

West Coast Fishing Fleet:

Analysis of Commercial Fishing Licence, Quota, and Vessel Values

As at March 31, 2013

Prepared for Fisheries and Oceans Canada, Pacific Region

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Introduction

This report offers assessments of licence, quota, lease, and vessel values as of March 31, 2013 for commercial fisheries in B.C. The assessments are based where possible on market transactions.

The valuations contained in this report represent the best efforts of the contractor to encapsulate prevailing asset value levels in the commercial fishery. Since few transactions take place at or near the March 31 valuation date, activity from the last quarter of 2012 through the first half of 2013 was considered. The depth and quality of data upon which valuations are based varies by fishery. For fisheries with very limited vessel/licence markets, valuations are based more on inference and anecdotal information than on hard data. This is reflected in the reported “confidence level” of each assessment.

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

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

The contractor cautions that valuations contained in this study, while reflective of March 31, 2013 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.

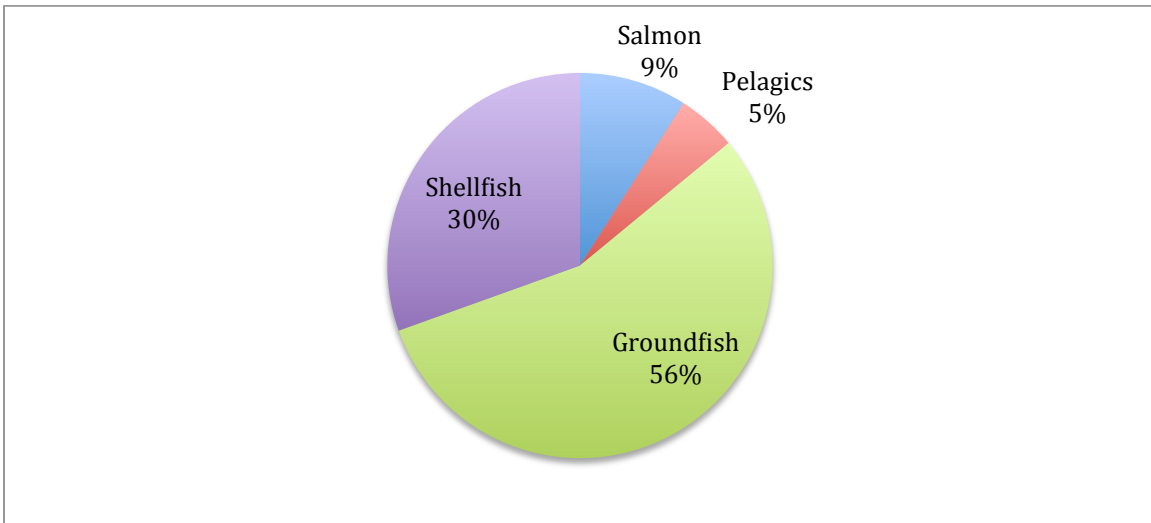
Summary: Year ending March 31, 2013

The market capitalization of commercial licences and quota in the BC fishery at March 31, 2013 is summarized as follows (excludes F licences and relinquished quota in the halibut and sablefish fisheries):

| Fishery Grouping | Fishery | Licence Designation | # Licences | Total Licence & Quota Value (\$ millions) |
|--------------------|-------------------------|---------------------|------------|---|
| Salmon | Seine | AS | 210 | 62.3 |
| | Gillnet | AG | 822 | 44.1 |
| | Troll | AT | 404 | 44.3 |
| Pelagics | Herring – Roe Seine | HS | 241 | 22.2 |
| | Herring – Roe Gillnet | HG | 1,101 | 46.8 |
| | Herring - Spawn on Kelp | J | 36 | 9.0 |
| | Tuna | USA 68 | 110 | - |
| | Sardine | ZS | 25 | 5.0 |
| Groundfish | Halibut | L | 345 | 361.2 |
| | Sablefish | K | 42 | 211.0 |
| | Groundfish Trawl | T | 137 | 298.7 |
| | Rockfish Inside | ZN | 57 | 2.0 |
| | Rockfish Outside | ZN | 163 | 22.8 |
| | Lingcod Hook & Line | | | 25.9 |
| | Dogfish Hook & Line | | | 2.7 |
| Shellfish | Prawn | W | 195 | 128.8 |
| | Crab | R | 189 | 111.3 |
| | Shrimp | S | 219 | 8.3 |
| | Geoduck | G | 50 | 207.5 |
| | Sea Cucumber | ZD | 85 | 44.6 |
| | Red Sea Urchin | ZC | 85 | 4.7 |
| | Green Sea Urchin | ZA | 49 | 2.0 |
| | Euphausiid | ZF | 18 | 0.5 |
| Schedule II | Schedule II Species | C | 451 | 3.5 |
| | | | | 1,668.9 |

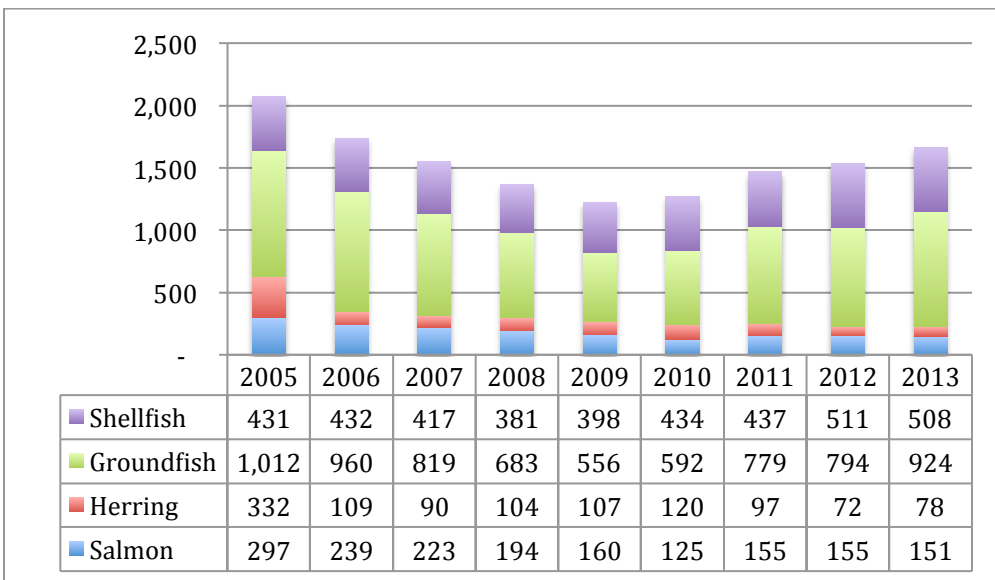
The break-down of licence and quota value by grouping is as follows:

Market Value Breakdown for 2013 by Fishery Grouping



The aggregate value of Pacific commercial fishing licences and quotas rose marginally for the fourth consecutive year, as shown in the following table.

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



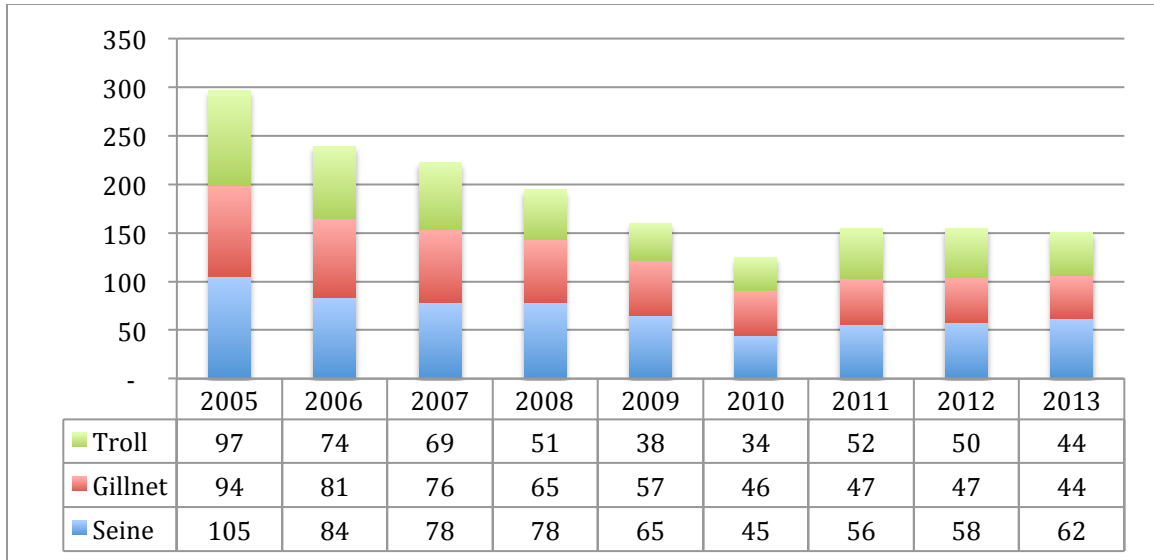
The growth seen over the past couple of years is in spite of the fact that the pool of commercial licences and quotas has diminished through retirements under the PICFI program; the program relinquished more than \$100 million in access over the last six years. Growth has been focused in the groundfish and shellfish fisheries.

Further details for key fishery grouping are provided on the next page. In all charts values are *not* adjusted for inflation; also, valuations exclude F-category licences and quota.

Salmon

Salmon remains a soft licence market, and the 2012 season was very poor. Values were essentially flat in 2013, though overall capitalization has fallen slightly as a result of continued removal of licences from the pool of general commercial licenses through the PICFI program and Pacific Salmon Commission Mitigation Fund.

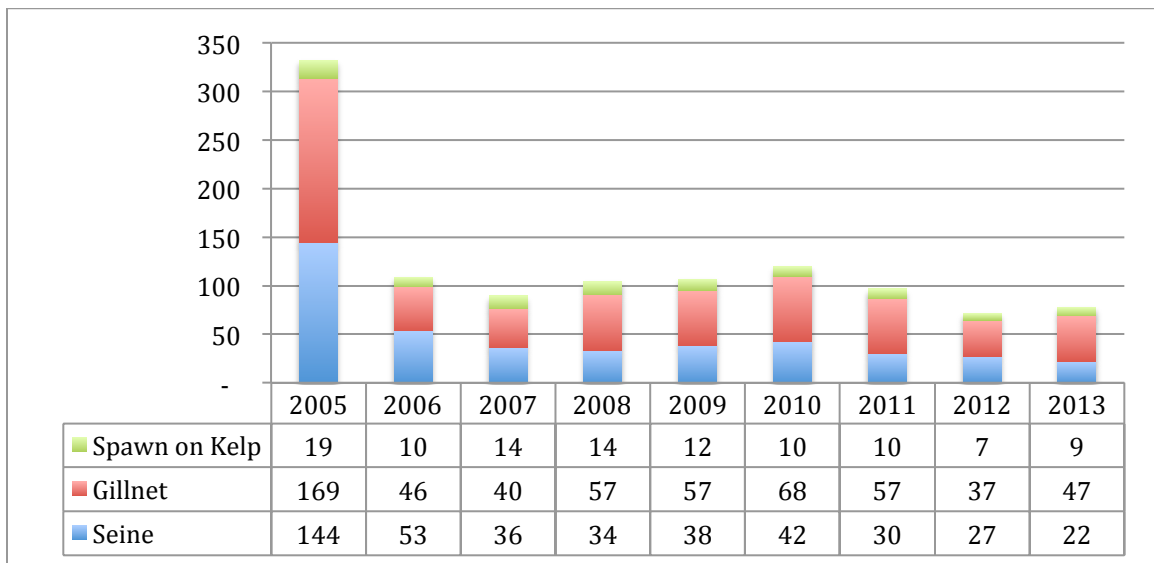
Aggregate Salmon Licence Value (\$ millions)



Herring

Roe herring licence values remain at low levels. Valuation research indicates that seine licence values softened somewhat in 2013, while gillnet licence values firmed. Results for the 2013 spawn on kelp fishery were improved compared to recent levels.

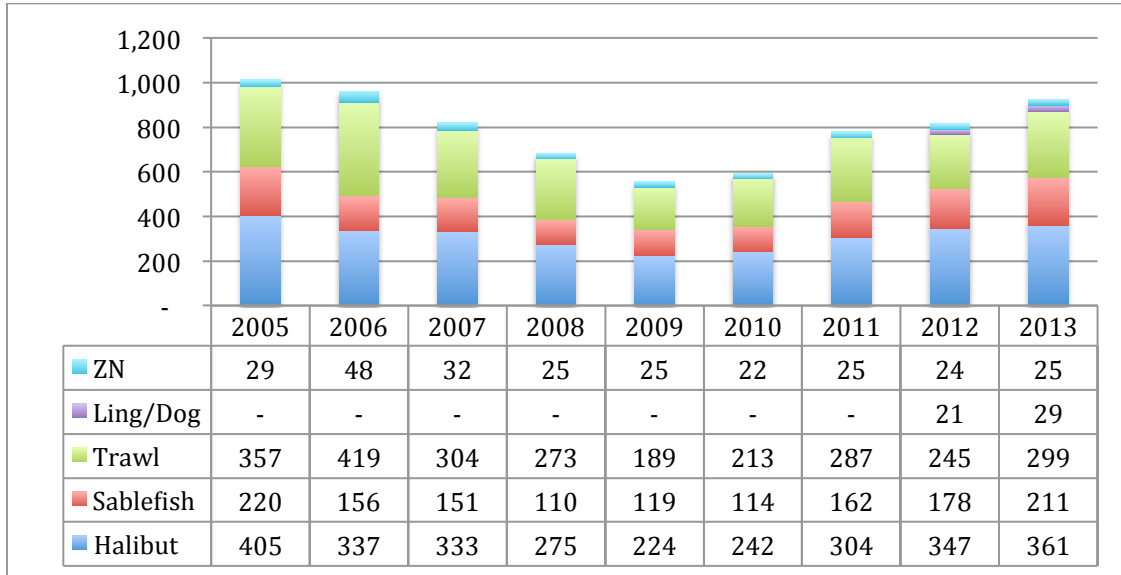
Aggregate Herring Licence Value (\$ millions)



Groundfish

Overall capitalization in the three major groundfish fisheries—groundfish trawl, halibut, and sablefish—grew in 2013. This is related to both an increase in IVQ per-pound rates (especially for halibut), and modest growth in TACs (groundfish trawl and sablefish).

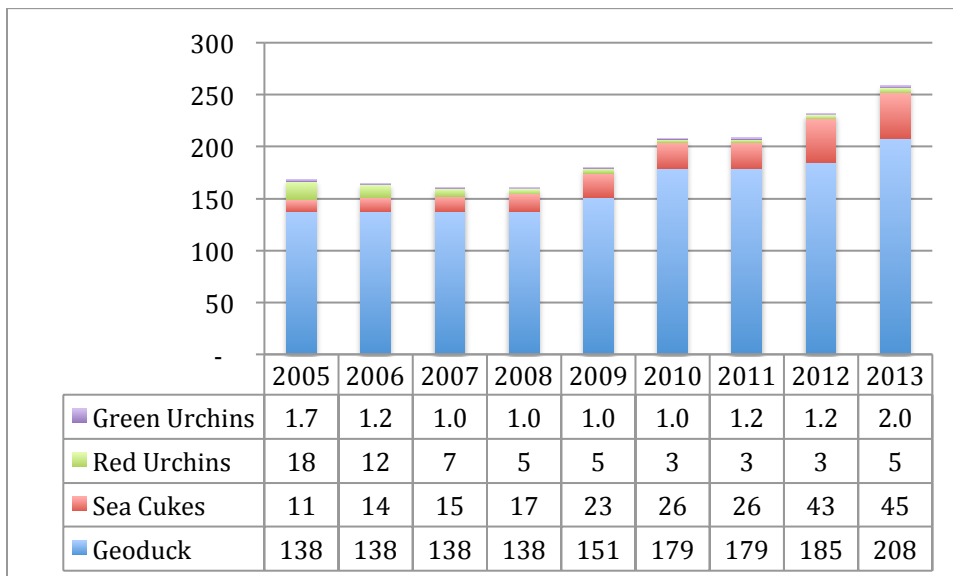
Aggregate Groundfish Licence and Quota Value (\$ millions)



Shellfish

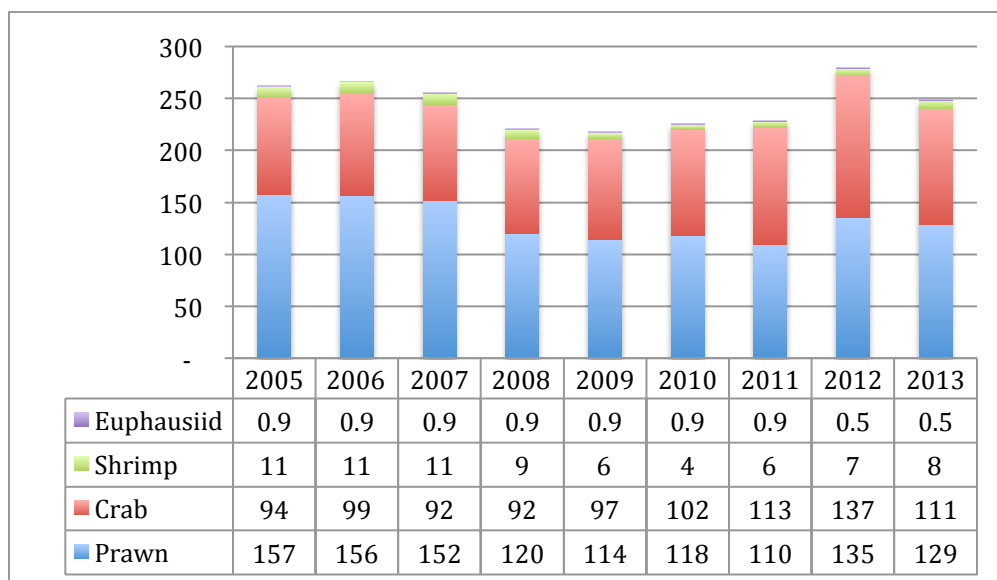
The dive-category shellfish fisheries showed continued growth in 2013. The predominant categories—geoduck and sea cucumber—remained strong, while the ailing red and green sea urchin fisheries showed modest signs of improvement.

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



The trap/trawl shellfish fisheries continue to be dominated by the crab and prawn fisheries. Both of these categories saw declines in value in 2013, evidence of a correction from 2012's sky-high values, rather than a sign of fundamental weakness in the fisheries.

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



Rates of Return – Leasing

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

| Fishery | Lease Rate | Quota/Licence Valuation | Rate of Return |
|-----------------------|------------|-------------------------|----------------|
| Herring - Roe Seine | \$- | \$88,008 | 0.0% |
| Herring - Roe Gillnet | \$3,250 | \$42,484 | 7.6% |
| Sardine | \$15,000 | \$200,000 | 7.5% |
| Halibut | \$4.50 | \$70.00 | 6.4% |
| Sablefish | \$3.35 | \$60.00 | 5.6% |
| Trawl - Groundfish | \$0.09 | \$1.50 | 6.0% |
| Trawl - Offshore Hake | \$0.02 | \$0.65 | 3.1% |
| Rockfish Inside | 1,200 | \$35,000 | 3.4% |
| Rockfish Outside | 8,000 | \$140,000 | 5.7% |
| Lingcod Hook & Line | \$0.35 | \$10.00 | 3.5% |
| Dogfish Hook & Line | \$0.01 | \$0.12 | 8.3% |
| Prawn | \$45,000 | \$657,000 | 6.8% |
| Geoduck | \$500,000 | \$4,150,000 | 12.0% |
| Sea Cucumber | \$65,000 | \$525,000 | 12.4% |
| Red Sea Urchin | \$1,200 | \$55,000 | 2.2% |
| Green Sea Urchin | \$1,000 | \$40,000 | 2.5% |

Methodology

Valuations Performed

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

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

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

Valuation Methodology

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

Licence/Quota Stratification & Valuation Criteria

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

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

Vessel Stratification

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

1. The number of licensed vessels in each commercial category is identified (source: Commercial Licence Eligibility Counts report).

2. Vessels are apportioned between “classic” and “modern” style.

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

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

3. A range of values—low and high—is pegged for both classic and modern vessels.

4. A calculation is provided, showing the estimated make-up and valuation of vessels in the fishery, for both individual vessels, and the fleet in aggregate. The following sample table is populated for each fishery:

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

Note: For some fisheries, the number of vessels enumerated does not correspond to the number of licences indicated for the fishery. This discrepancy is sometimes due to licence stacking permitted in a fishery. It may also be due to the fact that some licences were not renewed or assigned to vessels at the March 31, 2013 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 methodology for valuing licences, quotas, and vessels to that applied in prior reports. Asset valuations are based upon a variety of information, including:

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

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

Valuation Criteria

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

Valuation Trends

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

Licensing Information

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

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

SALMON: Salmon Seine

General Description

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

Valuation Parameters

| | |
|--------------------------|---|
| Valuations performed: | 1. AS licence: full fee and reduced fee 2. Vessels |
| Basis for valuation: | >5 open market transactions 2 PICFI retirements Anecdotal information |
| Confidence in valuation: | Moderate |

Current Valuation

Licence Value at March 31, 2013

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

Valuation Comments

Range of values between \$270,000 and \$325,000.

Values have solidified somewhat compared to the prior year.

While 2012 was a poor season, participants seem to feel that profitable fishing opportunities will arise from time to time, justifying prices at current levels.

The general mood in the salmon seine fishery is guardedly positive.

There is some leasing for F category AS licences; these deals tend to be based on a percentage of the landed value, with percentages ranging from 15-30%.

