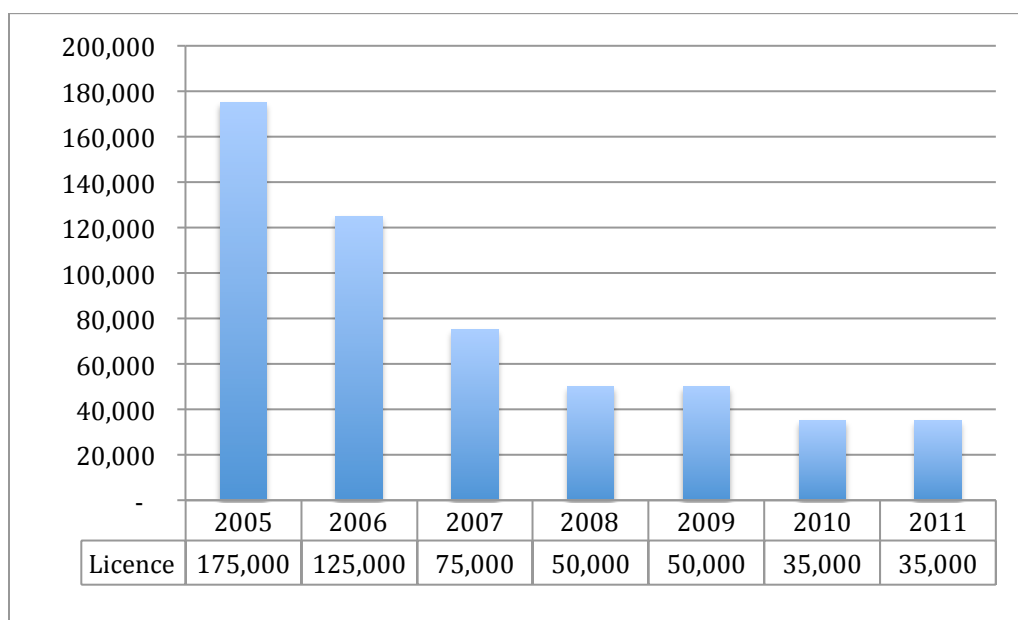
Vessel Value

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.

Red Sea Urchin	# Vessels	Avg Vessel Value (\$)	Aggregate Value (\$)
Classic Style	12	66,000	792,000
Modern Style	18	188,000	3,384,000
<i>Total</i>	30 ³¹	139,200	4,176,000

Licensing Trends³²

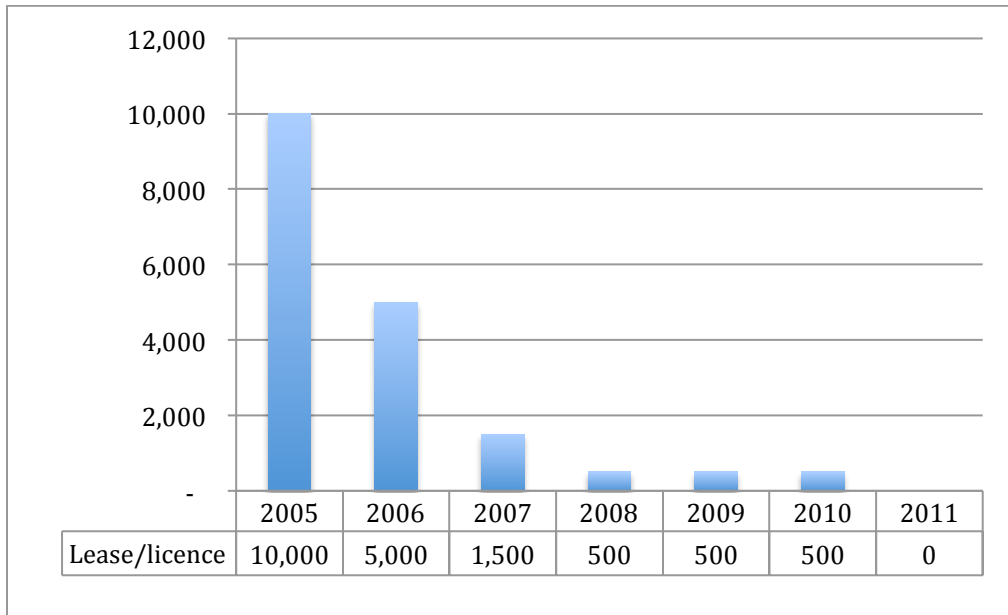
Recent ZC Licence Valuations (\$)



³¹ The numbers of vessels and licences may not mesh; see Note on p. 9

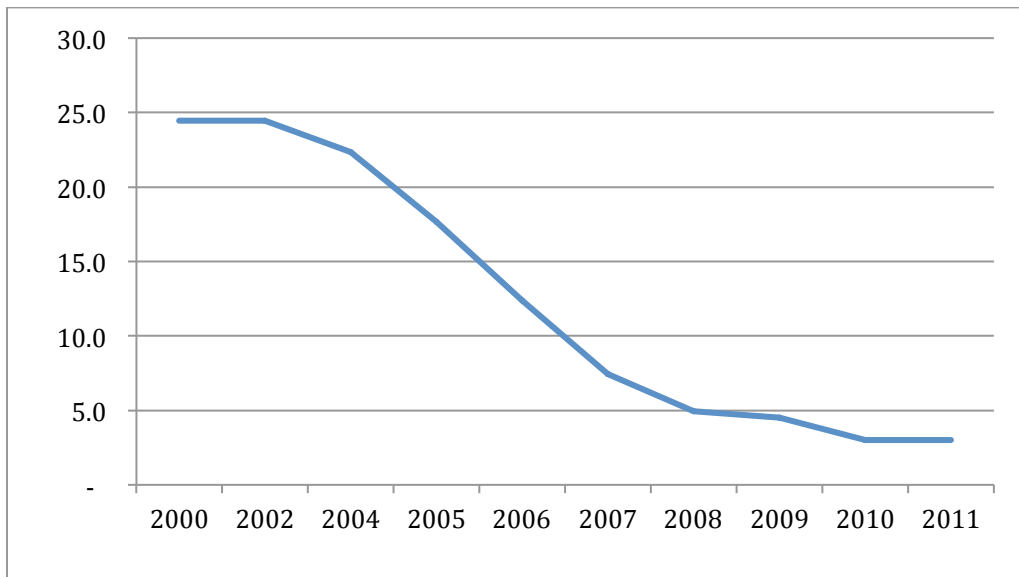
³² Values in charts are in nominal terms (not adjusted for inflation)

Recent ZC Licence Lease Rates (\$)