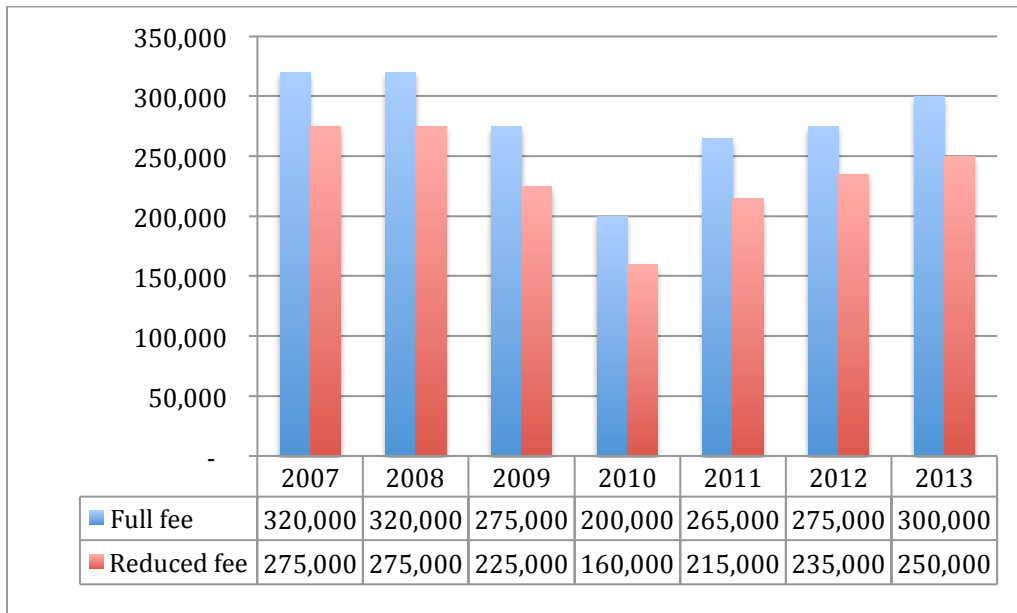
Vessel Value

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 | 153,000 | 9,486,000 |
| Modern Style | 93 | 646,000 | 60,078,000 |
| <i>Total</i> | 155 | 448,800 | 69,564,000 |

Licensing Trends¹

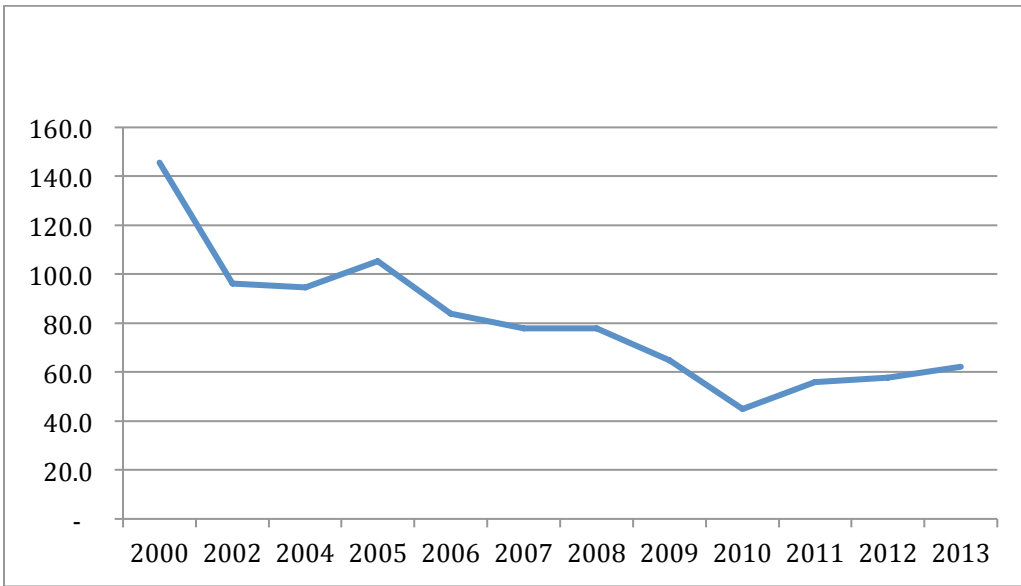
Recent AS Licence Valuations (\$)



Values have crept up each year over the last four years, evidence of some renewed confidence and optimism in this fishery.

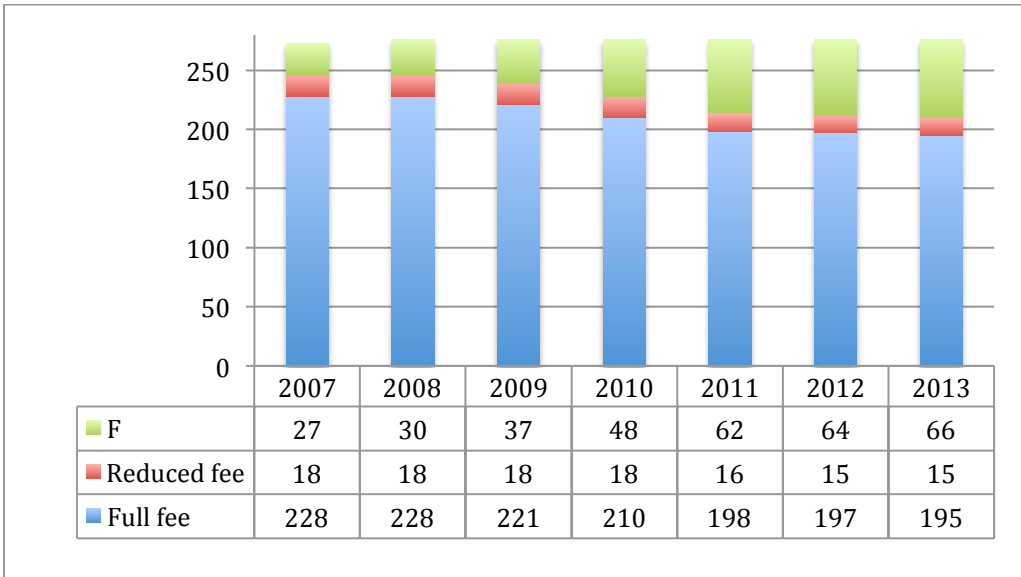
¹ Values in charts are in nominal terms (not adjusted for inflation)

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



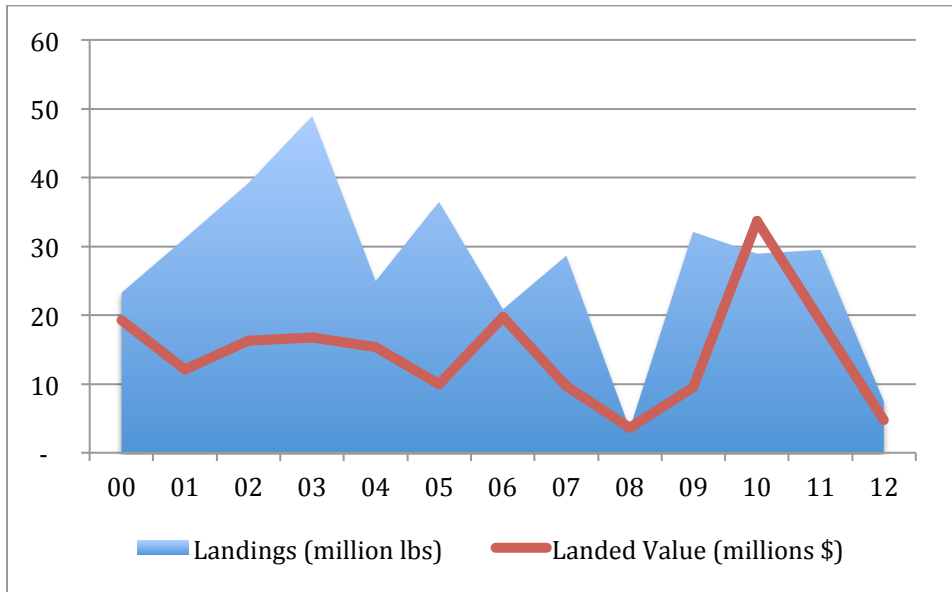
This longer-term chart places the current AS licence “rally” in context: values were far higher in the past.

AS Licence Counts by Category



Seine Salmon Landings & Landed Value Trend

Source: DFO Catch Stats



Outlook

Though this fishery is no longer a pillar of the BC commercial fishery as it historically was, it is increasingly seen as one where occasional profitable opportunities will be seen.

A case in point was the salmon fishery in 2013, where the seine fleet enjoyed a bumper harvest of pink salmon. Now, the fleet looks forward to a potentially large return of Fraser sockeye in 2014.

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

SALMON: Salmon Gillnet

General Description

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

Valuation Parameters

| | |
|--------------------------|--|
| Valuations performed: | 1. AG licence, full fee and reduced fee 2. Vessels |
| Basis for valuation: | ≈ 10 open market transactions 53 PICFI retirements Anecdotal information |
| Confidence in valuation: | Moderate |

Current Valuation

Licence Value at March 31, 2013

| Category | # Licences | Value/ Licence (\$) | Total Value (\$) |
|-------------|------------|---------------------|------------------|
| Full Fee | 707 | 55,000 | 38,885,000 |
| Reduced Fee | 115 | 45,000 | 5,175,000 |
| All AG | 822 | 53,601 | 44,060,000 |

Valuation Comments

Range of values between \$45,000 - \$60,000.

Some sources believe that Area C licences are now valued at slightly less than average rates, while Area E trades at a slight premium. This may reflect the lower harvesting costs in Area E.

With a growing pool of F-category AG licences, which are party based licences, there is an increasing amount of leasing of these licences. Some of the First Nations communities or corporations lease FAG licences to community members at advantageous price levels, while others are leased outside of communities at market rates.

Lease rates for FAG licences range from \$500 to \$2,500. Some leases are based on a percentage of the gross value of the catch (about 25%).

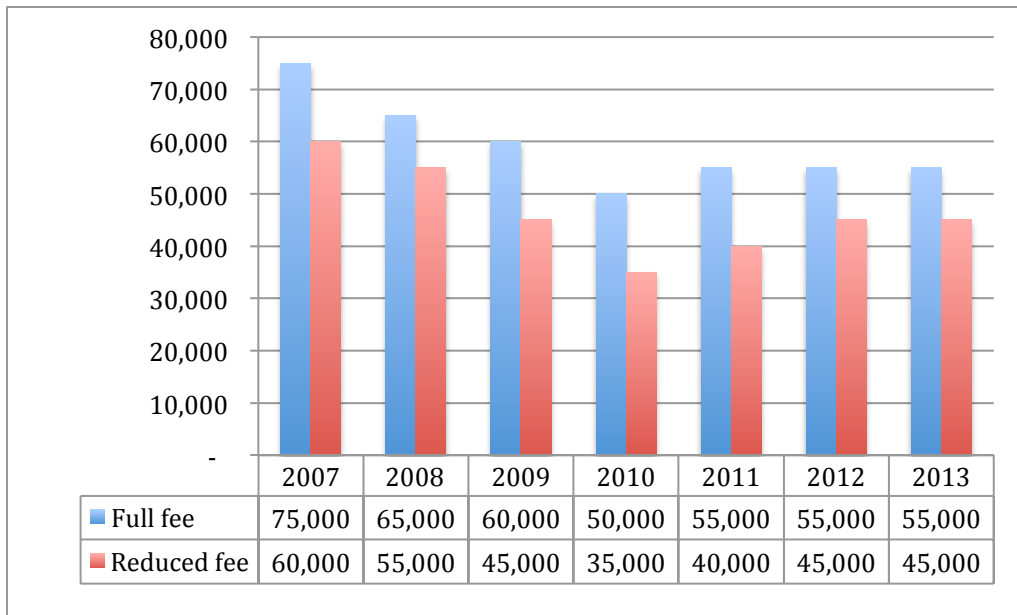
Vessel Value

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 | 57,000 | 29,754,000 |
| Modern Style | 348 | 150,000 | 52,200,000 |
| <i>Total</i> | 870 | 94,200 | 81,954,000 |

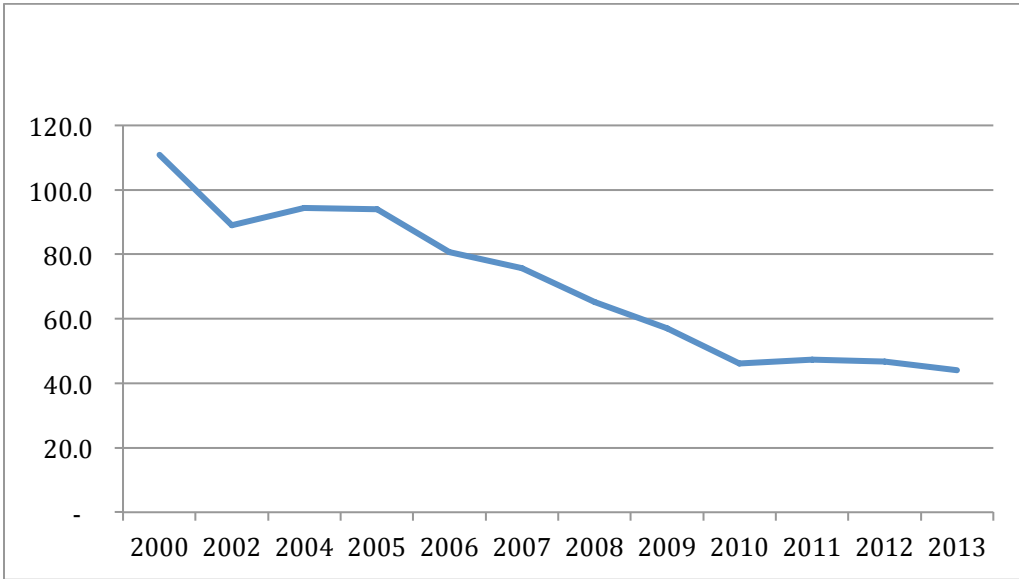
Licensing Trends²

Recent AG Licence Valuations (\$)

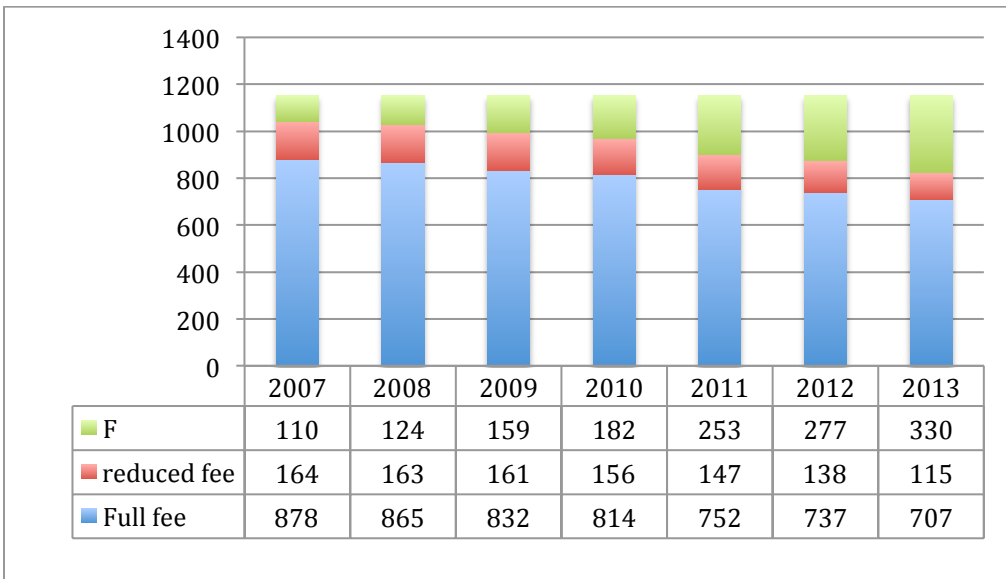


² Values in charts are in nominal terms (not adjusted for inflation)

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



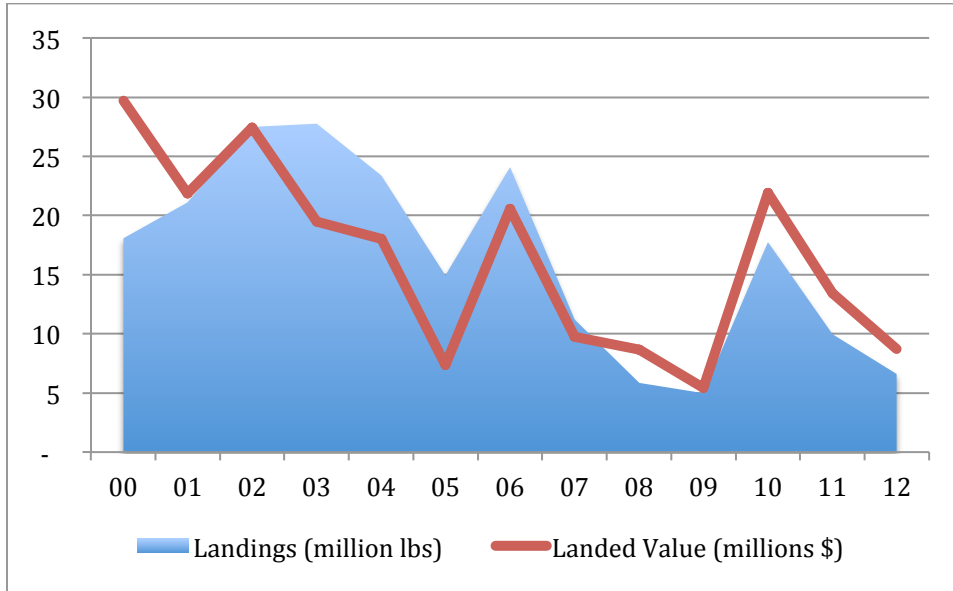
AG Licence Counts by Category



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

Gillnet Salmon Landings & Landed Value Trends

Source: DFO Catch Stats



Outlook

The gillnet salmon fishery has not seen the steady improvement in licence values evidenced in the seine fishery, perhaps because gillnetters do not realize the same economies of scale in high volume fisheries as seiners.

There is currently the prospect of strong sockeye catches for the 2014 season.

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

SALMON: Salmon Troll

General Description

| | |
|--|---|
| <i>Licence Designation</i> | AT |
| <i>Nature of Licence</i> | Vessel based – vessel owner may make annual application for issuance of licence |
| <i>Number of Commercial Licences (valued in this study)</i> | 404 |
| <i>No. of Communal Commercial Lic's (not valued in this study)</i> | 83 (FAT designation, Party-based) |
| <i>Licensing/Management Framework</i> | Area Licensing; vessel owner must designate one of 3 areas: North (F), West Coast Vancouver Island (G), and Georgia Strait (H); periodic area re-selection allowed. Stacking allowed; currently 263 Area F, 165 Area G, 90 Area H (includes FAT licences). |
| <i>Additional Information</i> | Competitive fishery, except area F (IVQ). Vessel-based licence virtually precludes licence leasing. Reduced fee licences may only be held on a vessel where the vessel owner is an aboriginal individual. Vessel-based licence allows harvest of Schedule II species and transporting (packing). |

Valuation Parameters

| | |
|--------------------------|--|
| Valuations performed: | 1. AT licence, full fee and reduced fee 2. Vessels |
| Basis for valuation: | 5-10 open market transactions 12 PICFI retirements 43 Mitigation Fund retirements Anecdotal information |
| Confidence in valuation: | Moderate |

Current Valuation

Licence Value at March 31, 2013

| Category | # Licences | Value/Licence (\$) | Total Value (\$) |
|-------------|------------|--------------------|------------------|
| Full Fee | 388 | 110,000 | 42,680,000 |
| Reduced Fee | 16 | 100,000 | 1,600,000 |
| All AT | 404 | 109,604 | 44,280,000 |

Valuation Comments

Values range from \$110,000 to \$150,000. The “pegged” value of \$110,000 is because there was more activity at this level, and that this level was typical of activity at the March 31, 2013 valuation date. The highest prices were for large licences.

Values have remained quite steady for the last three years.

The anticipated surge in values due to the USA government-funded “Mitigation” program has not materialized. The Mitigation fund has been “stingy” in the view of some BC participants, paying rates that are barely on par with those on the open market.

It appears that the Mitigation Fund has retired 43 licences in the past year.

There does not appear to be a discernable difference in values for troll licences in the three fishing areas.

Area F (north coast), which operates on an individual vessel quota system, features leasing of chinook quota for \$7-8 per fish. As the chinook fishery is often cut-off prematurely, many leases are now done on a 20% of gross basis.

F-category troll licences leased in the \$2,000 per season range.

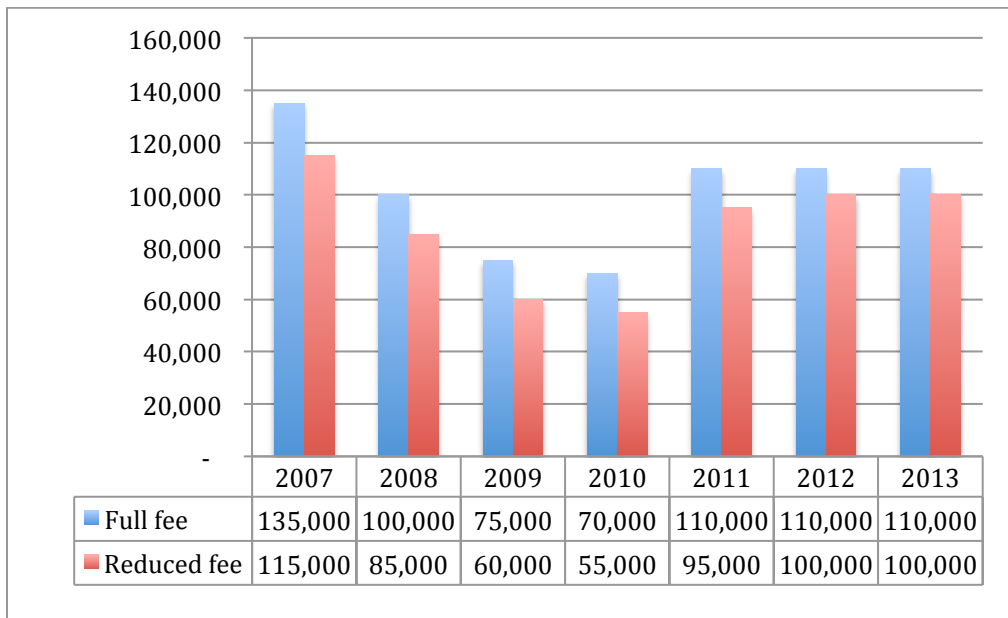
Vessel Value

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.

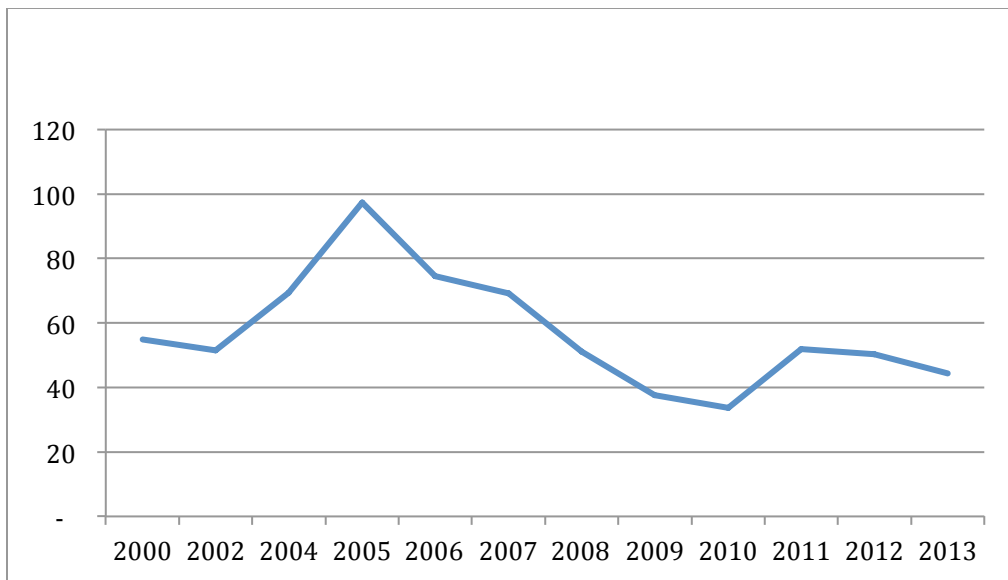
| Salmon Troll | # Vessels | Avg Vessel Value (\$) | Aggregate Value (\$) |
|---------------|-----------|-----------------------|----------------------|
| Classic Style | 287 | 136,000 | 39,032,000 |
| Modern Style | 123 | 200,000 | 24,600,000 |
| <i>Total</i> | 410 | 155,200 | 63,632,000 |

Licensing Trends³

Recent AT Licence Valuations (\$)

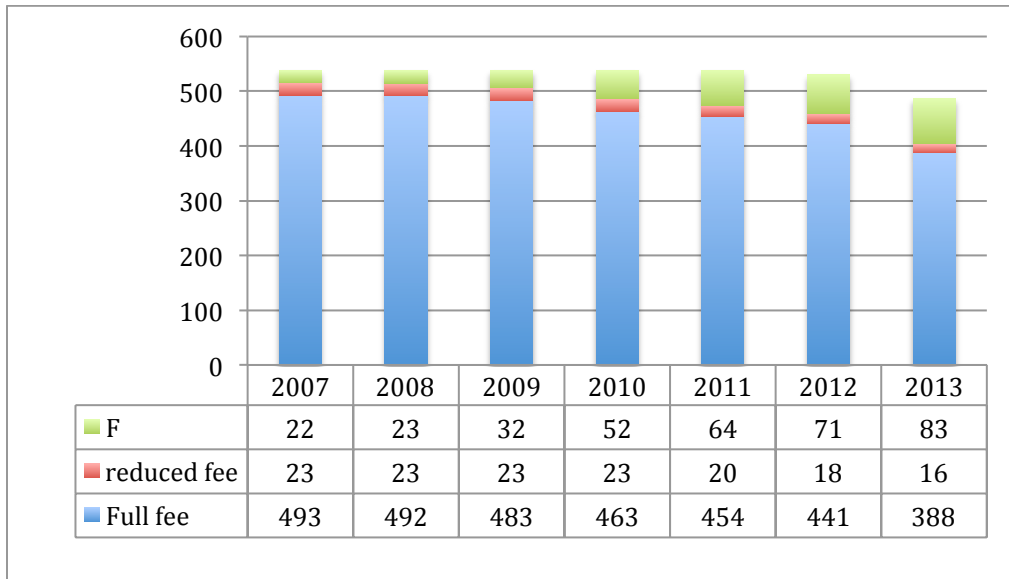


Aggregate Value of AT Licences (\$ millions by year)



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

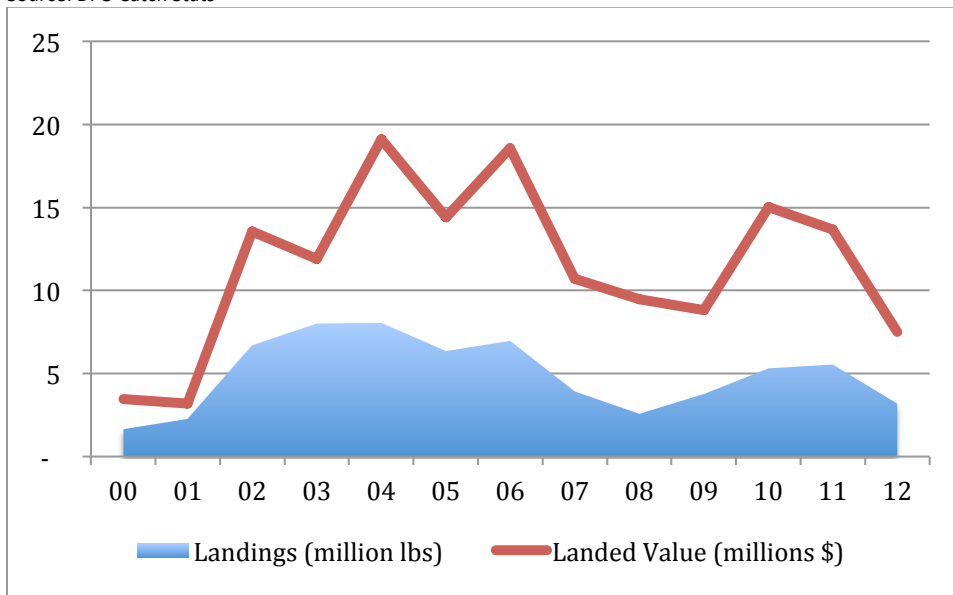
AT Licence Counts by Category



Note that the total number of AT licences is declining in recent years due to retirements by the Mitigation Fund.

Troll Salmon Landings & Landed Value Trends

Source: DFO Catch Stats



Outlook

The troll fishery has not seen a discernable upward or downward trend in recent years.

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

PELAGICS: Roe Herring Seine

General Description

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

Valuation Parameters

| | |
|--------------------------|---|
| Valuations performed: | 1. HS licence, full fee and reduced fee 2. Annual lease rate 3. Vessels |
| Basis for valuation: | < 3 open market transactions 4 PICFI retirements Anecdotal information |
| Confidence in valuation: | Low - Moderate |

Current Valuation

Licence Value at March 31, 2013

| Category | # Licences | Value/ Licence (\$) | Total Value (\$) |
|-------------|------------|---------------------|------------------|
| Full Fee | 193 | 90,000 | 17,370,000 |
| Reduced Fee | 48 | 80,000 | 3,840,000 |
| All HS | 241 | 88,008 | 21,210,000 |

Valuation Comments

Estimates of value range from \$80,000 to \$100,000.

Values have declined for three consecutive seasons.

A disappointing 2013 season resulted in eroding values through the spring of 2013.

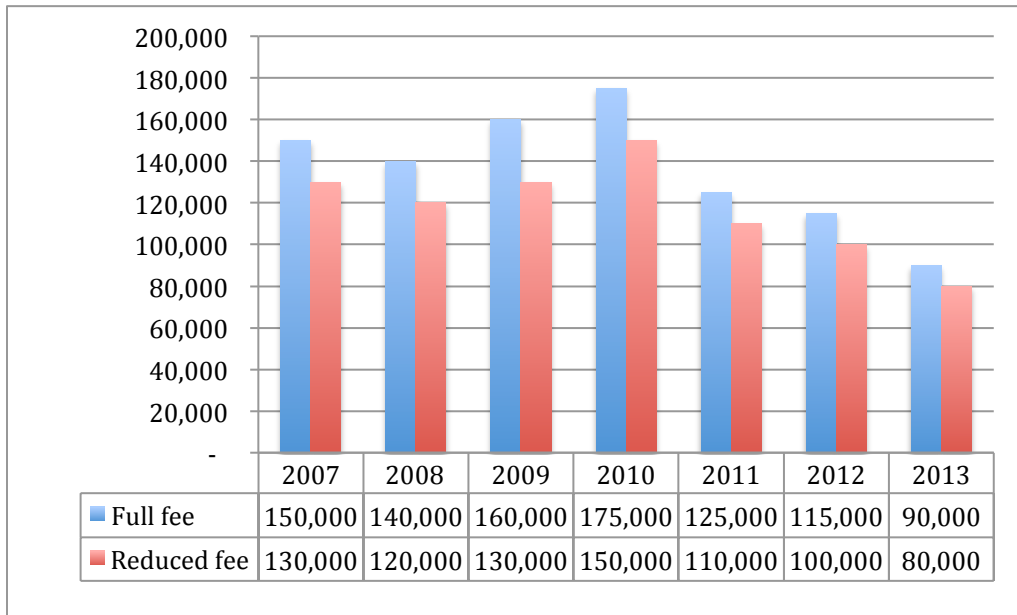
Vessel Value

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 | 175,000 | 6,125,000 |
| Modern Style | 105 | 733,000 | 76,965,000 |
| <i>Total</i> | 140 | 593,500 | 83,090,000 |

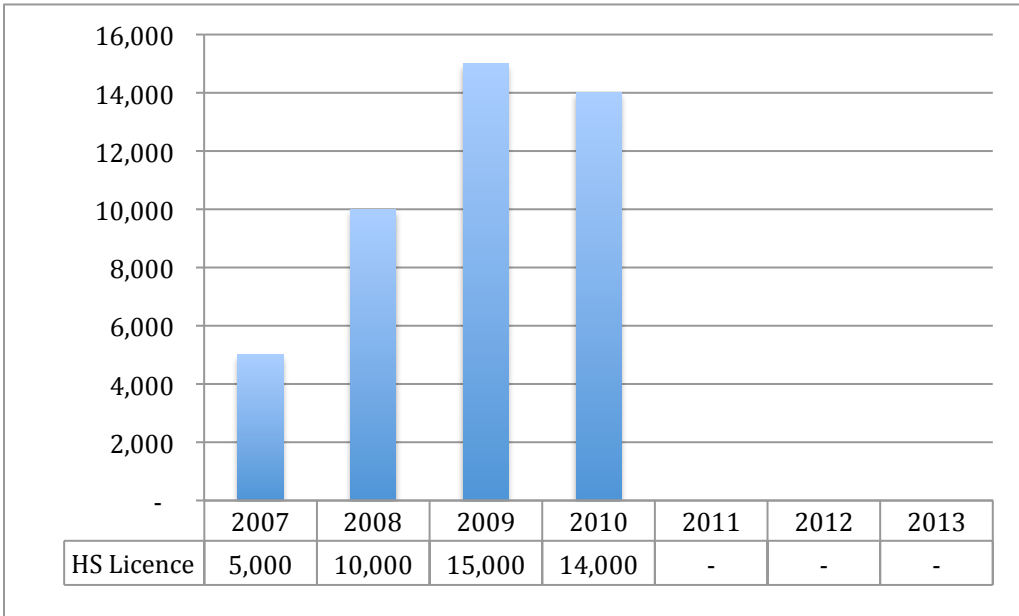
Licensing Trends⁴

Recent HS Licence Valuations (\$)



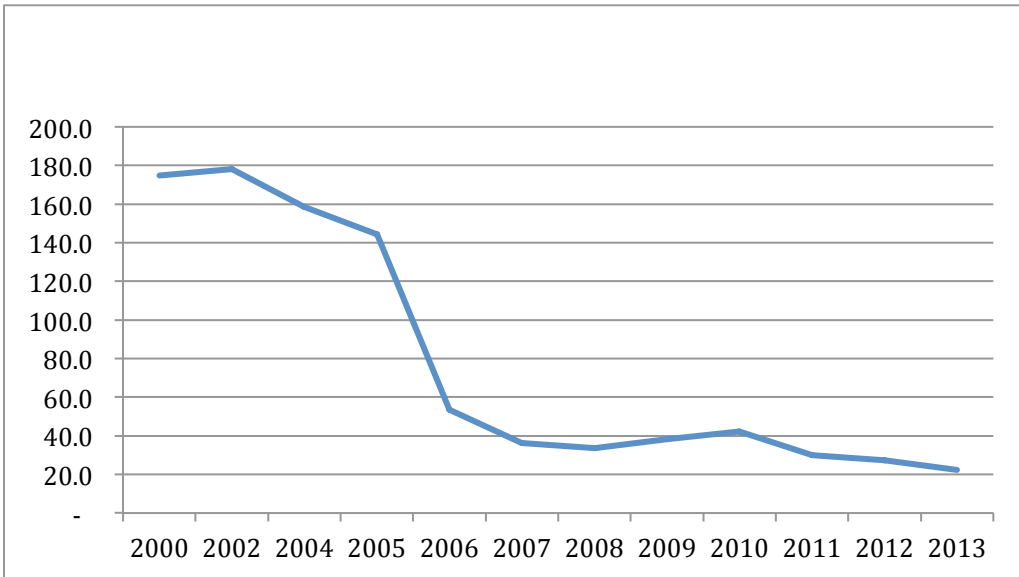
⁴ Values in charts are in nominal terms (not adjusted for inflation)

Recent HS Licence Lease Rates (\$)

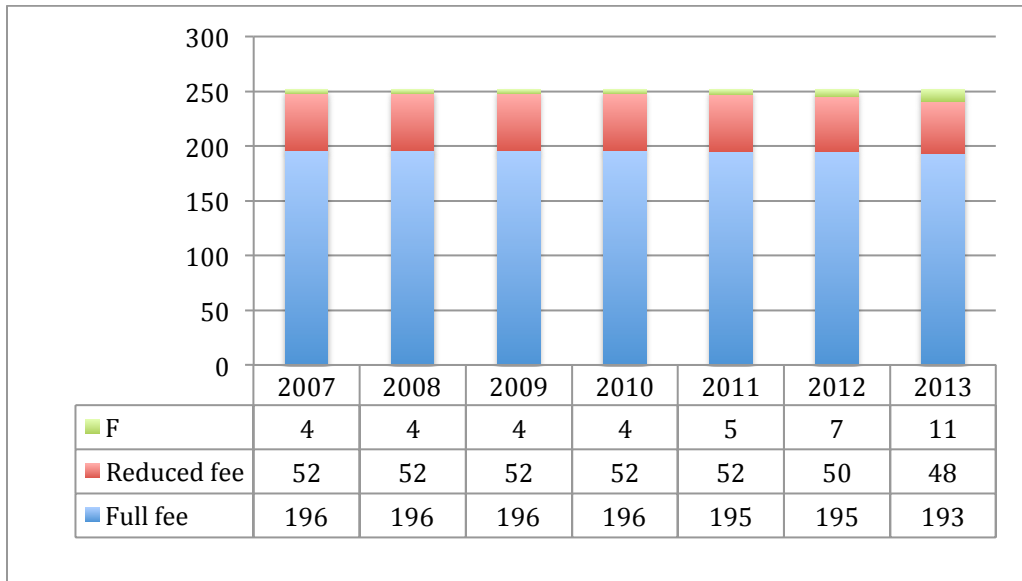


HS licences have had virtually no lease value for the past three seasons. Lessors typically pay only the DFO licence fees.

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

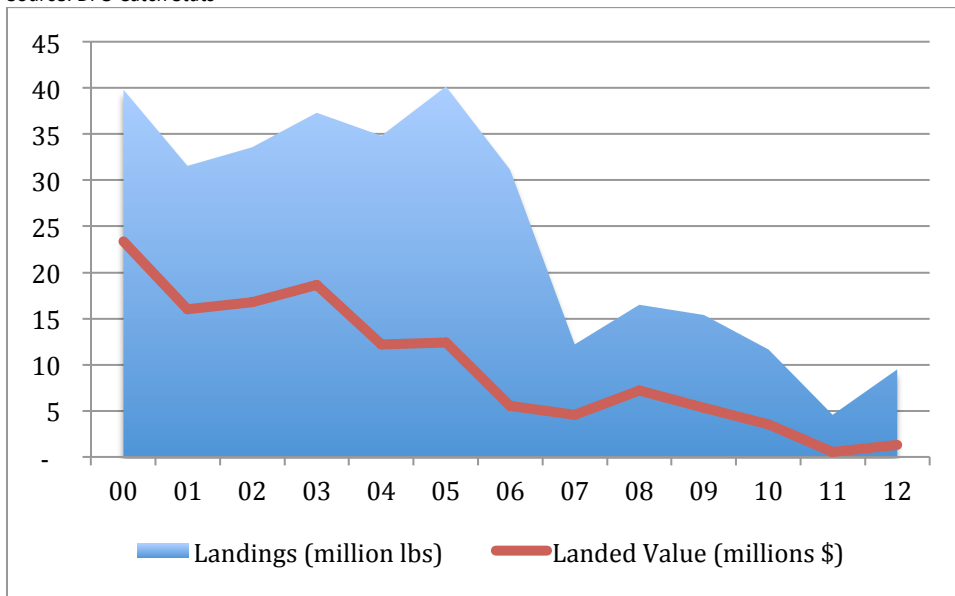


HS Licence Counts by Category



Seine Roe Herring Landings & Landed Value Trends

Source: DFO Catch Stats



Outlook

Seiners made little or no money in the 2013 roe herring seine fishery.

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

Some participants predict that the future for herring fisheries lies in targeting the meat (rather than the roe) for food and bait markets, though these markets are unlikely to yield high returns to licence holders and harvesters.

PELAGICS: Roe Herring Gillnet

General Description

| | |
|--|--|
| <i>Licence Designation</i> | HG |
| <i>Nature of Licence</i> | Party based – individual, corporation, or band may make annual application for issuance of licence |
| <i>Number of Commercial Licences (valued in this study)</i> | 1101 |
| <i>No. of Communal Commercial Lic's (not valued in this study)</i> | 167 (FH) designation |
| <i>Licensing/Management Framework</i> | Area Licensing – holder annually selects a fishing area. Pool fishery – organized into pools in order to avoid quota overages; each licence in a given area receives the same entitlement of fish. Minimum of 4 licences per pool. |
| <i>Additional Information</i> | Active lease market for licences. There are five stock management areas: QCI, North, Central, WCVI, and Strait of Georgia. |

Valuation Parameters

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

Current Valuation

Licence Value at March 31, 2013

| Category | # Licences | Value/Licence (\$) | Total Value (\$) |
|-------------|------------|--------------------|------------------|
| Full Fee | 824 | 45,000 | 37,080,000 |
| Reduced Fee | 277 | 35,000 | 9,695,000 |
| All HG | 1101 | 42,484 | 46,775,000 |

Valuation Comments

Licence values range from \$35,000 to \$55,000.

While a value of \$45,000 for full-fee is pegged at the March 31, 2013 valuation date, transactions after that time tended to take place at lower levels (\$35,000 to \$40,000).

2013 was a disappointing season for the gillnet roe herring fleet.

Lease rates in the \$3,000 to \$4,500 per licence range reflected optimism for the upcoming 2013 season. These rates, substantially higher than seen in the previous two seasons, were not justified by results.

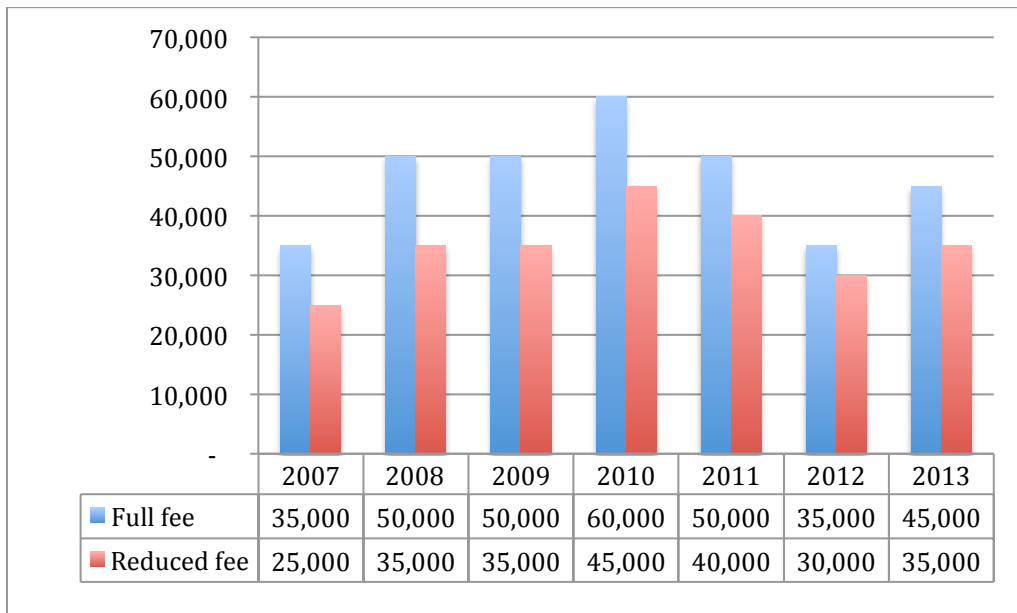
Vessel Value

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

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

Licensing Trends⁵

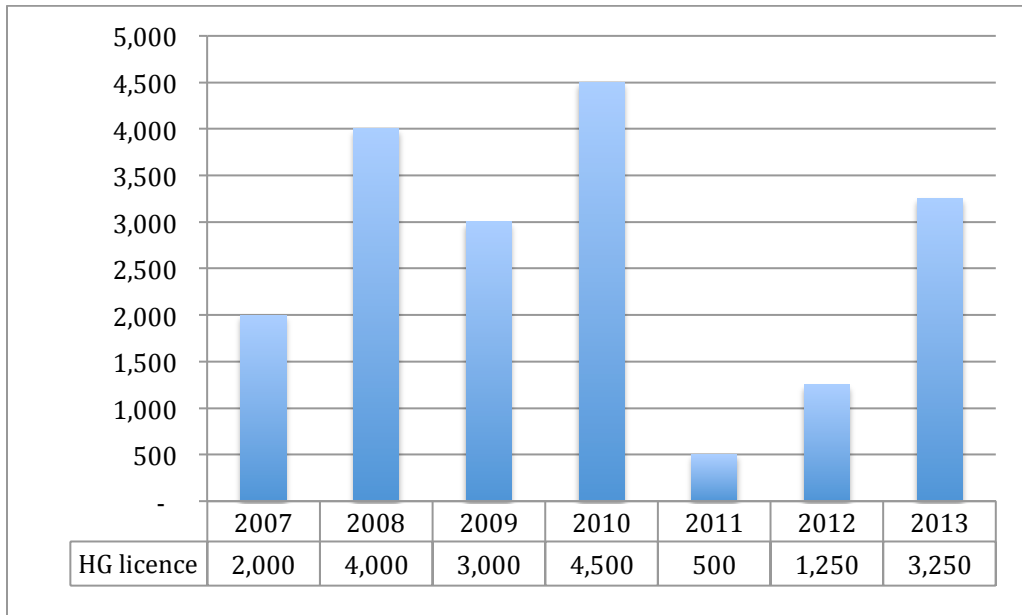
Recent HG Licence Valuations (\$)



As noted, licence values dropped somewhat after the March 31, 2013 valuation date.