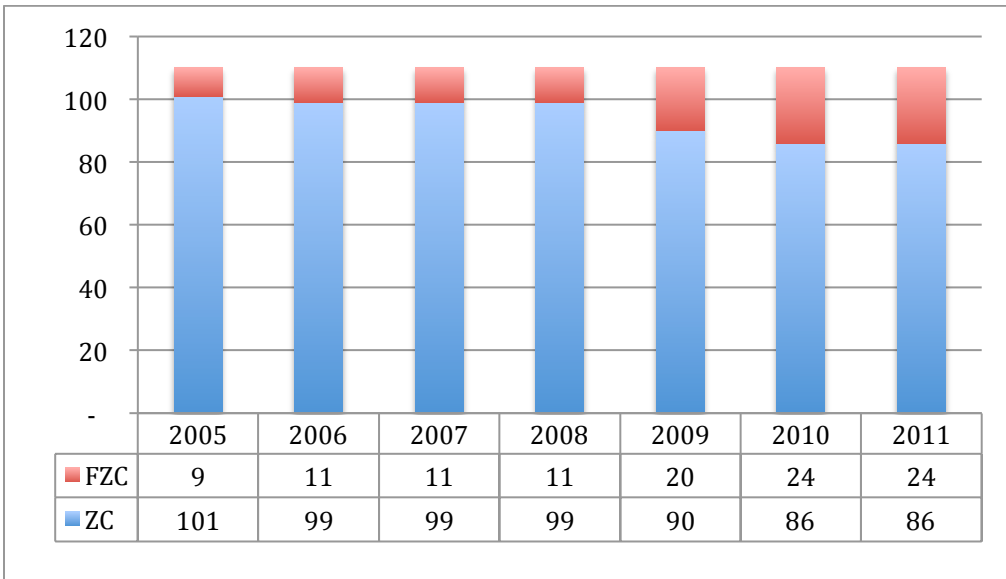
Lease rate is pegged at nil for 2011. Most licenses were sublet for licence fees only, though some south coast licences were leased for up to \$1,000. Even at a negligible lease rates, many licences were unutilized (or partially utilized) in 2011.

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



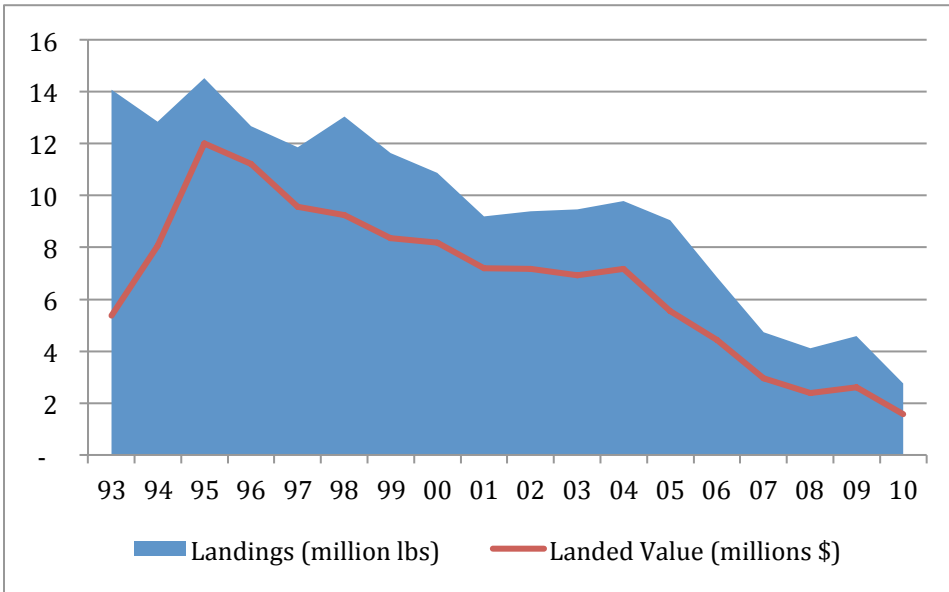
- The reduction in market value for ZC licences is mostly related to the reduction in licence value, but also to the declining number of licences (as the pool of F licences grows).

ZC Licence Counts by Category



Red Sea Urchin Landings & Landed Value Trends

Source: DFO Catch Stats



Outlook

- Red sea urchin remains a depressed fishery.
- A glut of product imported by Japan from the Russian “IUU” fishery (illegal, un-regulated, un-reported) remains the largest challenge to the BC industry.
- It is uncertain how/when/if the current market flux will be resolved.
- The TAC is only partially harvested, as poor prices and marketability curb harvester’s ability to prosecute the fishery.
- Urchin stocks are currently healthy and the fishery is considered well-managed; stakeholders express frustration that, despite demonstrating a high level of resource stewardship, their industry is being undermined by external (illegal) forces.
- Industry remains concerned about the impact of sea otters on urchin stocks in areas where otter recovery has been successful.
- There are no overall concerns about red urchin stock levels.

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 Commercial Communal 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
Amount of trading activity underlying valuation:	Low (transactions) Low (lease)
Confidence in valuation:	Low (transactions) Low-Med (lease)

Current Valuation

Licence Value at March 31, 2011

Category	# Licences	Value/ Licence (\$)	Total Value (\$)
ZA Licences	49	25,000	1,225,000

Valuation Comments

- ZA licence value is pegged at \$25,000. This is based on anecdotal information. The valuation has risen from the \$20,000 level in 2010 year because some informants believe the prospects of the fishery have improved. This has yet to be realized in terms of market transactions, however.
- The green urchin market/fishery situation mirrors that for red sea urchins.

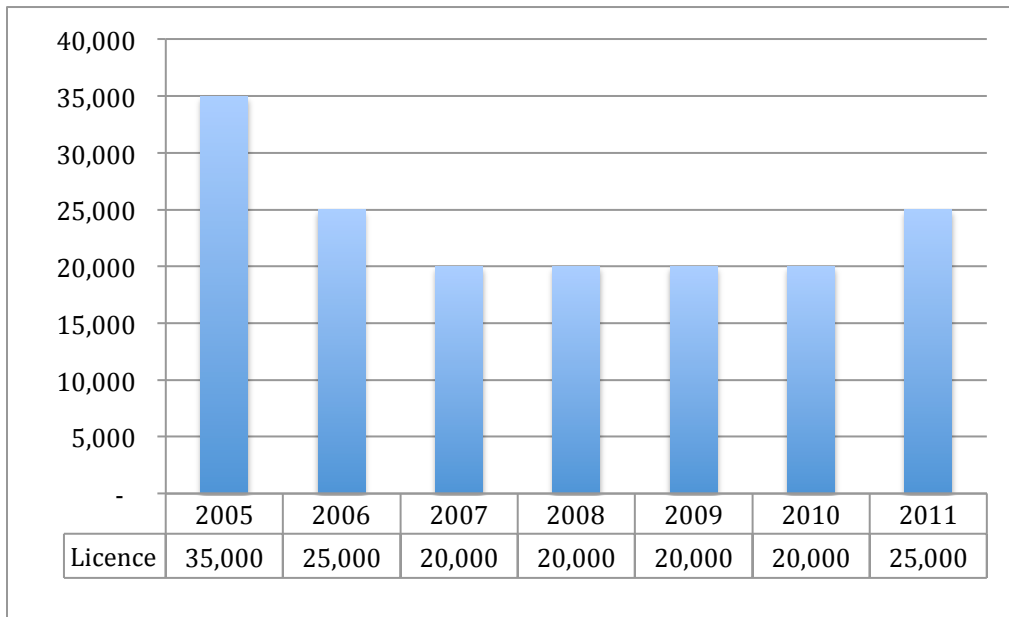
Vessel Value

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.