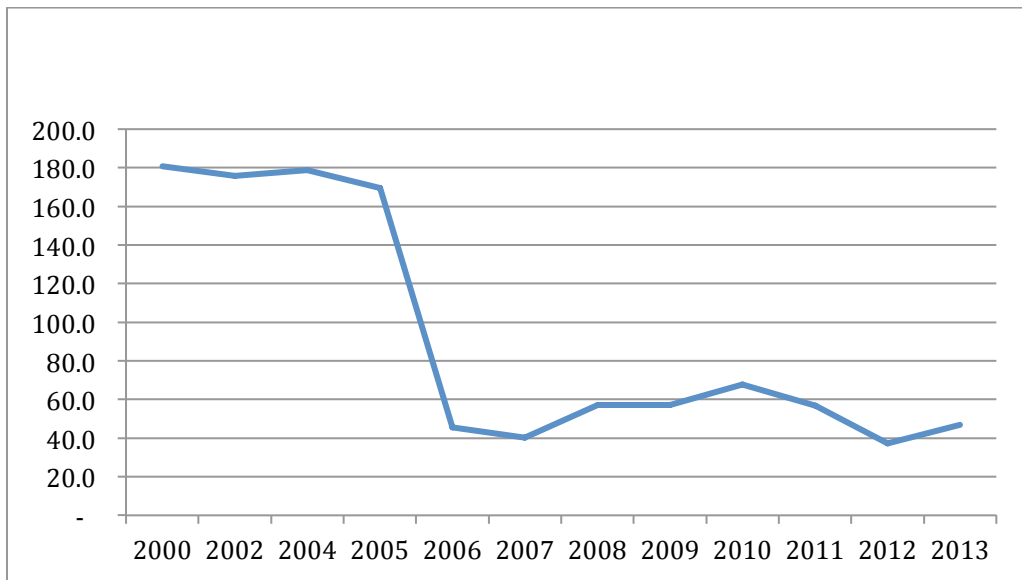
⁵ Values in charts are in nominal terms (not adjusted for inflation)

Recent HG Licence Lease Rates (\$)

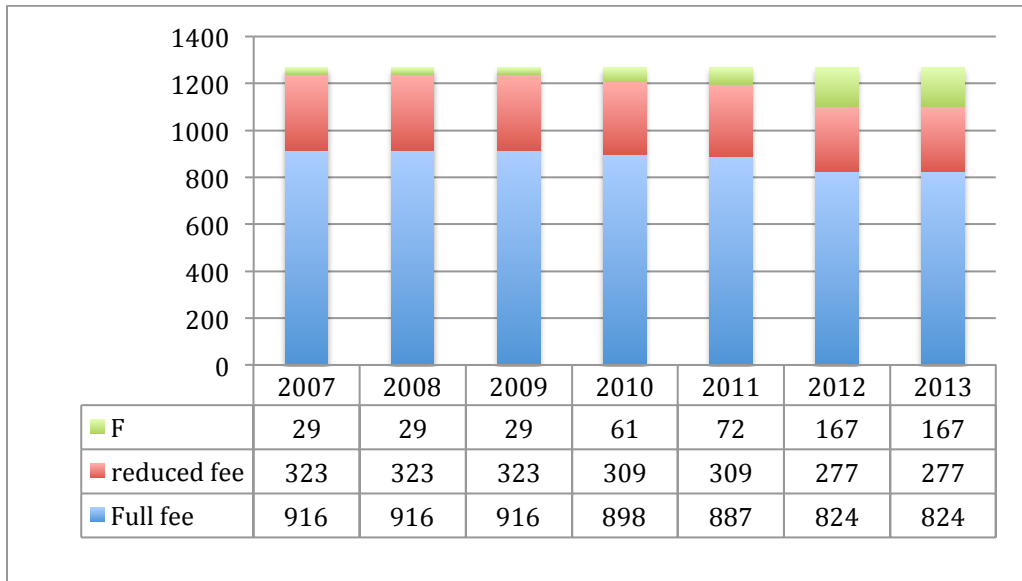


As expected last year, lease rates rose in 2013 based on speculation of improvement in the Japanese roe market. This improvement was not realized.

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

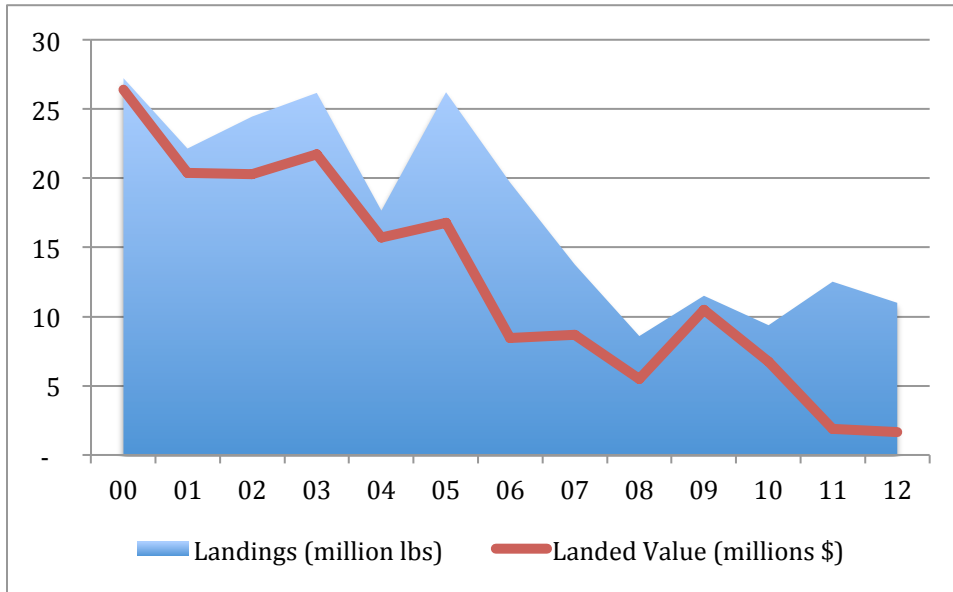


Licence Counts by Category



Gillnet Roe Herring Landings & Landed Value Trends

Source: DFO Catch Stats



Outlook

Gillnetters fared more poorly in the 2013 fishery than they had expected, causing erosion in licence values after the season.

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

PELAGICS: Herring Spawn on Kelp

General Description

| | |
|--|---|
| <i>Licence Designation</i> | J |
| <i>Nature of Licence</i> | Party based – individual, corporation, or band may make annual application for issuance of licence |
| <i>Number of Commercial Licences (valued in this study)</i> | 36 |
| <i>No. of Communal Commercial Lic's (not valued in this study)</i> | 3 (FJ designation) An additional 7 FJ licences 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 |
| Basis for valuation: | No transactions Anecdotal information |
| Confidence in valuation: | Low |

Current Valuation

Licence Value at March 31, 2013

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

Valuation Comments

Valuation information is challenging to unearth in this fishery, as transactions are extremely rare.

Anecdotal information supports a valuation in the \$250,000 range.

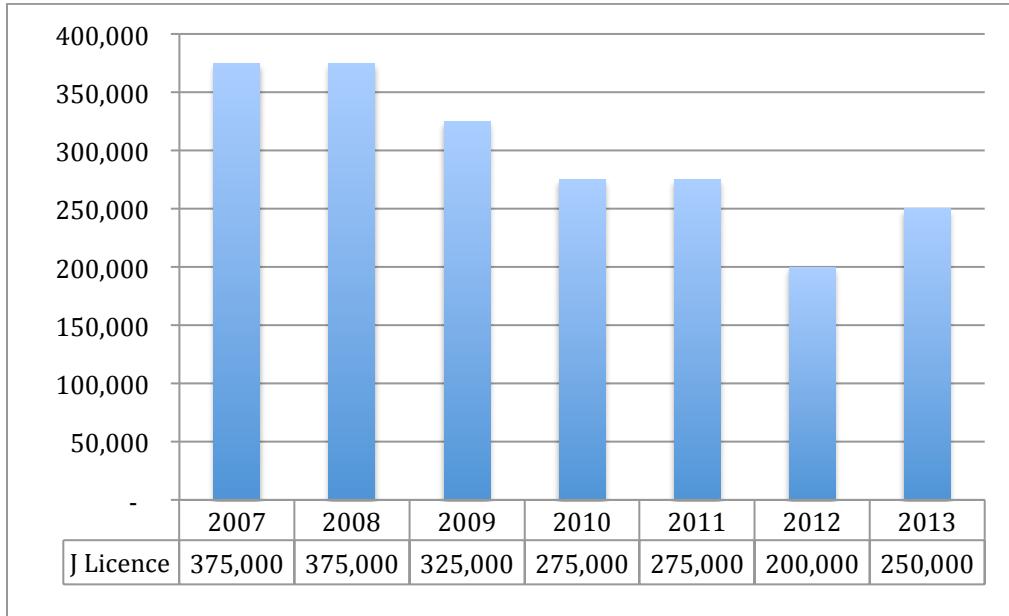
The 2013 SOK season saw some improvement over recent previous years in terms of prices for finished product.

Vessel Value

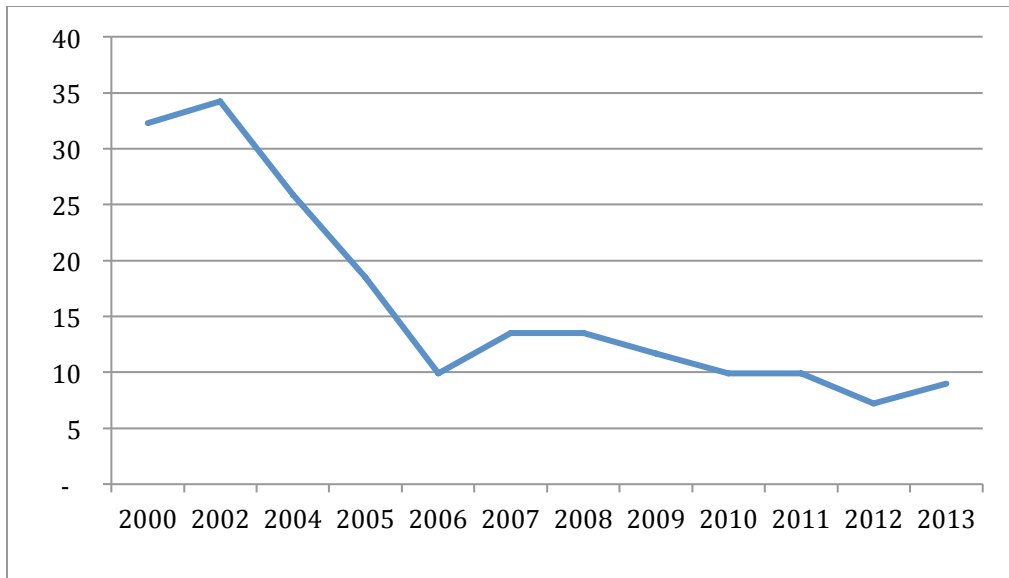
Not valued. There is no single vessel type associated with the spawn on kelp fishery, nor are licences assigned to a vessel.

Licensing Trends⁶

Recent J Licence Valuations (\$)



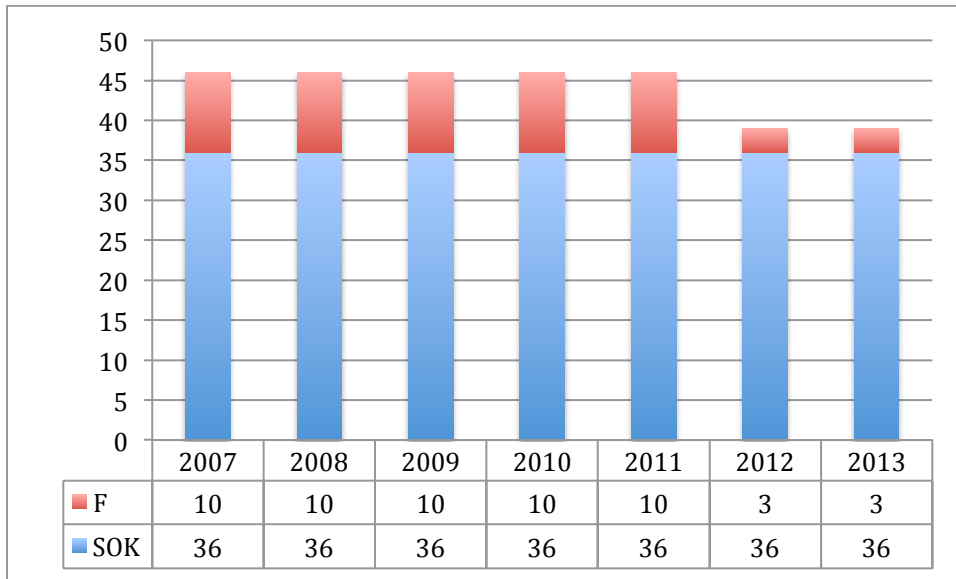
Aggregate Value of J Licences (\$ millions by year)



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

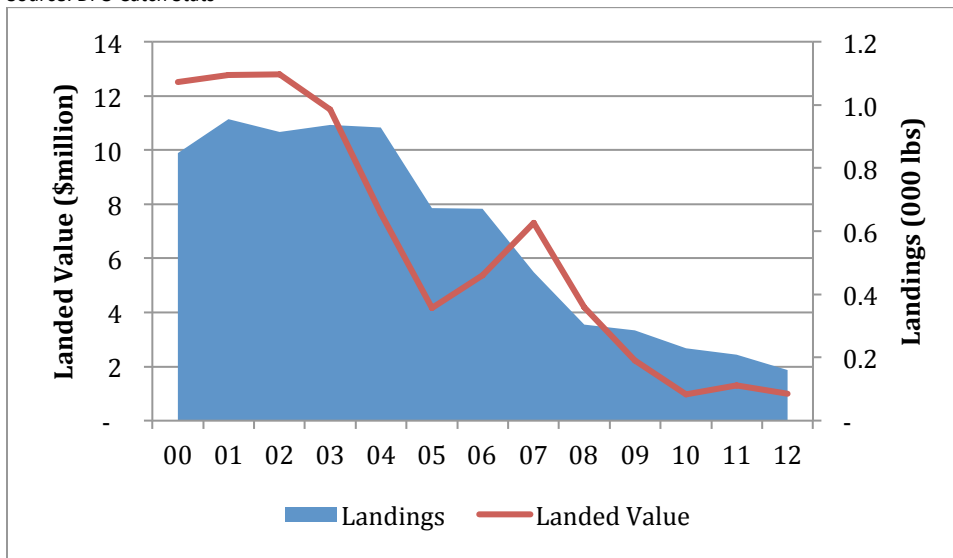
⁶ Values in charts are in nominal terms (not adjusted for inflation)

J Licence Counts by Category



Spawn on Kelp Landings & Landed Value Trends

Source: DFO Catch Stats



Outlook

Improvement was seen this year, with selling prices obtained by SOK producers of up to \$13 per pound (compared to an average of \$9.00 the prior year).

Whether or not this a trend or a blip is unknown.

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

PELAGICS: Tuna and Sardine

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

Tuna (Category USA 68)

Valuation Parameters

| | |
|--------------------------|----------------------------------|
| Valuations performed: | Licence |
| Basis for valuation: | Anecdotal information |
| Confidence in valuation: | Very low (no valuation possible) |

Current Valuation

Licence Value at March 31, 2013

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

Valuation Comments

No value is provided because of the high degree of uncertainty regarding access of Canadian boat in U.S. waters.

No transactions were reported; the future utility and value of these licences is in flux.

Outlook

In 2013 the U.S. allowed 45 of 110 USA 68 licences to participate in the fishery in U.S. waters; the prior year, no Canadian vessels were allowed in their waters.

The extent to which Canadian access to tuna in U.S. waters will be allowed in the future is uncertain.

It is reported that tuna fishing in Canadian waters was good in 2013, and many U.S. vessels operated in the Canadian zone. This may affect the negotiating dynamics between the two countries regarding future access to each others’ fishing zones.

Sardine (ZS)

Valuation Parameters

| | |
|--------------------------|-----------------------|
| Valuations performed: | Licence |
| Basis for valuation: | Anecdotal information |
| Confidence in valuation: | Medium |

Current Valuation

Licence Value at March 31, 2013

| Category | # Licences | Value/ Licence (\$) | Total Value (\$) |
|----------|------------|---------------------|------------------|
| ZS | 25 | 200,000 | 5,000,000 |

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

Valuation Comments

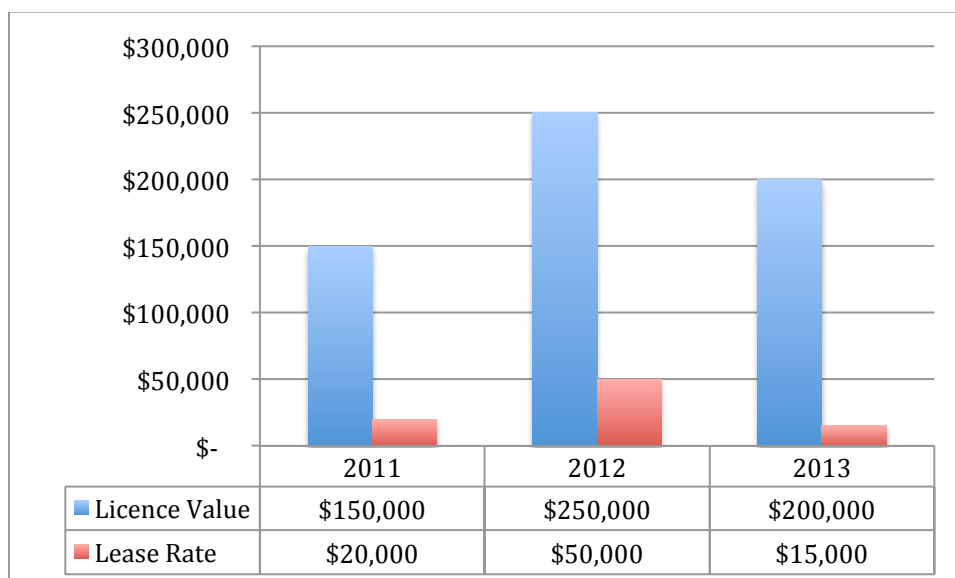
Estimates of value at the March 31, 2013 valuation date centered around the \$200,000 mark.

Lease rates were in the \$10,000 to \$20,000 range.

Values were dampened compared to the prior year, as the 2012 licence and lease market was fueled by optimism about the improving trajectory of the fishery.

Licensing Trends

Recent Sardine Valuations



Outlook

The 2013 season has seen a virtual absence of sardines in Canadian waters, and catches have been negligible.

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

Accordingly, the value of sardine licences is expected to plummet unless a dramatic return of fish is observed.

GROUND FISH: Halibut

General Description

| | |
|--|--|
| <i>Licence Designation</i> | L |
| <i>Nature of Licence</i> | Vessel based – vessel owner may make annual application for issuance of licence |
| <i>Number of Commercial Licences (valued in this study)</i> | 345 |
| <i>No. of Communal Commercial Lic's (not valued in this study)</i> | 91 (FL designation, Party-based) |
| <i>Licensing/Management Framework</i> | <p>Quota management system.</p> <p>Quota is separable from licence and divisible into one-pound increments. Quota can be re-allocated (transferred) amongst L licensed vessels on a temporary or permanent basis (FL's temporary only).</p> <p>Vessel must hold a halibut licence to hold or fish halibut.</p> <p>There is a minimum quantity of quota to be held on L licences (permanent allocation); see Management Plan for details.</p> |
| <i>Additional Information</i> | <p>About 150 L-licensed vessels actively fish for halibut.</p> <p>Quotas have declined in recent years due to stock fluctuation and distribution.</p> <p>Quota in the 2013 management plan for the commercial fishery is 5.95 million pounds.</p> <p>Vessel-based licence allows harvest of Schedule II species and transporting (packing).</p> |

Valuation Parameters

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

Current Valuation

Licence and Quota Value at March 31, 2013

| Category | # Licences/ lbs quota | Value per Licence/ lb quota (\$) | Total Value (\$) |
|-------------|--------------------------|--|---------------------|
| L | 345 | 1,250 | 18,457,500 |
| Quota | 4,896,243 | 70.00 | 342,737,010 |
| Total Value | | | 361,194,510 |

Valuation Comments

The value of L licence tabs ranges from \$1,050 to \$1,500 per foot; precise valuation is confounded because most sales include a minimum amount of quota and the apportionment can vary.