Green Sea Urchin	# Vessels	Avg Vessel Value (\$)	Aggregate Value (\$)
Classic Style	6	66,000	396,000
Modern Style	9	188,000	1,692,000
<i>Total</i>	15 ³³	139,200	2,088,000

Licensing Trends³⁴

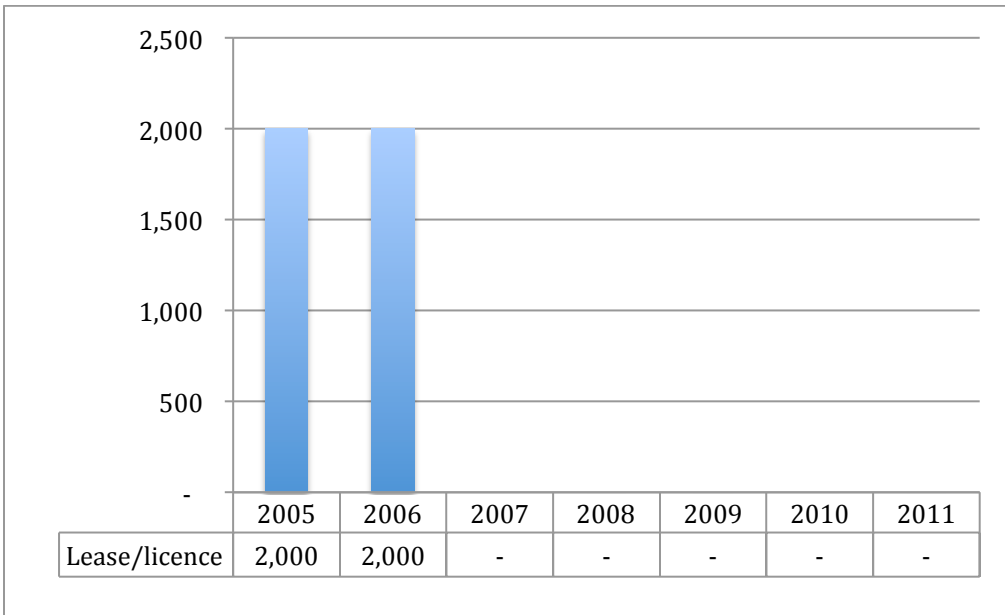
Recent ZA Licence Valuations (\$)



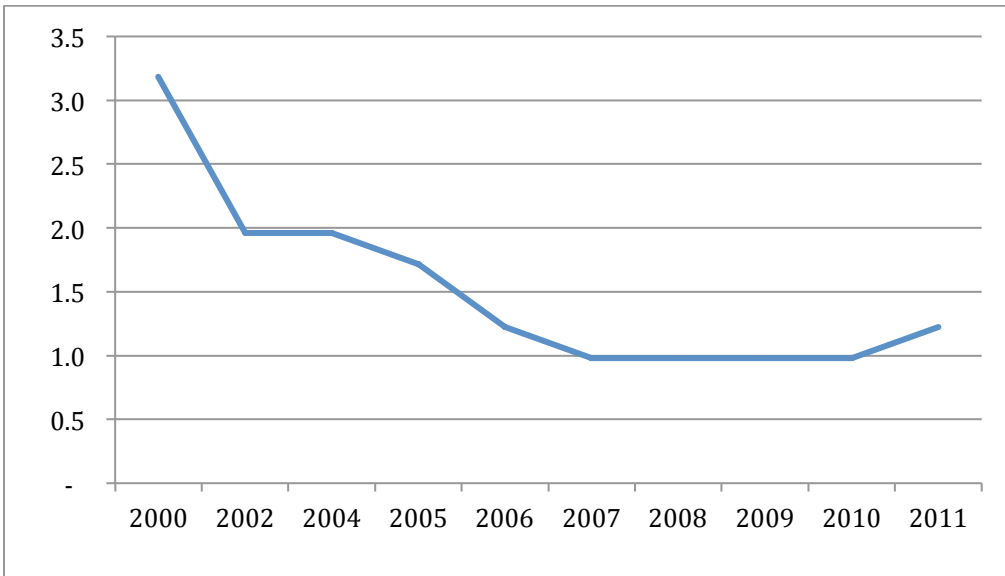
³³ The numbers of vessels and licences may not mesh; see Note on p. 9

³⁴ Values in charts are in nominal terms (not adjusted for inflation)

Recent ZA Licence Lease Rates (\$)



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

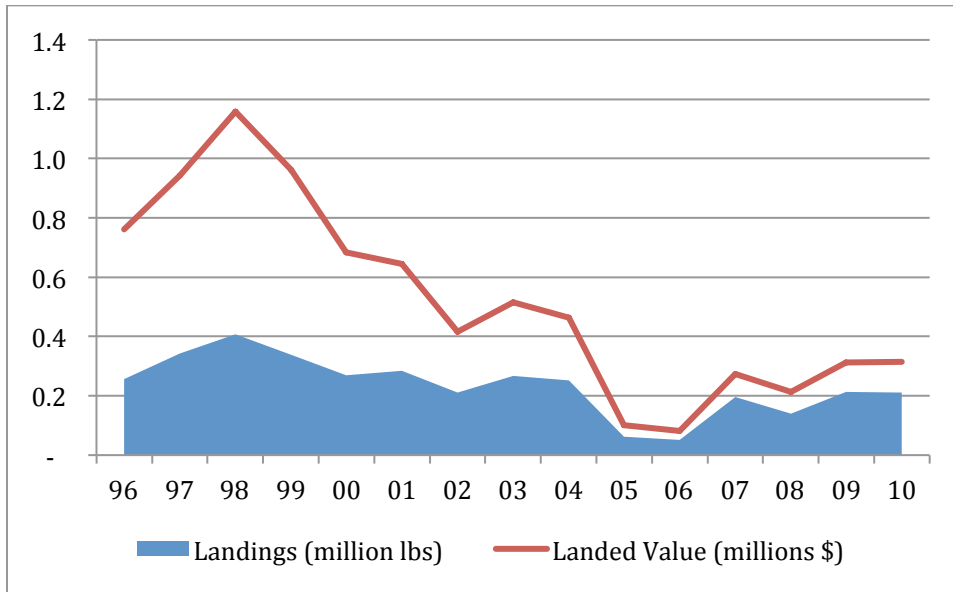


Licence Counts by Category

No chart shown: all 49 licences are category ZA.

Green Sea Urchin Landings & Landed Value Trends

Source: DFO Catch Stats



Outlook

- Only a fraction of the TAC has been harvested in recent seasons. The balance is left in the water because fishing/processing operations are un-economic.
- A glut of product imported by Japan from the Russian “IUU” fishery (illegal, un-regulated, un-reported) remains the largest challenge to the BC industry.
- It is uncertain how/when/if the current market flux will be resolved.
- Urchin stocks are currently healthy and the fishery is considered well-managed; stakeholders express frustration that, despite demonstrating a high level of resource stewardship, their industry is being undermined by external (illegal) forces.
- Industry remains concerned about the impact of sea otters on urchin stocks in areas where otter recovery has been successful. There are no overall concerns about green urchin stock levels.
- There are reports that product prices rose somewhat in 2011, meaning that active fishermen earned positive returns. Whether this sets the stage for a rally in this fishery remains to be seen.

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>	229 (165 Outside, 64 Inside)
<i>No. of Commercial Communal Lic's (not valued in this study)</i>	33 (FZN designation – 26 Outside, 7 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 temporarily transferred within the ZN fleet, and to other groundfish sectors. Permanent transferability arrangements are under discussion. 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. Annual lease rate for Inside and Outside 4. Vessels
Amount of trading activity underlying valuation:	<p>Few inside licence transactions</p> <p>A moderate number of outside licence transactions</p> <p>A moderate number of leases for both categories</p>
Confidence in valuation:	<p>Moderate (transactions)</p> <p>Moderate (lease)</p>

Current Valuation

Licence Value at March 31, 2011

Category	# Licences	Value/ Licence (\$)	Total Value (\$)
ZN Inside	64	35,000	2,240,000
ZN Outside	165	136,500	22,522,500
ZN Total	229	108,133	24,762,500

Valuation Comments

- ZN inside licence value pegged at \$1,000 per foot. Average licence value \$35,000 based on a 35' average vessel length. Values ranged from \$30,000-45,000.
- ZN outside licence value pegged at \$3,250 per foot. Average licence value \$136,500 based on a 42' average vessel length. Values range from \$130,000-145,000.
- ZN outside licences are largely viewed as a source of rockfish bycatch in the integrated groundfish fishery.
- Separate from licence transactions, there are individual species leases within this category as the ZN fishery is managed on an Individual Vessel Quota system under the groundfish integration program. There are no permanent transfers of quota allowed (yet) under the program.

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.

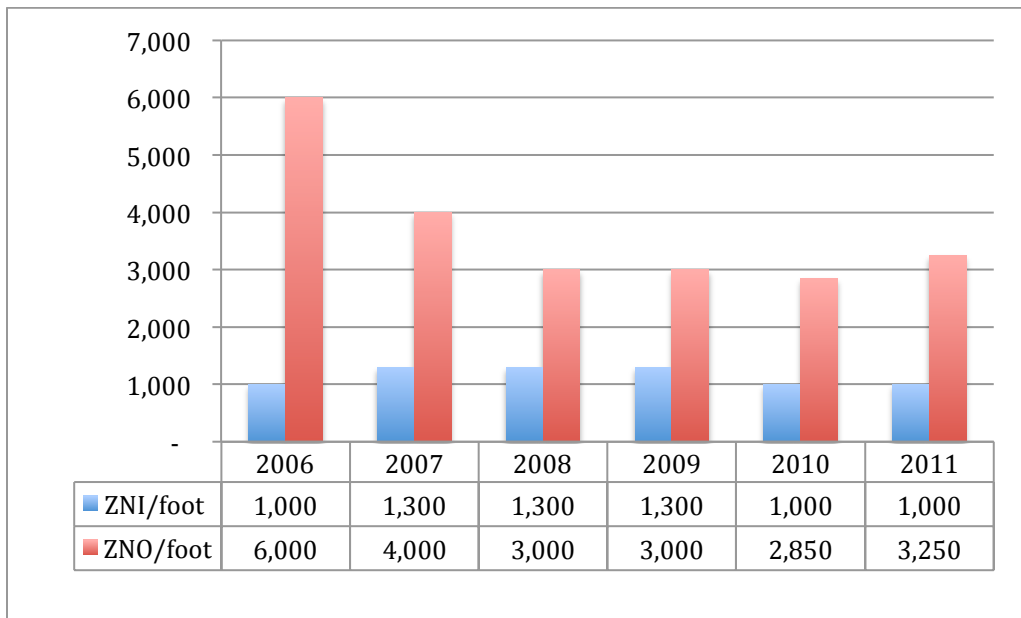
ZN Inside	# Vessels	Avg Vessel Value (\$)	Aggregate Value (\$)
Classic Style	12	41,000	492,000
Modern Style	7	118,000	826,000
<i>Total</i>	19	69,368	1,318,000

ZN Outside	# Vessels	Avg Vessel Value	Aggregate Value
Classic Style	118	67,000	7,926,100
Modern Style	64	196,000	12,485,200
<i>Total</i>	182 ³⁵	112,150	20,411,300

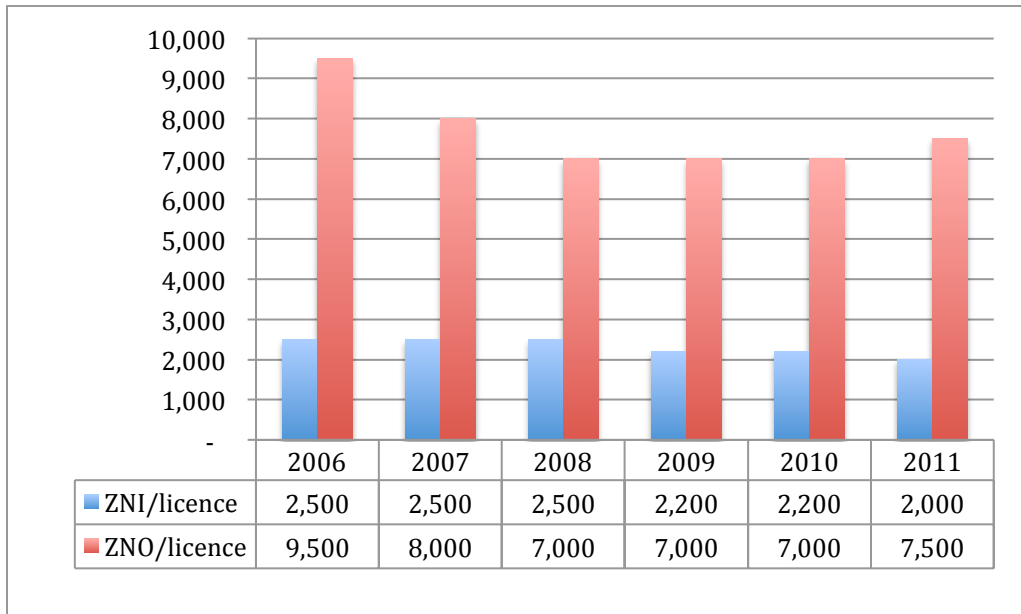
³⁵ The numbers of vessels and licences may not mesh; see Note on p. 9