An average L tab (42.8') at \$1,250 per foot would have a value of \$53,500.

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

Quota transactions ranged from \$65 per lb to \$72 per lb.

The market for halibut quota is increasingly thin. There were few transactions, other than for small quantities, reported for the current period.

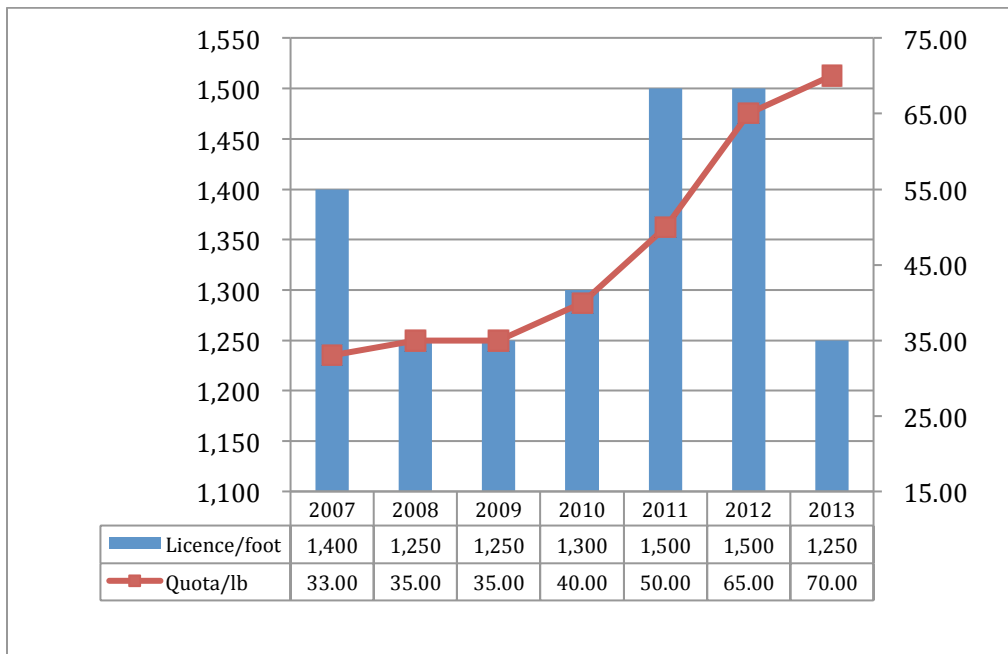
Vessel Value

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.

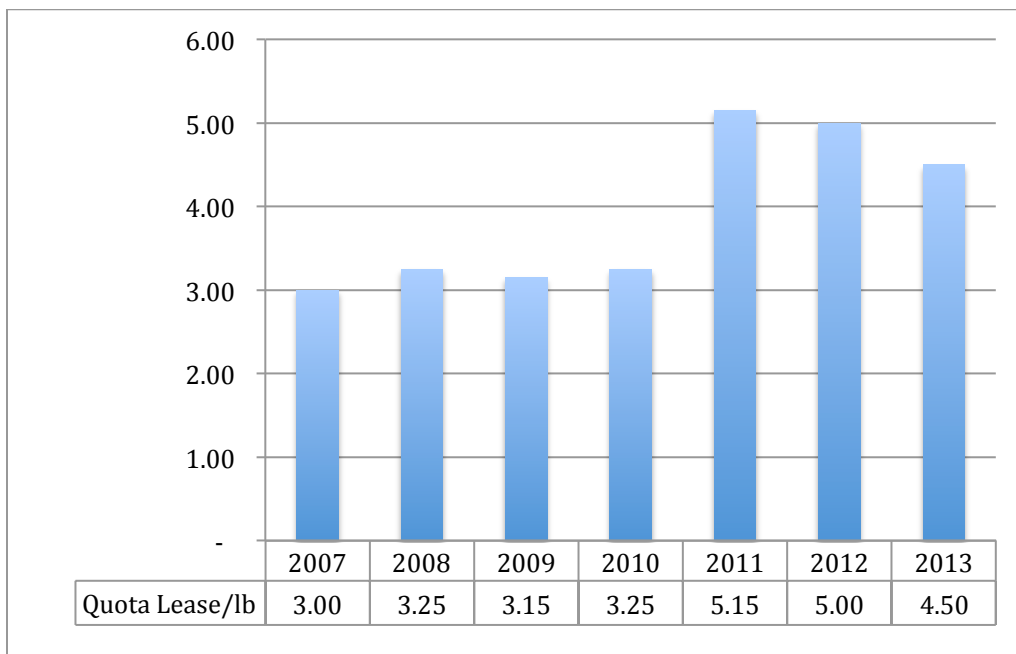
| Halibut | # Vessels | Avg Vessel Value (\$) | Aggregate Value (\$) |
|---------------|-----------|--------------------------|-------------------------|
| Classic Style | 231 | 141,000 | 32,571,000 |
| Modern Style | 154 | 256,000 | 39,424,000 |
| <i>Total</i> | 385 | 187,000 | 71,995,000 |

License & Quota Trends⁷

Recent L Licence and Halibut Quota Valuations (\$)



Recent Halibut Quota Lease Rates (\$ per lb)



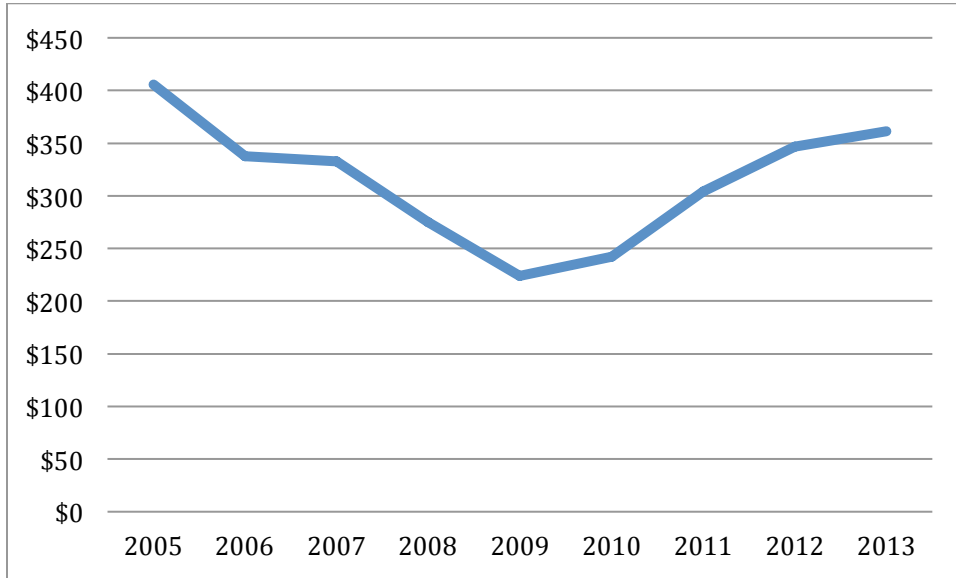
Lease rates in 2013 ranged from \$4.25 to \$5.00 per lb; lower values compared to 2012 reflect lower fish prices in the current year.

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

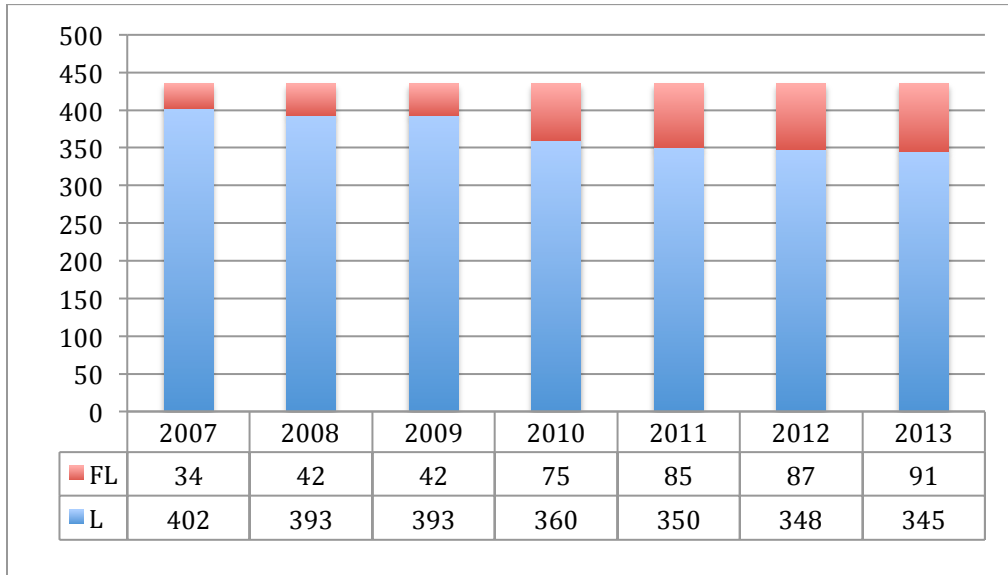
PACIFIC FLEET LICENCE, QUOTA, AND VESSEL VALUATION: AT MARCH 31, 2013

In addition to the lease fee for quota, lessees also tend to pay the DFO/management fees.

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

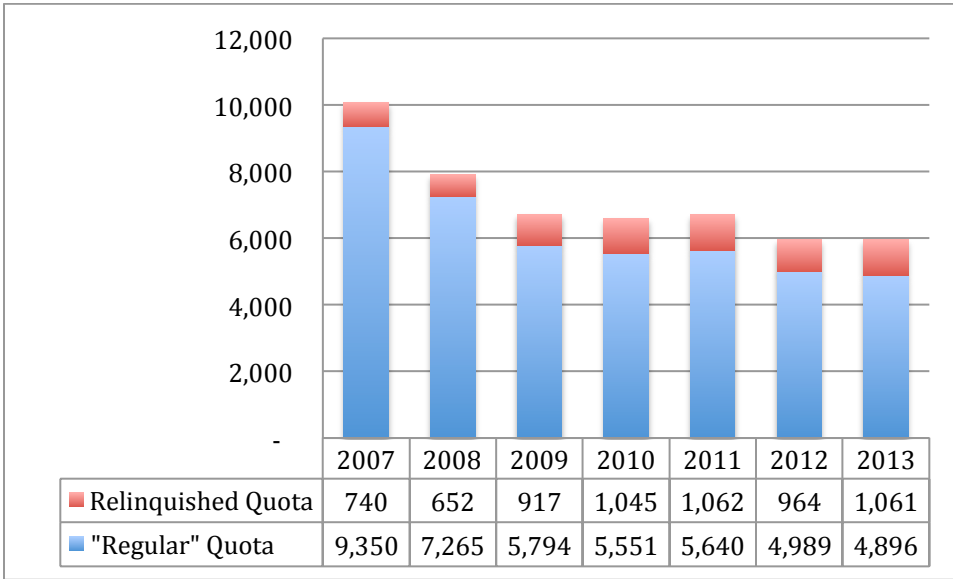


L Licence Counts by Category



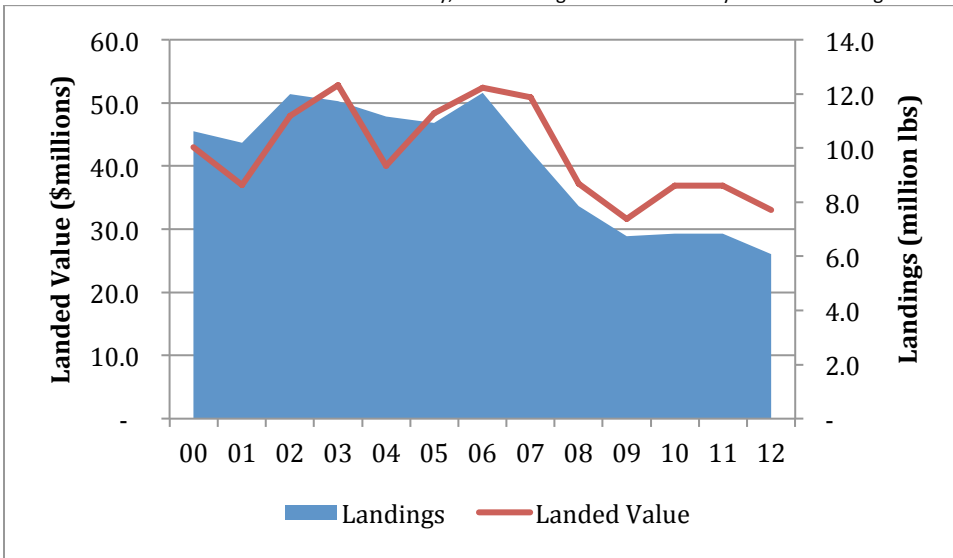
⁸ Excludes F licences and relinquished quota

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



Halibut Landings & Landed Value Trends

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



Outlook

Halibut is one of the most in-demand fishery categories. Quota is seen as a stable investment (compared to the volatility seen in other fisheries).

Halibut is easier to lease than other categories of quota because there are numerous L tabs.

Even with extremely high IVQ prices (in the \$70 range), returns have exceeded 5% on investment, which seems to be satisfactory to purchasers.

Some participants believe that the price of halibut quota has peaked (this is a refrain expressed each year).

GROUND FISH: Sablefish (Black Cod)

General Description

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

Valuation Parameters

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

Current Valuation

Licence and Quota Value at March 31, 2013

| Category | # Licences/ lbs quota | Value per Licence/ lb quota (\$) | Total Value (\$) |
|-------------|--------------------------|-------------------------------------|---------------------|
| K Licence | 42 | 275,000 | 11,550,000 |
| Quota | 3,747,068 | 60.00 | 224,824,080 |
| Total Value | | | 236,374,080 |

Valuation Comments

K licence estimations of value range from \$275,000 to \$300,000. The paucity of supply of K licences (43 in total, plus 6 FKs) is a key reason for the high tab value.

Sablefish quota ranged from \$55 to \$65 per pound (j-cut). Most of the transactions were for very small blocks of IVQ.

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

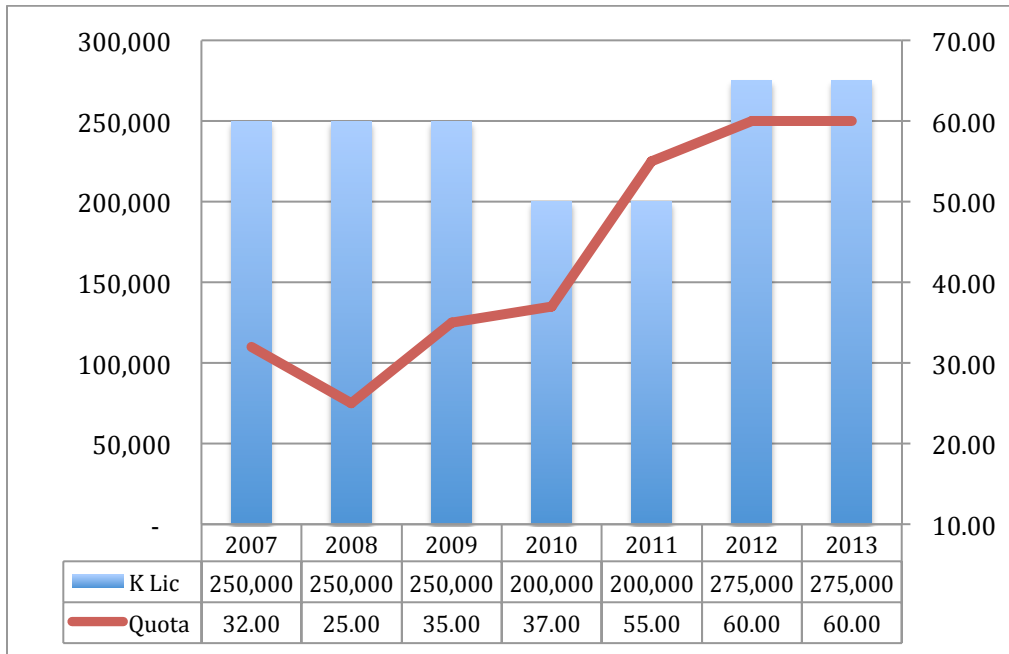
Vessel Value

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

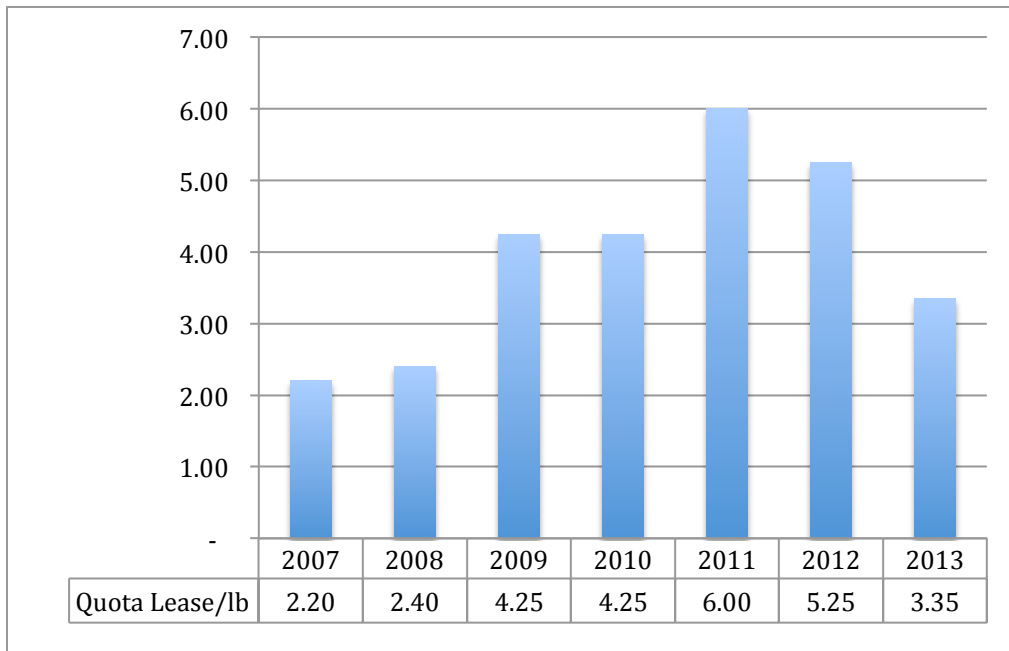
| Sablefish | # Vessels | Avg Vessel Value (\$) | Aggregate Value (\$) |
|---------------|-----------|--------------------------|-------------------------|
| Classic Style | 24 | 200,000 | 4,800,000 |
| Modern Style | 24 | 650,000 | 15,600,000 |
| <i>Total</i> | 48 | 425,000 | 20,400,000 |

License & Quota Trends⁹

Recent K Licence and Sablefish Quota Valuations (\$)



Recent Sablefish Quota Lease Rates (\$ per lb)



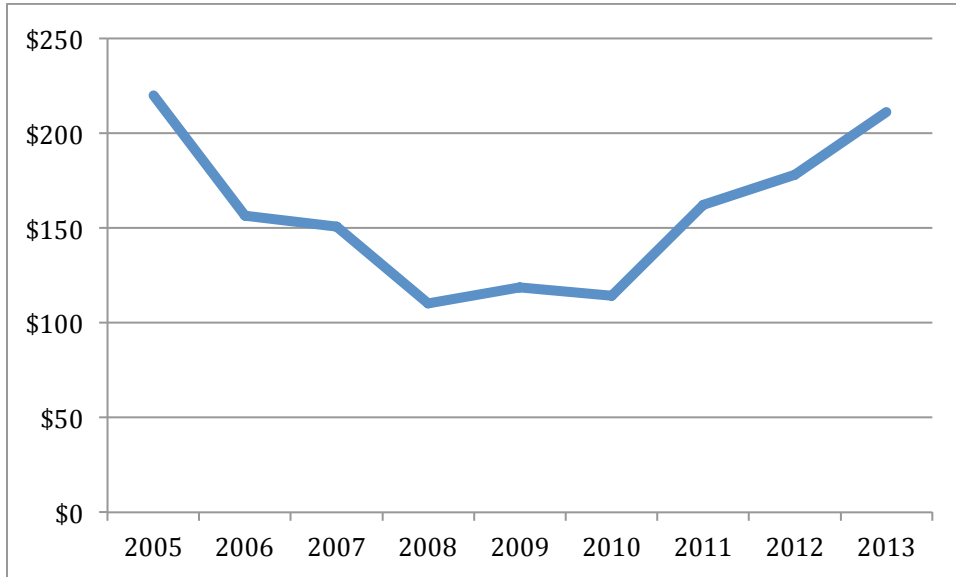
⁹ Values in charts are in nominal terms (not adjusted for inflation)

PACIFIC FLEET LICENCE, QUOTA, AND VESSEL VALUATION: AT MARCH 31, 2013

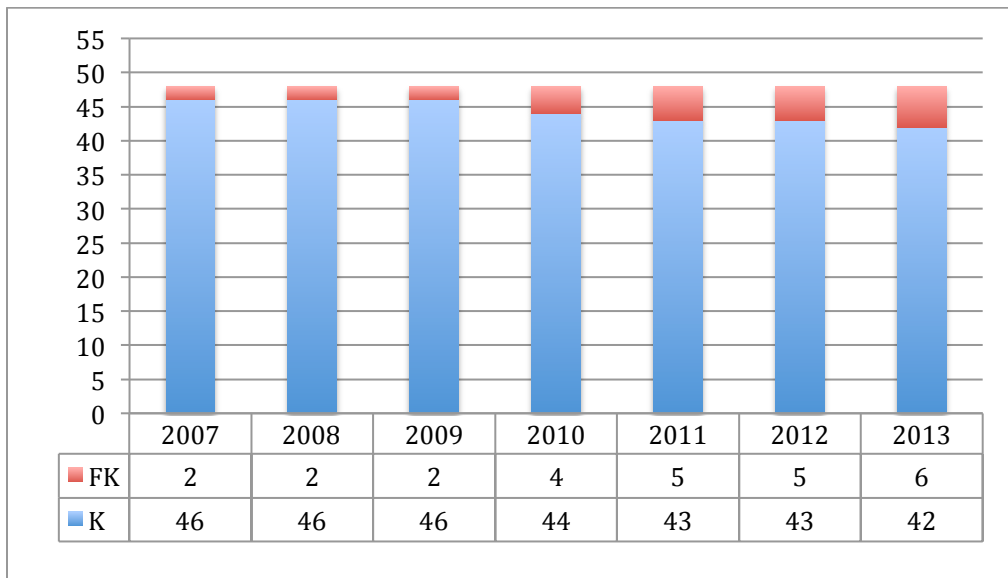
Lease rates range from \$2.70 to \$3.80 per j cut pound. This is a sharp reduction from the prior year, reflecting lower fish prices.