Licensing Trends³⁶

Recent ZN Licence Valuations (\$ per foot)



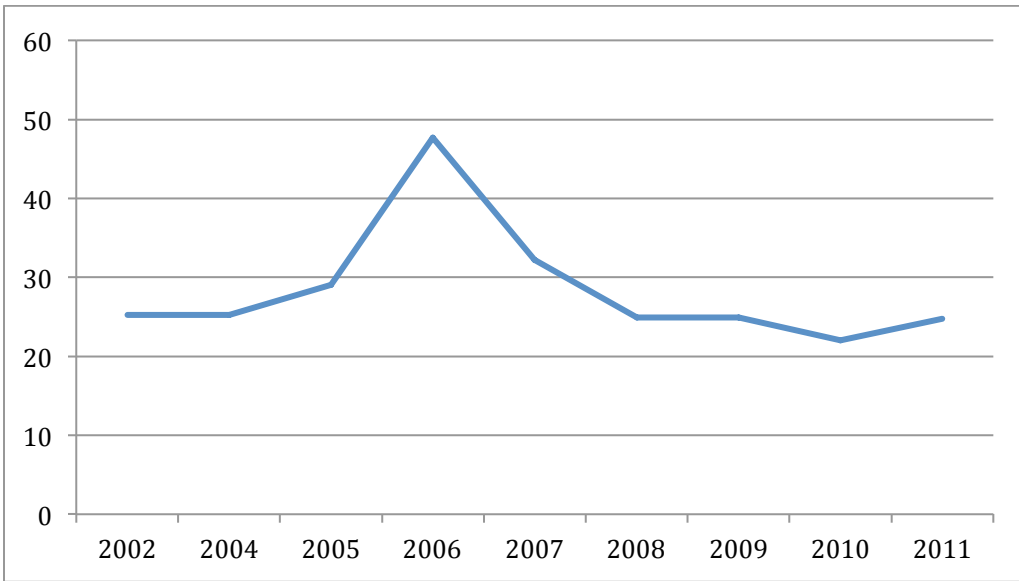
Recent ZN Licence Lease Rates (\$)



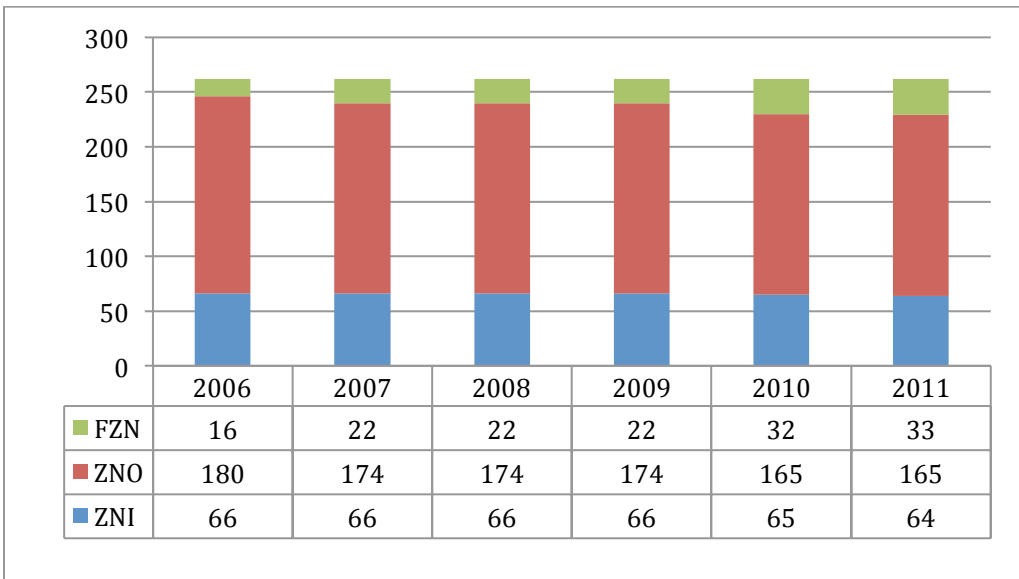
Most Inside ZN leases are in the \$2,000 - \$2,200 range. Outside ZN leases range from \$6,500 - \$9,000.

³⁶ Values in charts are in nominal terms (not adjusted for inflation)

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

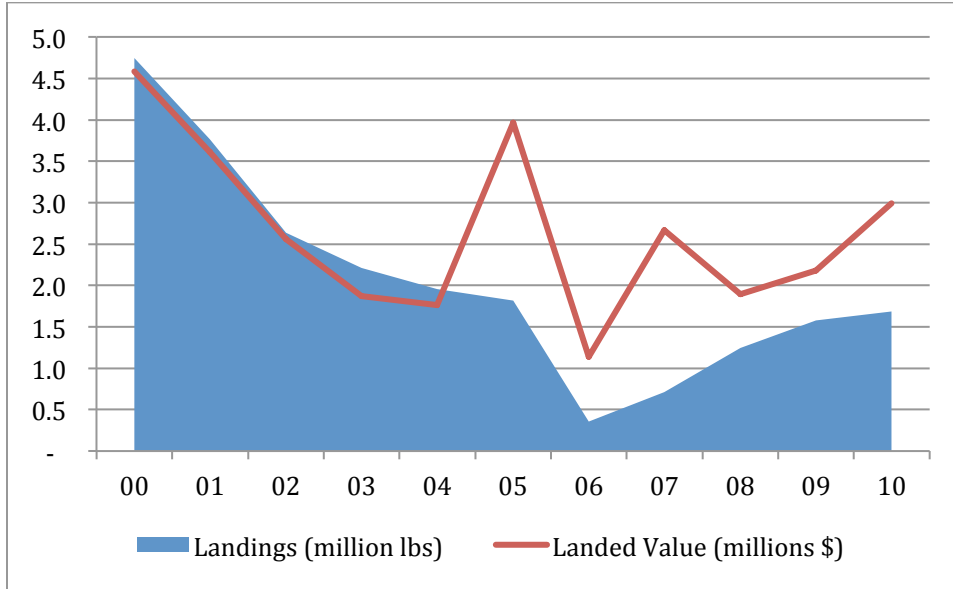


Licence Counts by Category



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 steadily grown.