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

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

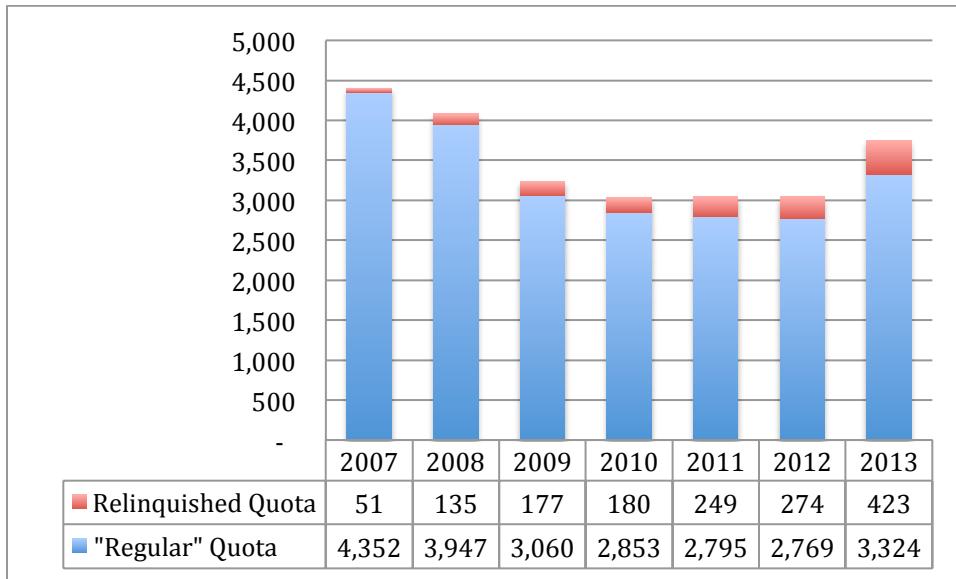


K Licence Counts by Category



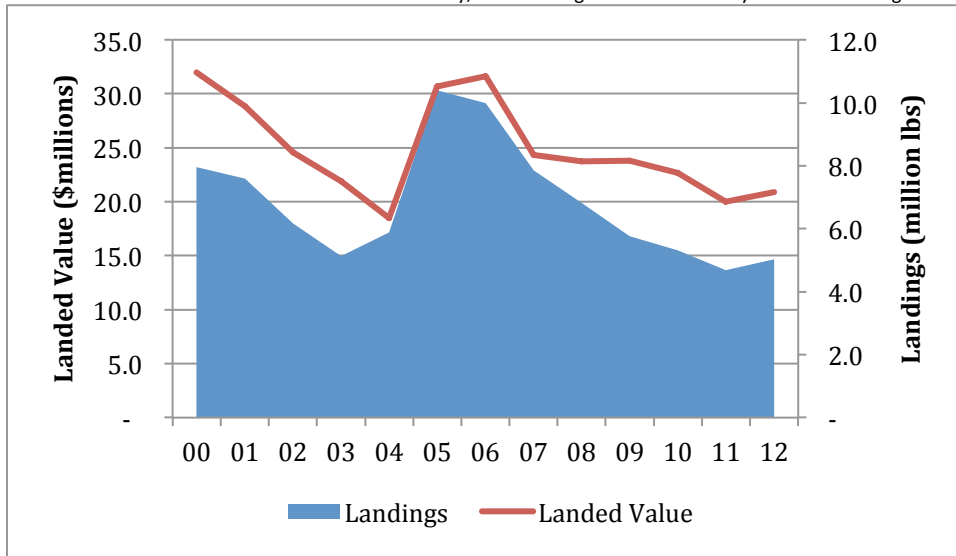
¹⁰ excludes F licences and relinquished quota

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



Sablefish Landings & Landed Value Trends

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



Outlook

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

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

GROUND FISH: Groundfish Trawl

General Description

| | |
|--|---|
| <i>Licence Designation</i> | T |
| <i>Nature of Licence</i> | Vessel based – vessel owner may make annual application for issuance of licence |
| <i>Number of Commercial Licences (valued in this study)</i> | 137 |
| <i>No. of Communal Commercial Lic's (not valued in this study)</i> | 4 (FT designation, Party-based) |
| <i>Licensing/Management Framework</i> | Individual quotas – about 50 quotas based on species and areas – complex system. 80% of quota allocated to vessels as IVQ, and 20% allocated to vessels via the Groundfish Development Authority (see Management Plan). Quotas divisible and transferable amongst T licensed vessels on a temporary or permanent basis. |
| <i>Additional Information</i> | 100% at sea observer coverage, 100% offload monitoring coverage. Each T licence has a unique holdings cap, which influences licence value. Vessel-based licence allows harvest of Schedule II species and transporting (packing). |

Valuation Parameters

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

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

Current Valuation

Licence and Quota Value at March 31, 2013

| Category | # Licences/ lbs quota, thousands | Value per Foot/ lb quota (\$) | Total Value (\$ thousands) |
|--------------|--|-------------------------------------|----------------------------------|
| T | 137 | \$1,250 | 11,029 |
| Uncut quota | 104,845 | \$1.50 | 157,268 |
| Hake outside | 200,580 | \$0.65 | 130,377 |
| Total Value | | | 298,674 |

Valuation Comments

Estimates of T licence value range from \$1,000 to \$2,000 per foot. This is a very wide range, with values dependent on vessel length, holdings caps, and supply and demand dynamics. There is some premium for longer T licences with large holdings caps.

Average T licence value \$80,500 (based on \$1,250/ft pegged rate and 64.4' average vessel length).

Groundfish quota values range from \$1.50 to \$1.65 per lb. There were very few IVQ transactions this year, so the valuation is based largely on anecdotal information. The low level of transactions is likely related to the consolidation of quota amongst major players in this fishery.

Hake quota values range from \$0.60 to \$0.70 per lb. Hake quota valuations per-pound are challenging because the TAC is so volatile, and the distribution of hake in Canadian waters often makes it difficult for the fleet to fully harvest TACs. Also, there were very few transactions during the valuation period.

Vessel Value

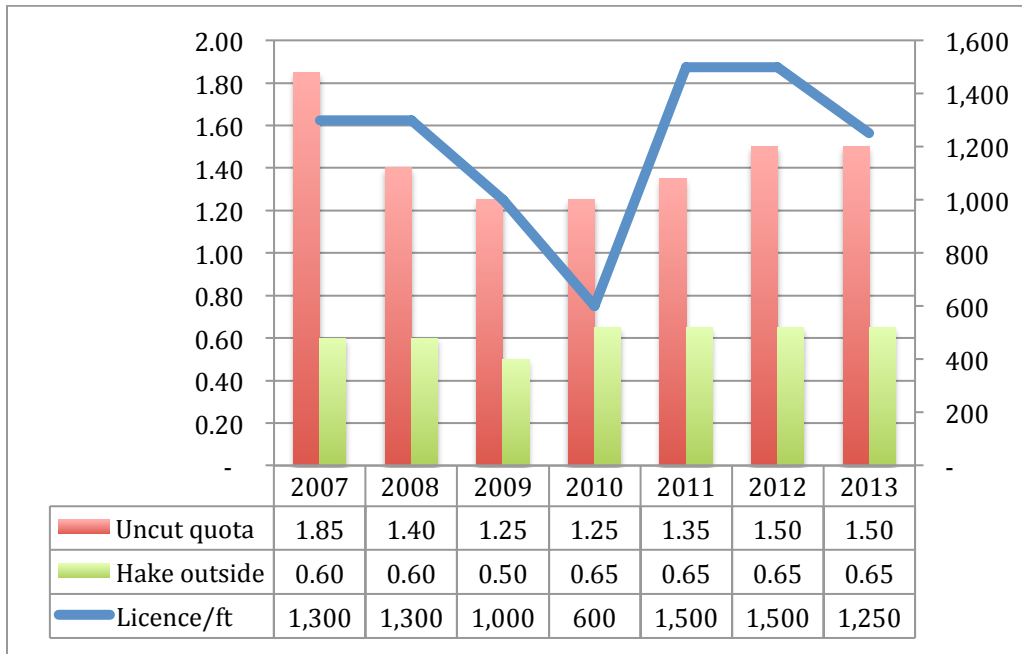
Fleet composition is arrived at by using past data as a baseline. By nature, fleet vessel valuation is very imprecise and results should be used for general purposes only.

| Trawl | # Vessels | Avg Vessel Value (\$) | Aggregate Value (\$) |
|---------------|-----------|--------------------------|-------------------------|
| Classic Style | 68 | 425,000 | 28,900,000 |
| Modern Style | 69 | 1,270,000 | 87,630,000 |
| <i>Total</i> | 137 | 850,584 | 116,530,000 |

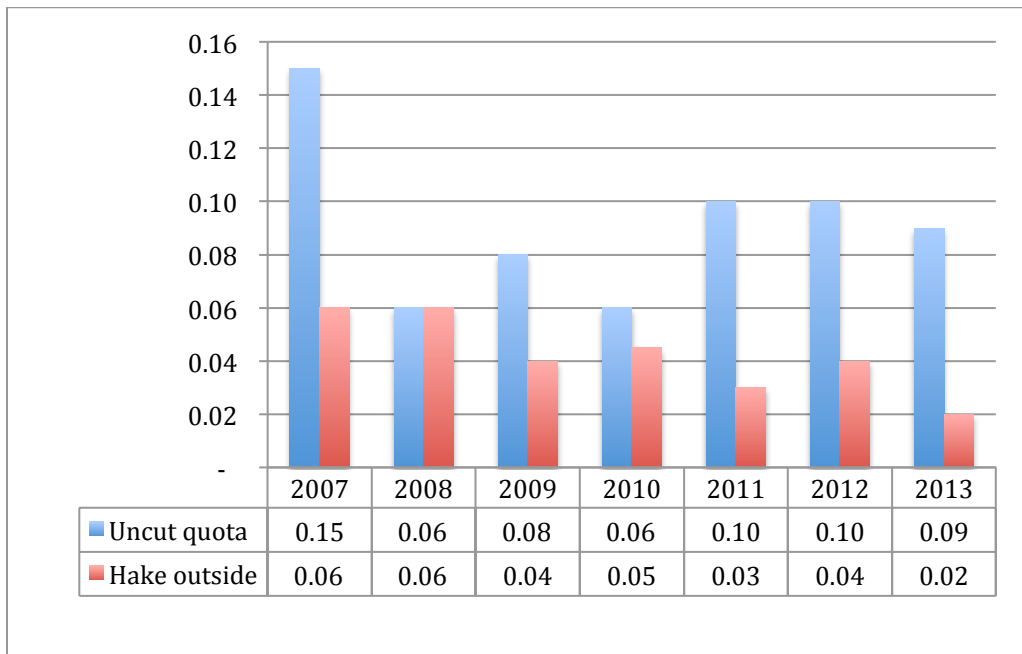
Note that in the groundfish trawl fleet there are now four large-scale freezer-trawlers in operation. Each of these vessels have multi-million dollar valuations, and are not included in the above calculation.

License & Quota Trends¹¹

Recent T Licence and Trawl Quota Valuations (\$)



Recent Trawl Quota Lease Rates (\$ per lb)



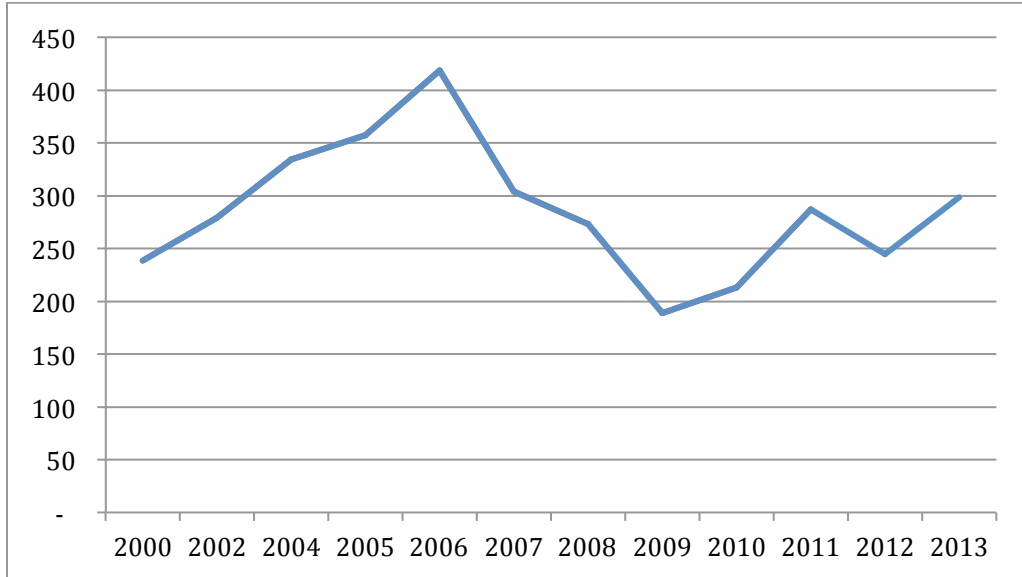
Groundfish quota leases ranged from \$.08 -\$.10 per lb.

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

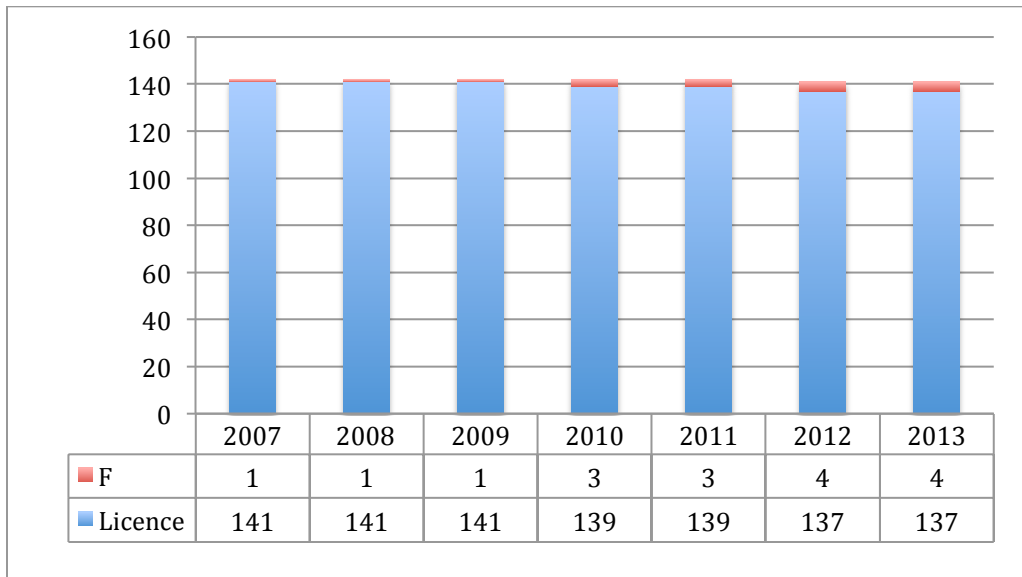
PACIFIC FLEET LICENCE, QUOTA, AND VESSEL VALUATION: AT MARCH 31, 2013

Hake quota leases ranged from 1.5 cents to 3.5 cents per lb. Rates are linked to the expected and actual catch-ability of the hake stocks through the season. As catching hake in 2013 was again challenging, lease rates fell to the low end of the range (1.5 cents) as the season progressed.

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



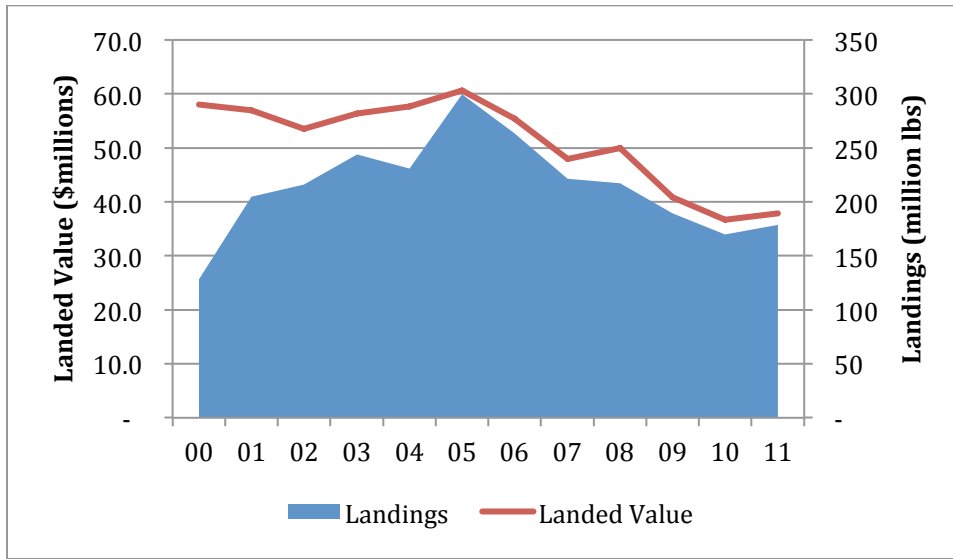
Licence Counts by Category



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

Groundfish Trawl Landings & Landed Value Trends

Source: DFO Catch Stats



Note: 2012 landings and landed value data not available.

Outlook

The groundfish trawl fishery is a “big boat” fishery, requiring significant capital and integration of fishing operations with sales and marketing to succeed. Though margins are low, there has been an influx of investment in the fishery, both through licence/quota purchases (in prior years) and entry of freezer/factory trawlers into the fishery.

Participants seem to believe that long term prospects for the fishery are positive.

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

GROUND FISH: Rockfish Hook & Line

General Description

| | |
|--|--|
| <i>Licence Designation</i> | ZN |
| <i>Nature of Licence</i> | Party based – individual, corporation, or band may make annual application for issuance of licence |
| <i>Number of Commercial Licences (valued in this study)</i> | 220 (163 Outside, 57 Inside) |
| <i>No. of Communal Commercial Lic's (not valued in this study)</i> | 43 (FZN designation – 28 Outside, 15 Inside) |
| <i>Licensing/Management Framework</i> | The pilot integration program has been made permanent, effective 2010. ZN licences are allocated Individual Vessel Quota (IVQ). IVQ can be transferred within the ZN fleet, and to other groundfish sectors. Each licence receives an equal share of ZN rockfish allocation. |
| <i>Additional Information</i> | The inside fishery is severely constrained due to inshore rockfish conservation measures. 100% electronic monitoring is in place. |

Valuation Parameters

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

Current Valuation

Licence Value at March 31, 2013

| Category | # Licences | Value/Licence (\$) | Total Value (\$) |
|------------|------------|--------------------|------------------|
| ZN Inside | 57 | 35,000 | 1,995,000 |
| ZN Outside | 163 | 140,000 | 22,820,000 |
| ZN Total | 43 | 577,093 | 24,815,000 |

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

Valuation Comments

Inside ZN licence values range from \$25,000 to \$40,000 per licence. A few transactions were reported this year, whereas no transactions were unearthed the prior year.

Outside ZN licence values range from \$125,000 to \$160,000 per licence. Licences over 43 feet command values at the high end of the range. No transactions reported this year.

Vessel Value

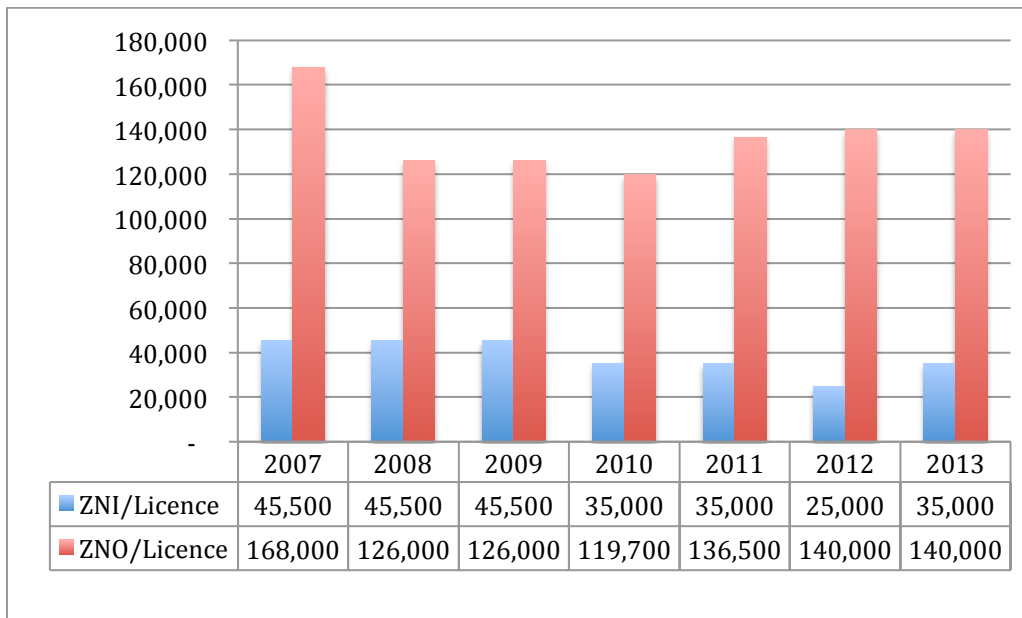
Vessel counts exclude F licences. Fleet composition is arrived at by using past data as a baseline. By nature, fleet vessel valuation is very imprecise and results should be used for general purposes only.

| ZN Outside | # Vessels | Avg Vessel Value | Aggregate Value |
|-------------------|------------------|-------------------------|------------------------|
| Classic Style | 118 | 120,000 | 14,196,000 |
| Modern Style | 64 | 293,000 | 18,664,100 |
| <i>Total</i> | 182 | 180,550 | 32,860,100 |

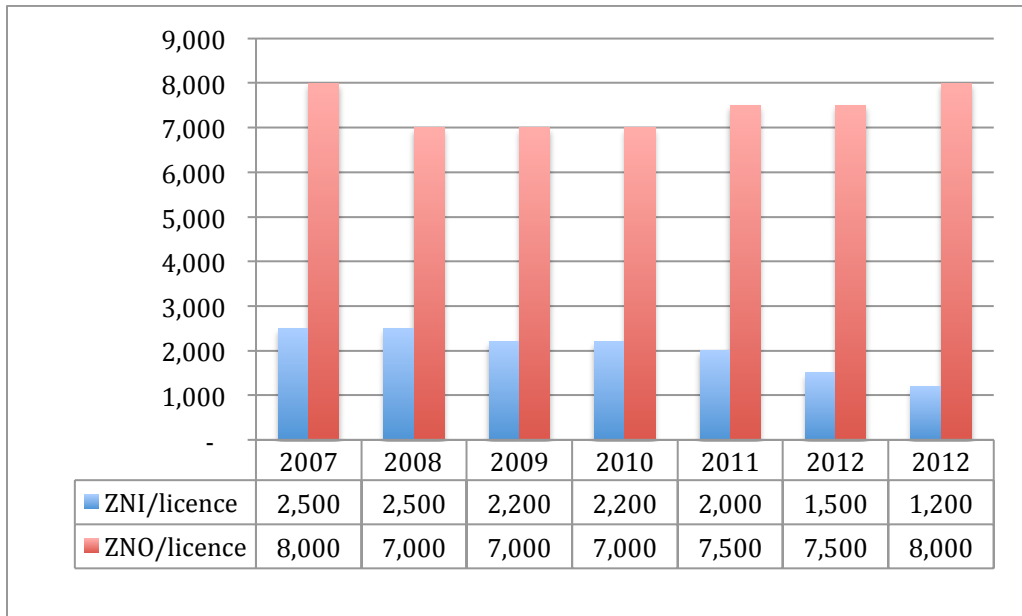
| ZN Inside | # Vessels | Avg Vessel Value (\$) | Aggregate Value (\$) |
|------------------|------------------|------------------------------|-----------------------------|
| Classic Style | 12 | 75,000 | 900,000 |
| Modern Style | 7 | 196,000 | 1,372,000 |
| <i>Total</i> | 19 | 119,579 | 2,272,000 |

Licensing Trends¹³

Recent ZN Licence Valuations (\$ per licence)



Recent ZN Licence Lease Rates (\$)

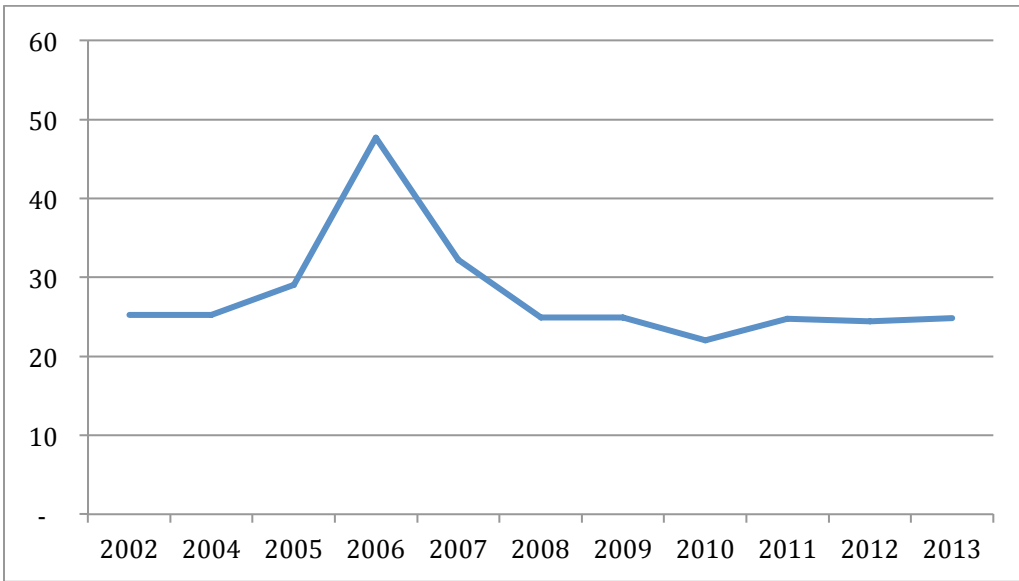


Outside ZN licence leases range from \$6,500 to \$9,000.

Inside ZN lease rates are reported in the \$1,000 to \$1,500 range.

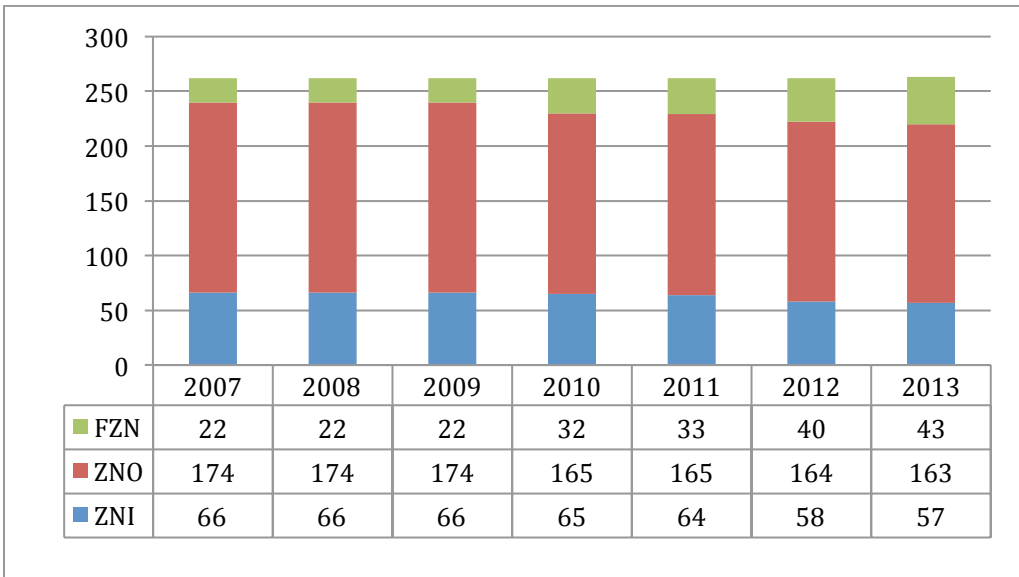
¹³ Values in charts are in nominal terms (not adjusted for inflation)

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



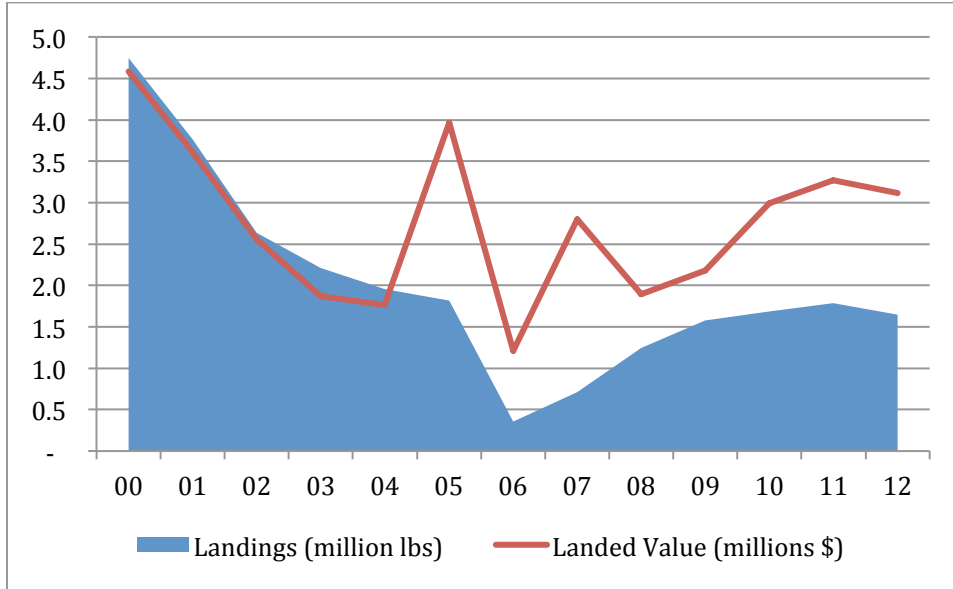
The “blip” in values seen in the mid-2000s was fueled by speculation that, in the integrated groundfish fishery, the rockfish bycatch afforded by ZN licences would be essential to prosecuting the halibut and sablefish fishery. As rockfish bycatch concerns eased, so too did values for ZN licences.

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 rebounded.

Outlook

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

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

GROUND FISH: Lingcod and Dogfish

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

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

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

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

Lingcod

5-10 transactions

Quota Value at March 31, 2013

| Category | lbs Quota | Value/lb | Total Value (\$) |
|---------------------|-----------|----------|------------------|
| Lingcod Quota (H&L) | 2,588,000 | \$10.00 | 25,880,000 |

Lingcod quota transactions range from \$6.50 to \$11.00 per lb. Values have eased through the season and currently sit close to the low end of the range.

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

- West Coast Vancouver Island—40 cents and up.
- Queen Charlotte Sound—25-30 cents.
- North Coast—20 cents
- The difference in lease rates is related to the ease and cost of catching lingcod in the various areas, and the costs of getting the fish to market. The WCVI is the most expedient lingcod harvesting area for the hook and line fleet, while the north coast poses logistical challenges.

Dogfish

< 3 transactions

Quota Value at March 31, 2013

| Category | lbs Quota | Value/lb | Total Value (\$) |
|---------------------|------------|----------|------------------|
| Dogfish Quota (H&L) | 22,182,000 | \$0.12 | 2,661,840 |

Dogfish quota transactions range from \$0.10 to \$0.15 per lb.

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

SHELLFISH: Prawn-by-Trap

General Description

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

Valuation Parameters

| | |
|--------------------------|---|
| Valuations performed: | 1. W licence (per foot) 2. Annual lease rate (per licence) 3. Vessels |
| Basis for valuation: | 5-10 open market transactions nil PICFI licences > 10 leases Anecdotal information |
| Confidence in valuation: | Moderate |

Current Valuation

Licence Value at March 31, 2013

| Category | # Licences | Value/ Foot (\$) | Total Value (\$) |
|------------|------------|------------------|------------------|
| W Licences | 195 | 18,000 | 128,817,000 |

Valuation Comments

Transactions ranged from \$15,000 to \$20,000 per foot.

Average licence value based on \$18,000 per foot and 36.7' vessel = \$660,600.

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

There appears to be a premium for small licences (< 32') and very large licences (> 50').

This remains a fairly active licence category for open market transactions.

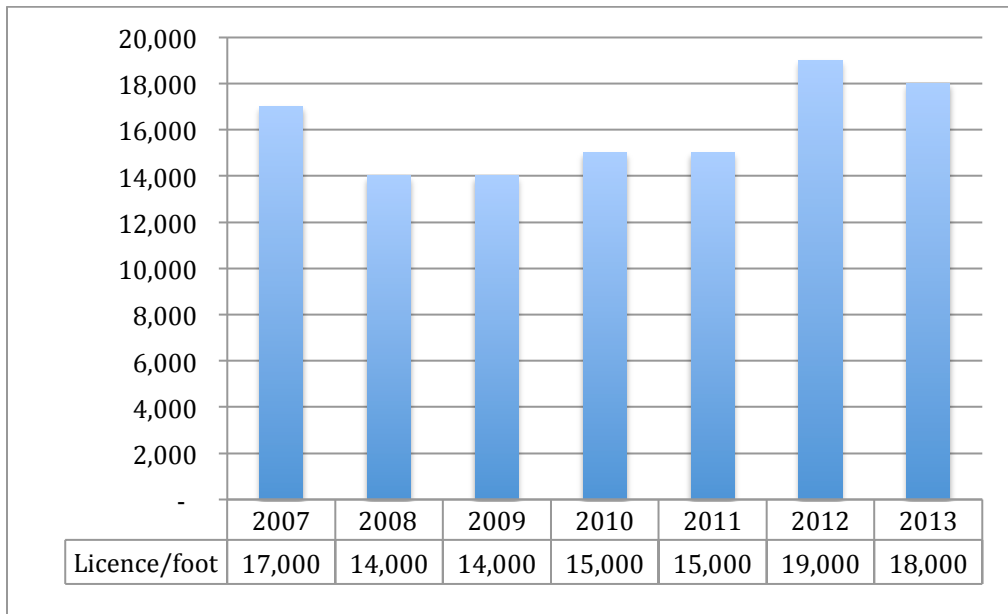
Vessel Value

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 | 170,000 | 19,040,000 |
| Modern Style | 113 | 320,000 | 36,160,000 |
| <i>Total</i> | 225 | 245,333 | 55,200,000 |

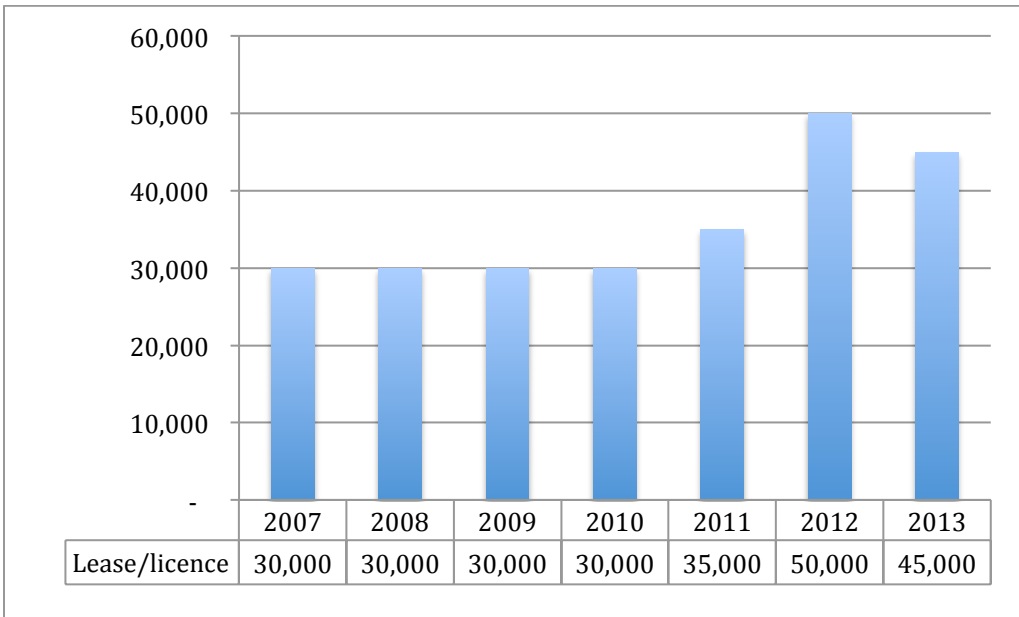
Licensing Trends¹⁴

Recent W Licence Valuations (\$)



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

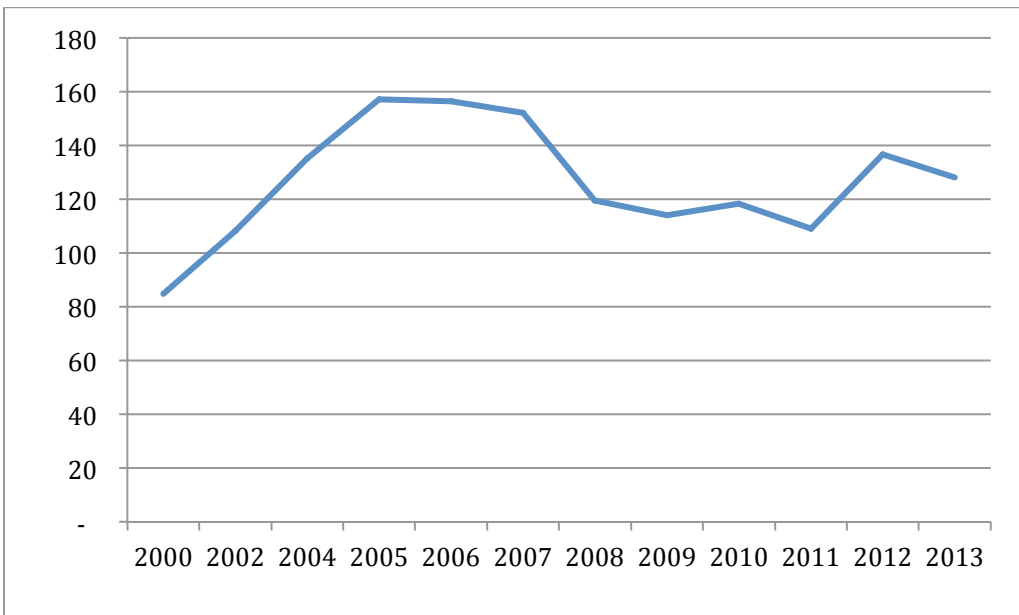
Recent W Licence Lease Rates (\$)



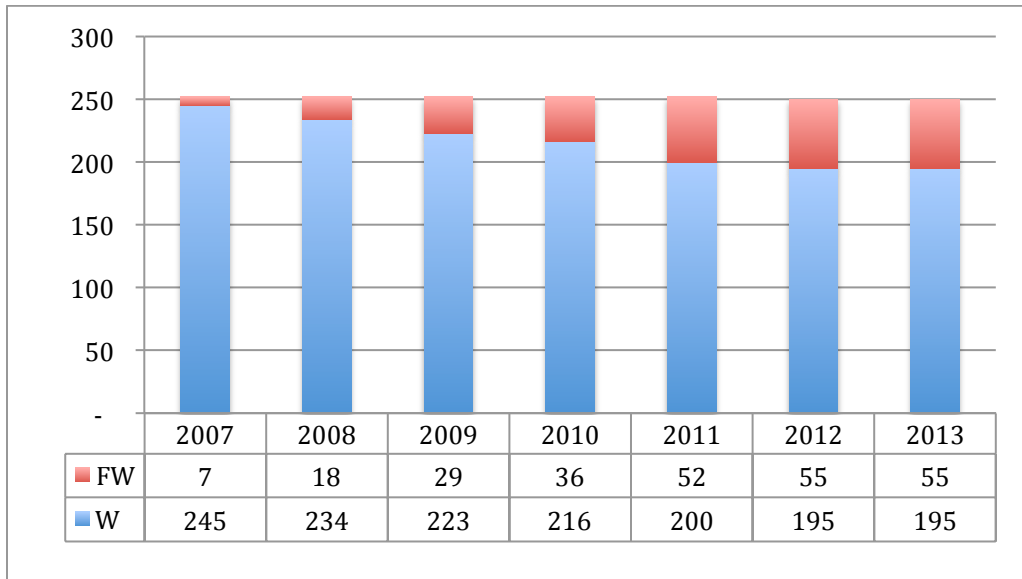
Lease rates ranged from \$30,000 to \$55,000 per licence.

“Stacking” (2nd licences) tend to lease at the lower end of the range, while “base” (1st licences) are at the higher end.

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

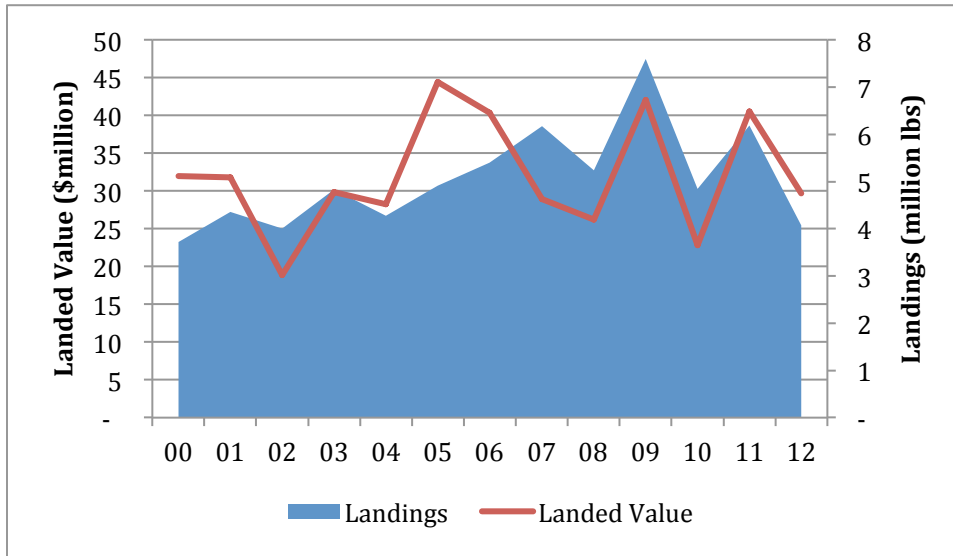


W Licence Counts by Category



Prawn Landings & Landed Value Trends

Source: DFO Catch Stats



Outlook

The 2013 season saw another short fishery, with prawn abundance resulting in relatively low catch levels. Prices, however, remained strong, likely in the \$10 per pound range. Results for fishermen were sporadic.