Outlook

- The ZN fisheries are small-scale fisheries, sensitive to fish volumes and operating costs.
- Enhanced catch monitoring requirements, implemented along with the integration measures, have increased costs for the ZN fleet.
- ZN fishermen claim that continued financial support by DFO for the catch monitoring program is critical to continued viability.
- The groundfish integration program has been made permanent, though permanent transferability of IVQ is not currently permitted.

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>	459
<i>No. of Commercial Communal Lic's (not valued in this study)</i>	11 (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 pilot groundfish integration program.

Valuation Parameters

Valuations performed:	<ol style="list-style-type: none"> 1. C licence 2. Vessels 3. Lingcod quota (comments) 4. Dogfish quota (comments)
Amount of trading activity underlying valuation:	Moderate
Confidence in valuation:	Moderate

Current Valuation

Licence Value at March 31, 2011

Category	# Licences	Value/ Licence Ft (\$)	Total Value (\$)
C Licences	459	225	3,511,350

Valuation Comments

- C licence value pegged at \$225 per foot. Average licence value \$7,650, given an average vessel length of 34'. Transactions range from \$175 - \$500 per foot. Higher values are seen when a buyer requires a particular length licence for a specific purpose.
- Because there is an ample supply of vessel based licences under which to conduct Schedule II fisheries, C licences have limited value. Also contributing to slight value is the fact that if another category of commercial licences is placed on a C-licensed vessel, the C licence is extinguished.
- Additionally, there are rumors that this licence category could lose the right to hold quotas, which would further erode C licence value.
- Lingcod – quota transactions in the \$6.50-\$8.00 range, with value pegged at \$7.50. Leases for live catch in the \$0.35 range.
- Dogfish – quota transactions in the 10-15 cent range. Leases at one cent/lb or less.

Vessel Value

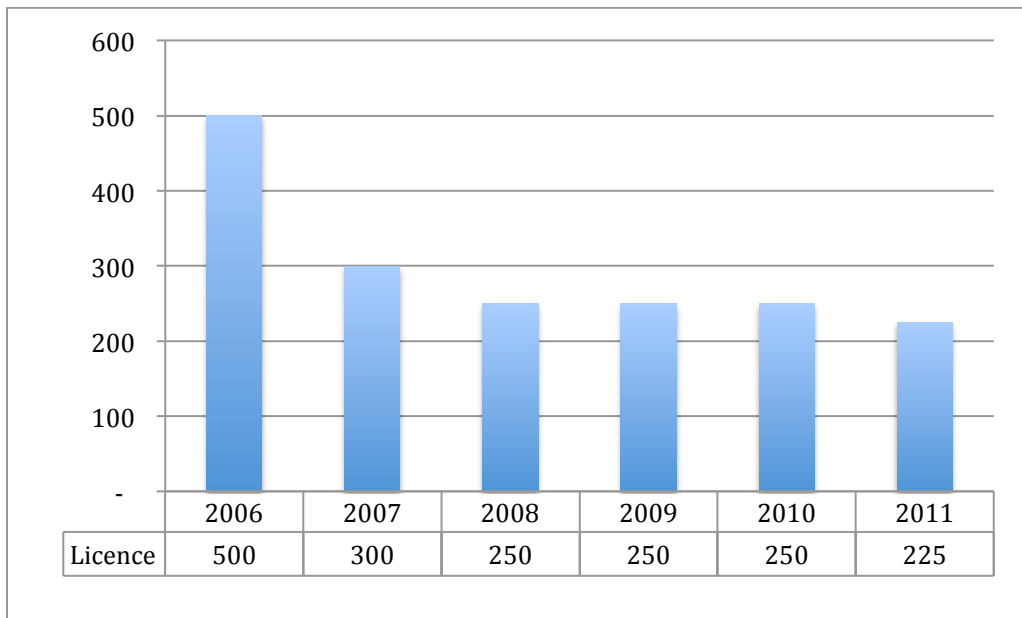
Vessel counts exclude F licences. Fleet composition is arrived at by using past data as a baseline. By nature, fleet vessel valuation is very imprecise and results should be used for general purposes only.

Schedule II	# Vessels	Avg Vessel Value (\$)	Aggregate Value (\$)
Classic Style	257	40,000	10,280,000
Modern Style	139	143,000	19,877,000
<i>Total</i>	396 ³⁷	76,154	30,157,000

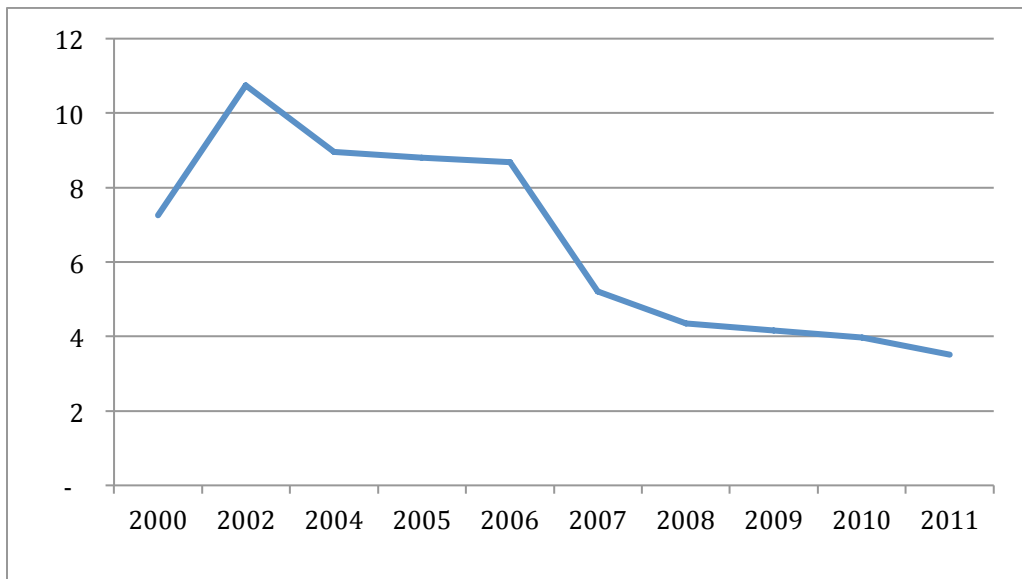
³⁷ The numbers of vessels and licences may not mesh; see Note on p. 9

Licensing Trends³⁸

Recent C Licence Valuations (\$ per foot)



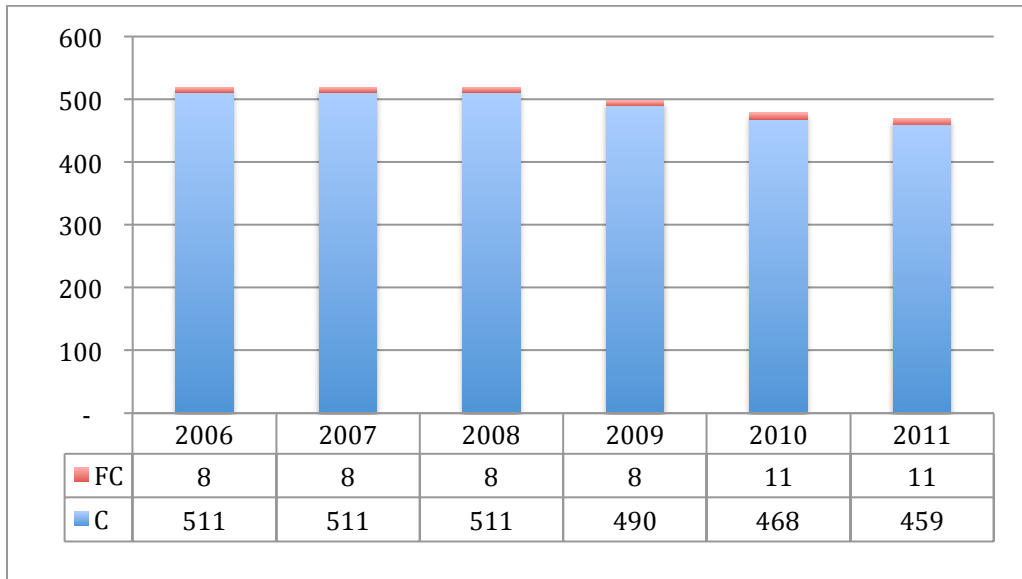
Aggregate Value of C Licences (\$ millions by year)



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).

³⁸ Values in charts are in nominal terms (not adjusted for inflation)

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

- C licences remain a low-value category. There is little reason to expect significant change in the foreseeable future.

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>	18
<i>No. of Commercial Communal 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
Amount of trading activity underlying valuation:	None
Confidence in valuation:	Low

Current Valuation

Licence Value at March 31, 2011

Category	# Licences	Value/ Licence (\$)	Total Value (\$)
ZF Licences	18	50,000	900,000

Valuation Comments

- Average licence value pegged at \$50,000, based on anecdotal reports.
- There has been no transaction activity in this category for several years.

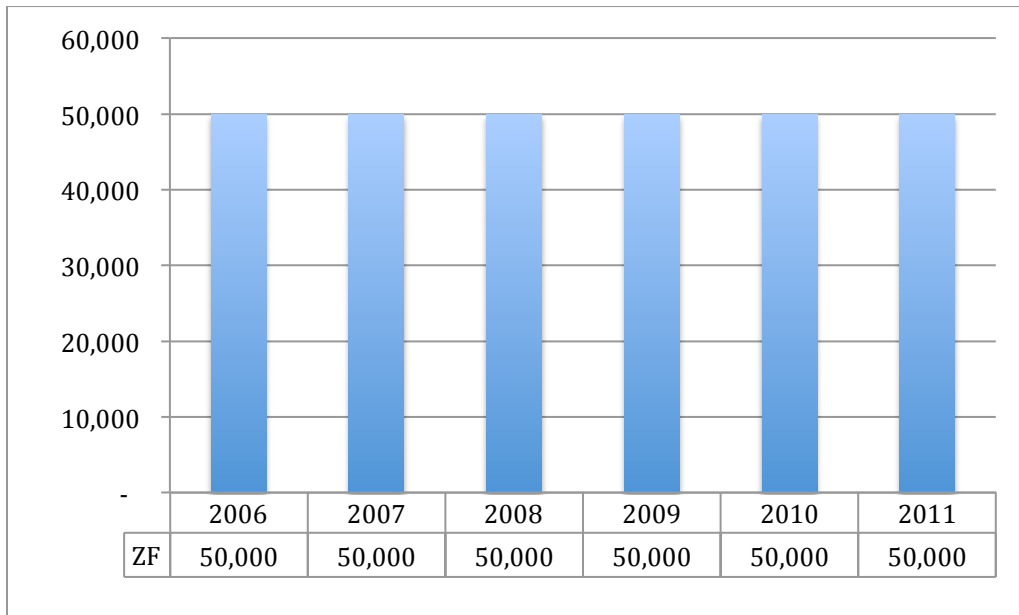
Vessel Value

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.

Euphausiid	# Vessels	Avg Vessel Value	Aggregate Value
Classic Style	4	144,000	576,000
Modern Style	7	567,000	3,969,000
<i>Total</i>	11 ³⁹	413,182	4,545,000

Licensing Trends⁴⁰

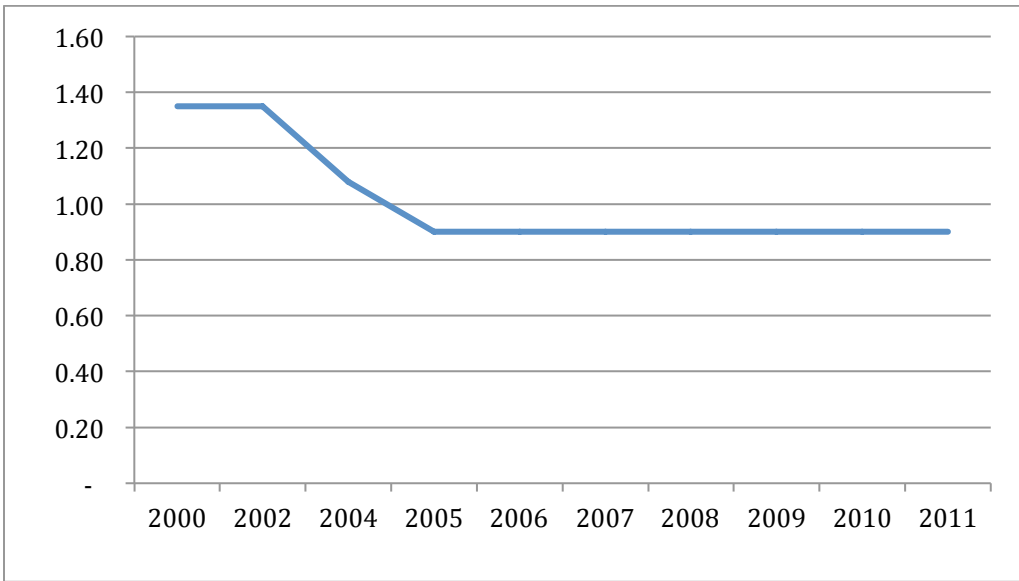
Recent ZF Licence Valuations (\$)



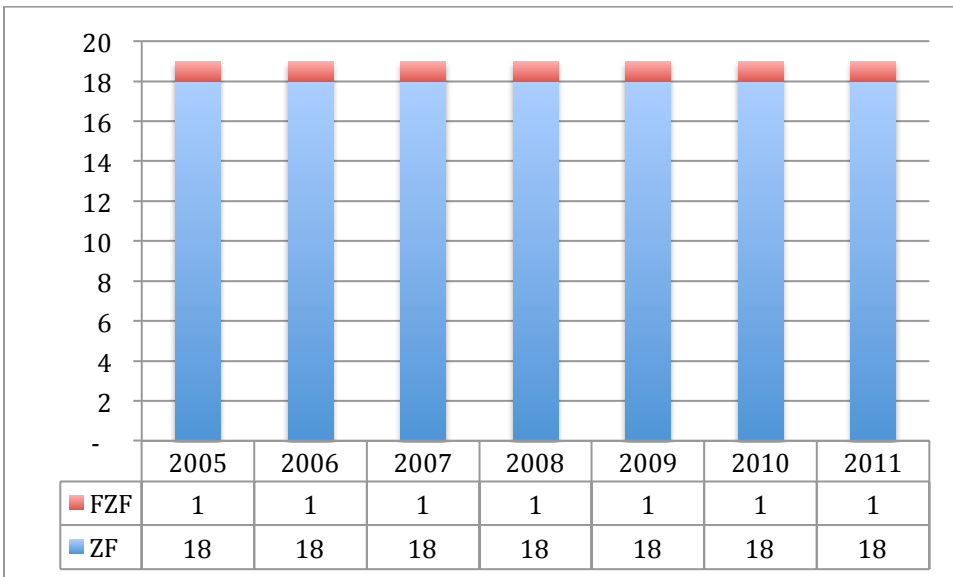
³⁹ The numbers of vessels and licences may not mesh; see Note on p. 9

⁴⁰ Values in charts are in nominal terms (not adjusted for inflation)

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

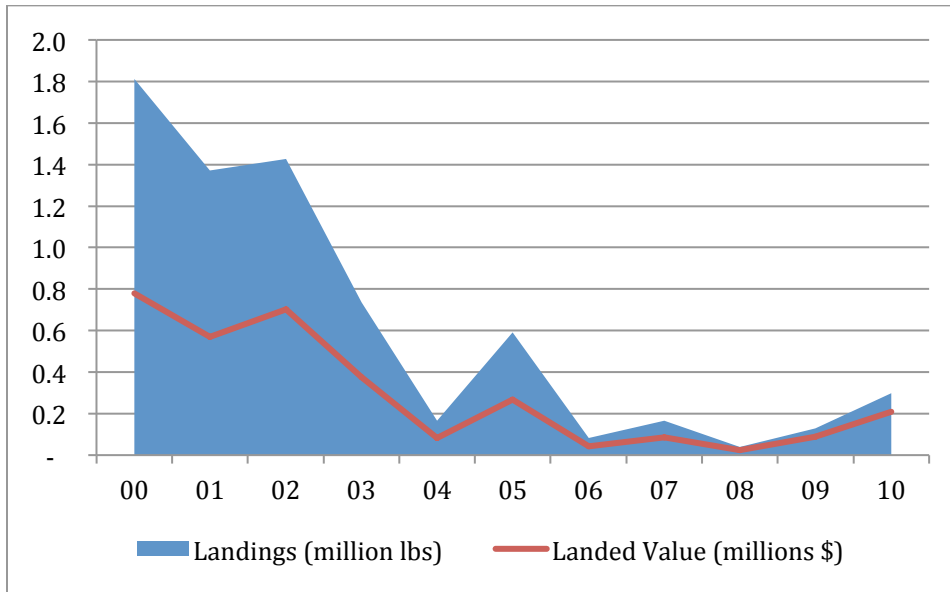


Licence Counts by Category



Euphausiid Landings & Landed Value Trends

Source: DFO Catch Stats



Outlook

- The market situation is currently challenging in this fishery.
- Economic operations are difficult to mount, so TACs are not fully utilized.
- A larger scale fishery could allow for economies of scale, but the optics of ramping-up catches in this plankton fishery are problematic.

Other Fisheries: 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:	Licence
Amount of trading activity underlying valuation:	Moderate
Confidence in valuation:	Moderate

Current Valuation

Licence Value at March 31, 2011

Category	# Licences	Value/ Licence (\$)	Total Value (\$)
USA68 Licences	110	150,000	16,500,000

Valuation Comments

- Values range from \$120,000 - \$180,000. Leases in the \$15,000 - \$20,000 range.
- Licences numbered below 94 generally have higher value than those between 95 and 110, as some feel they have greater security tenure (only 94 licences were initially authorized under the Canada/USA treaty).

Sardine

Valuation Parameters

Valuations performed:	Licence
Amount of trading activity underlying valuation:	Moderate
Confidence in valuation:	Moderate

Current Valuation

Licence Value at March 31, 2011

Category	# Licences	Value/ Licence (\$)	Total Value (\$)
ZS Licences	25	150,000	3,750,000

Valuation Comments

- Values range from \$150,000 - \$175,000. Leases in the \$15,000 – \$20,000 range.

Summary

Aggregate Value of Licences and Quota at March 31, 2011

Fishery	Licence Designation	# Licences	Aggregate Licence Value (\$ millions)	Average Licence Value (\$)	Aggregate Quota Value (\$millions)	Total Licence & Quota Value
Salmon Seine	AS	214	55.9	261,262		55.9
Salmon Gillnet	AG	899	47.2	52,547		47.2
Salmon Troll	AT	474	51.8	109,367		51.8
Roe Herring Seine	HS	247	30.1	121,842		30.1
Roe Herring Gillnet	HG	1196	56.7	47,416		56.7
Herring Spawn on Kelp	J	36	9.9	275,000		9.9
Halibut	L	350	22.4	63,900	282.0	304.4
Sablefish	K	43	8.6	200,000	153.7	162.3
Geoduck/Horseclam	G	55	178.8	3,250,000		178.8
Shrimp	S	228	5.6	24,600		5.6
Prawn	W	199	109.0	547,500		109.0
Groundfish Trawl	T	139	13.1	94,500	272.1	285.3
Crab	R	196	112.9	576,000		112.9
Sea Cucumber	ZD	85	25.5	300,000		25.5
Red Sea Urchin	ZC	86	3.0	35,000		3.0
Green Sea Urchin	ZA	49	1.2	25,000		1.2
Rockfish - Inside	ZNI	64	2.2	35,000		2.2
Rockfish - Outside	ZNO	165	22.5	136,500		22.5
Schedule II	C	459	3.5	7,650		3.5
Euphausiid	ZF	18	0.9	50,000		0.9
Totals			760.9		721.0	1,468.8

Note: this table excludes the Tuna and Sardine valuations to preserve comparability of the results over time. Tuna and Sardine valuations:

Fishery	Licence Designation	# Licences	Aggregate Licence Value (\$ millions)	Average Licence Value (\$)	Aggregate Quota Value (\$millions)	Total Licence & Quota Value
Tuna	USA 68	110	16.5	150,000		16.5
Sardine	ZS	25	3.8	150,000		3.8