The prawn fishery remains an active and attractive category, and values have remained quite firm. The minor erosion in licence values and lease rates seen in 2013 is not deemed to reflect impaired long term prospects.

SHELLFISH: Crab

General Description

| | |
|--|--|
| <i>Licence Designation</i> | R |
| <i>Nature of Licence</i> | Vessel based – vessel owner may make annual application for issuance of licence |
| <i>Number of Commercial Licences (valued in this study)</i> | 189 |
| <i>No. of Communal Commercial Lic's (not valued in this study)</i> | 32 (FR designation, Party-based) |
| <i>Licensing/Management Framework</i> | Area Licensing – 7 areas. No stacking allowed – must select a single area. Area re-selection periodically; a re-selection took place applying for the 2010-2013 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 market is emerging for FR (Communal Commercial party-based) licences. |

Valuation Parameters

| | |
|--------------------------|--|
| Valuations performed: | 1. R licence (per foot) 2. Vessels |
| Basis for valuation: | 5-10 open market licence transactions 5 PICFI transactions Anecdotal information |
| Confidence in valuation: | Low to Moderate (the wide variation in prices makes precise valuation impossible) |

Current Valuation

Licence Value at March 31, 2013

| Category | # Licences | Value/Foot (\$) | Total Value (\$) |
|------------|------------|-----------------|------------------|
| R Licences | 189 | 19,000 | 111,321,000 |

Valuation Comments

Licence transactions ranged from \$17,000 to over \$22,000 per foot. The higher values are generally for small licences.

At \$19,000 per foot, and given an average vessel length of 31', the indicated average licence value is \$589,000.

The premium for Area A licences appear to have disappeared.

F-category crab licences lease in the \$30,000 to \$45,000 range. Leases within First Nations (to community-based harvesters) likely account for leases at the lower end of the range.

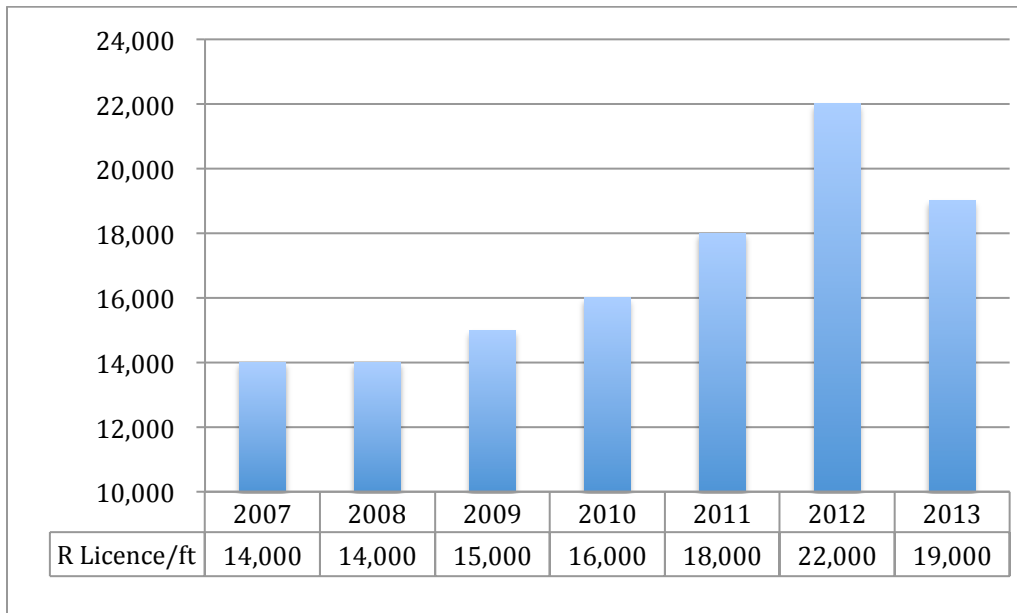
Vessel Value

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 | 144,000 | 12,240,000 |
| Modern Style | 127 | 350,000 | 44,450,000 |
| <i>Total</i> | 212 | 267,406 | 56,690,000 |

Licensing Trends¹⁵

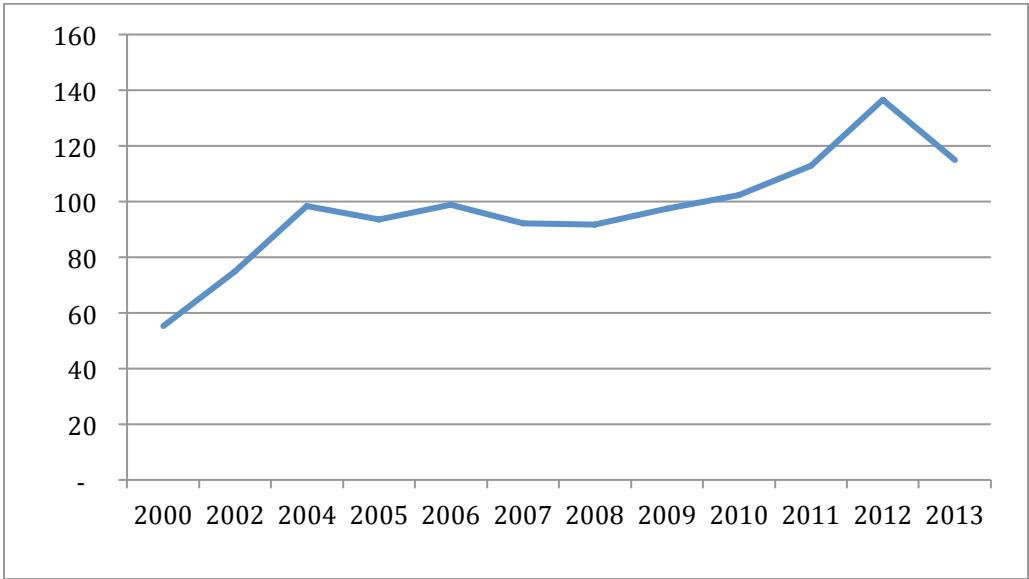
Recent R Licence Valuations (\$)



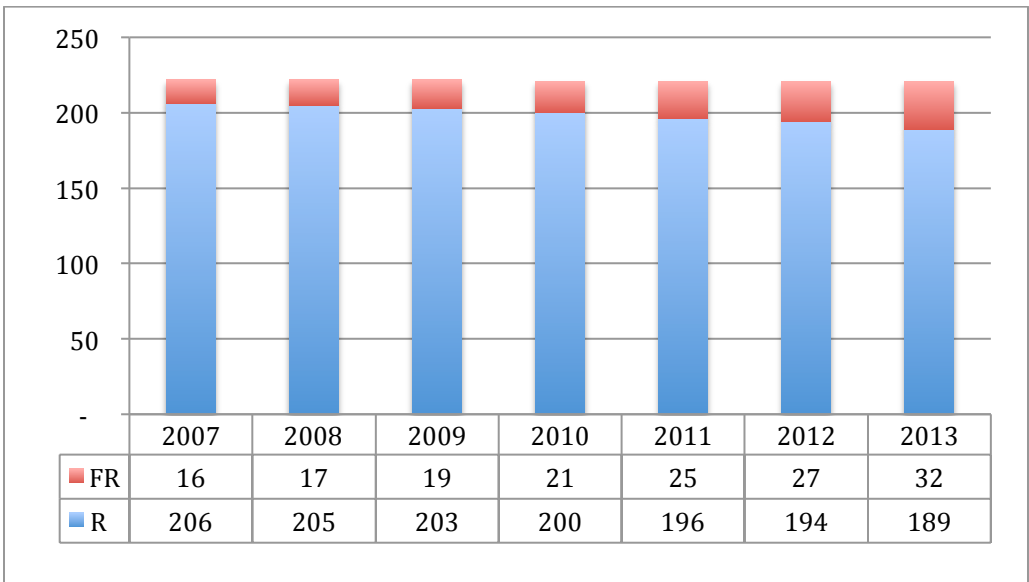
While 2013 value has dropped significantly vs. 2012, this likely reflects the mix of transactions researched for the year, rather than a major correction in the crab licence marketplace.

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

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

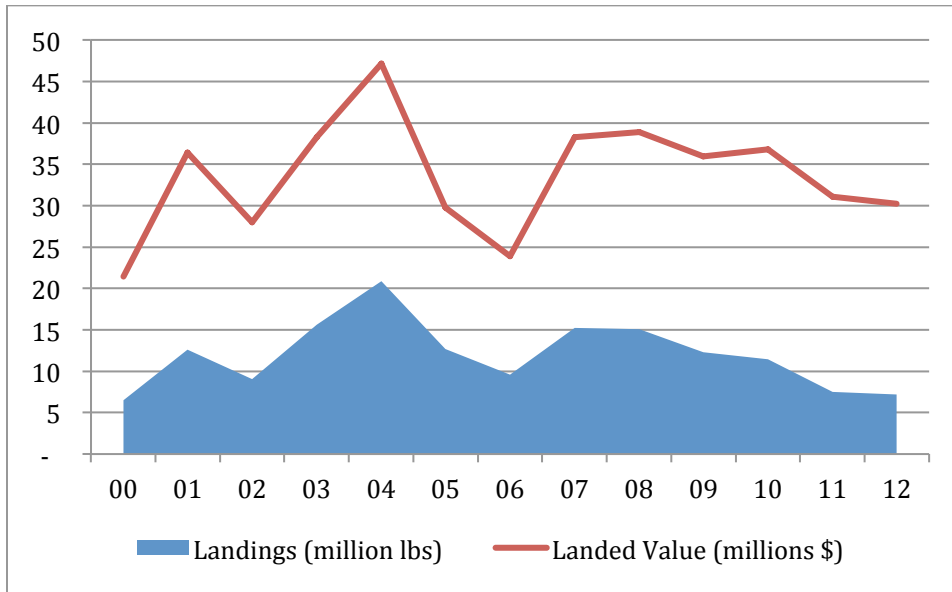


Licence Counts by Category



Crab Landings & Landed Value Trends

Source: DFO Catch Stats



Outlook

While crab catches have been lower in BC in recent year, higher product prices have at least partially compensated; prices have been in the \$7.00 - \$7.50 per pound range in some areas and times.

Crab is a highly cyclical resource, and there is optimism that catch levels will improve in time.

SHELLFISH: Shrimp-by-Trawl

General Description

| | |
|--|---|
| <i>Licence Designation</i> | S |
| <i>Nature of Licence</i> | Vessel based – vessel owner may make annual application for issuance of licence |
| <i>Number of Commercial Licences (valued in this study)</i> | 219 |
| <i>No. of Communal Commercial Lic's (not valued in this study)</i> | 23 (FS designation, Party-based) |
| <i>Licensing/Management Framework</i> | Fishery managed on basis of specie quotas by area (shrimp management areas). Areas are closed to fishing once a specie harvest is reached in a given area. Only one S (or FS) licence per vessel allowed. |
| <i>Additional Information</i> | Competitive fishery. Poor markets for pink shrimp in recent years have meant that the majority of the licensed fleet has not participated in the fishery. Vessel based licence virtually precludes licence leasing. Vessel-based licence allows harvest of Schedule II species and transporting (packing). |

Valuation Parameters

| | |
|--------------------------|---|
| Valuations performed: | 1. S licence (per foot) 2. Vessels |
| Basis for valuation: | 5-10 licence transactions 5 PICFI retirements Anecdotal information |
| Confidence in valuation: | Moderate |

Current Valuation

Licence Value at March 31, 2013

| Category | # Licences | Value/ Foot (\$) | Total Value (\$) |
|------------|------------|------------------|------------------|
| S Licences | 217 | 900 | 8,183,070 |

Valuation Comments

Transactions ranged from \$600 - \$1,600 per foot.

Average licence value based on a \$900 per foot valuation and 41.9' average vessel length is \$37,710.

Prices continued to rise after the valuation date.

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

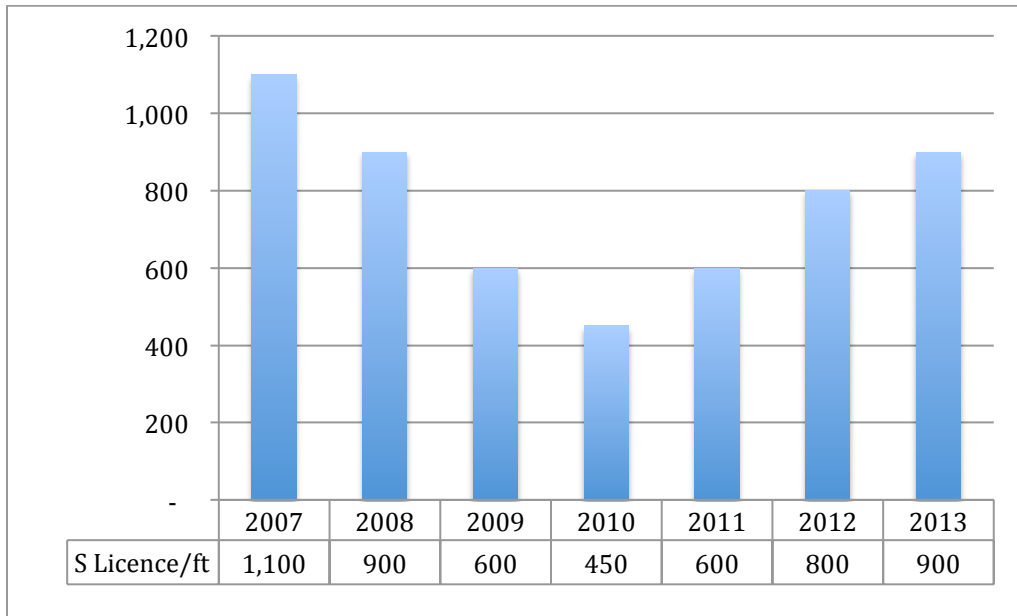
Vessel Value

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

| Shrimp Trawl | # Vessels | Avg Vessel Value (\$) | Aggregate Value (\$) |
|---------------|-----------|-----------------------|----------------------|
| Classic Style | 160 | 83,000 | 13,280,000 |
| Modern Style | 69 | 167,000 | 11,523,000 |
| <i>Total</i> | 229 | 108,310 | 24,803,000 |

Licensing Trends¹⁶

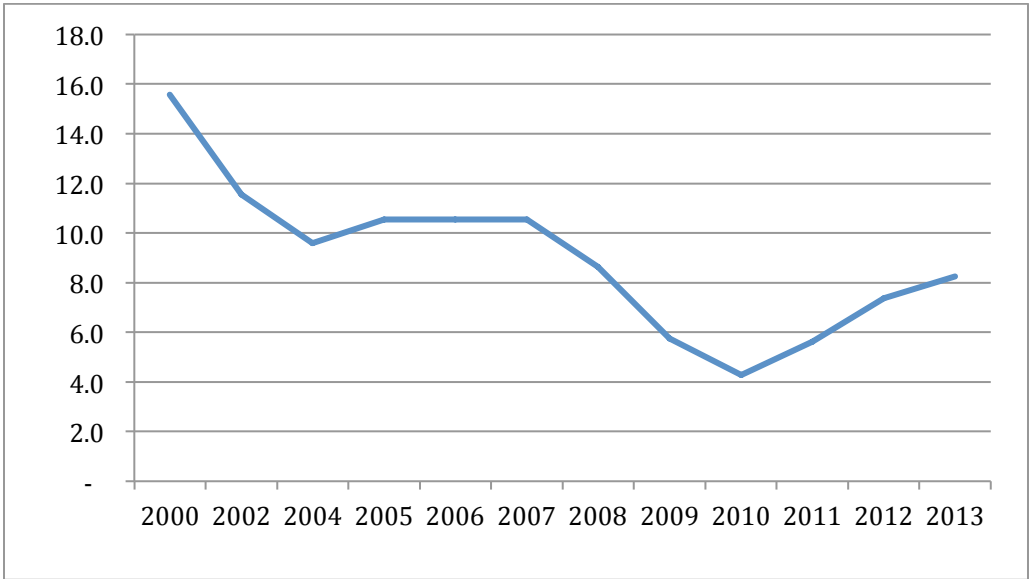
Recent S Licence Valuations (\$)



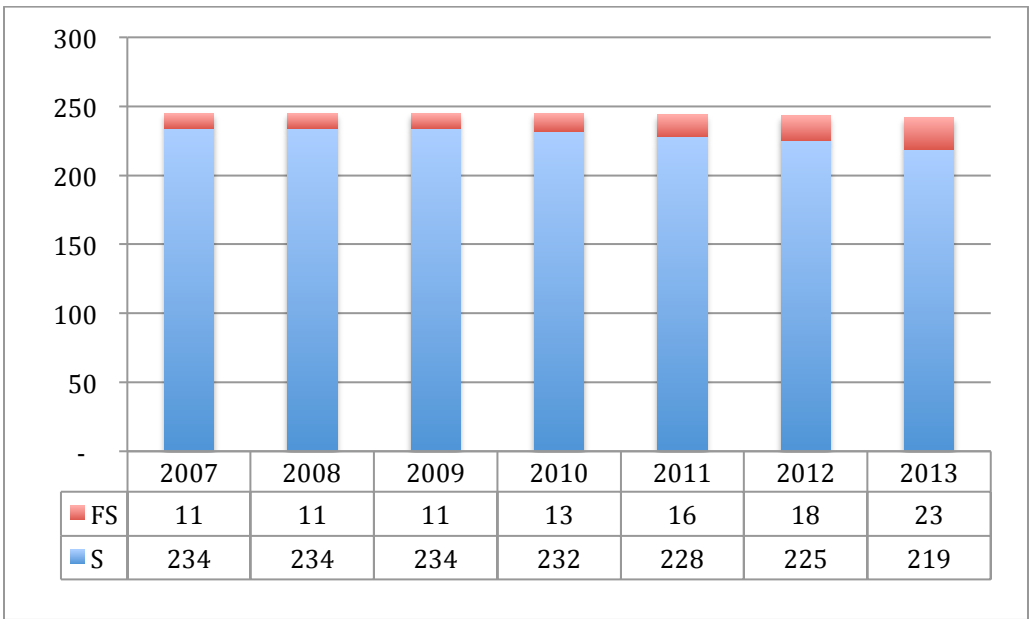
The rise in licence value since 2010 does not appear to reflect an improvement in the profitability of the fishery. Rather, it likely reflects that values bottomed-out at an extremely low level in 2010.

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

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

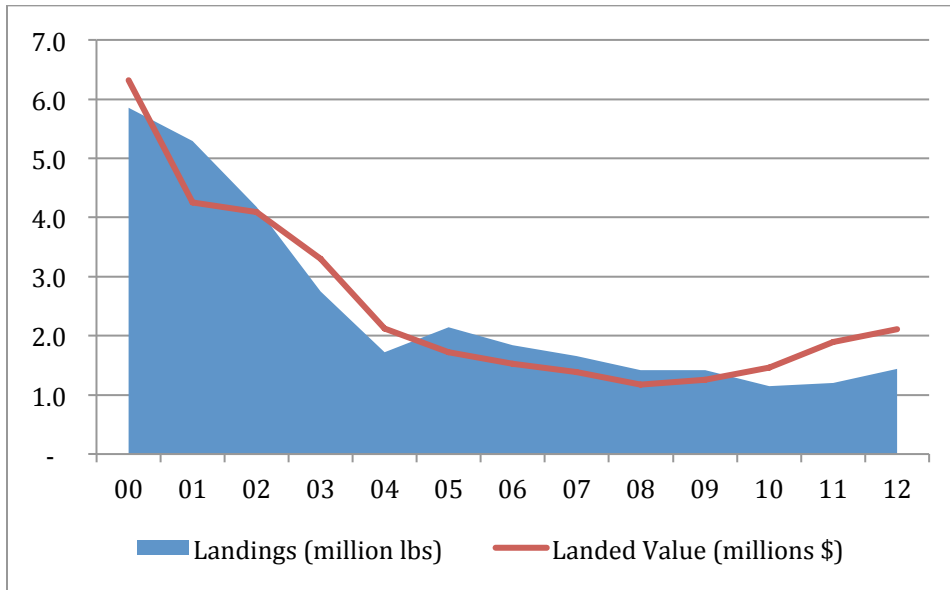


S Licence Counts by Category



Shrimp Landings & Landed Value Trends

Source: DFO Catch Stats



Outlook

After several years of poor results and low values, the shrimp fishery has shown signs of a rebound in 2013.

Prices paid to BC shrimpers have firmed, with prices of \$0.85 per pound for pink shrimp reported. As global shrimp fisheries do not appear as bullet-proof as in the past, world shrimp buyers are interested in BC's harvest.

There are reports that overseas buyers are speculating in the shrimp fishery through purchase of licences.

SHELLFISH: Geoduck/Horseclam

General Description

| | |
|--|--|
| <i>Licence Designation</i> | G |
| <i>Nature of Licence</i> | Vessel based – vessel owner may make annual application for issuance of licence |
| <i>Number of Commercial Licences (valued in this study)</i> | 50 licences 500 quota blocks |
| <i>No. of Communal Commercial Lic's (not valued in this study)</i> | 5 licences 50 quota blocks |
| <i>Licensing/Management Framework</i> | Area Licensing: three areas, north coast, WCVI, and inside waters of Vancouver Island. Areas are selected annually. The number of licence eligibilities fishing each area may change annually according to the proportion of the total quota assigned to each area. Quota management with a “quota block” system – each licence/quota block may harvest an equal share of the total quota (60,000 lbs per licence, or 6,000 lbs per quota block in 2013). |
| <i>Additional Information</i> | Dive fishery. 10 quota blocks per licence. Stacking allowed - 50 quota blocks maximum per licence. Vessel-based licence allows harvest of Schedule II species and transporting (packing). |

Valuation Parameters

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

Current Valuation

Licence Value at March 31, 2013

| Category | # Licences/ lbs quota | Value per Licence/ quota blk (\$) | Total Value (\$) |
|--------------|--------------------------|---|---------------------|
| G Licence | 50 | 300,000 | 15,000,000 |
| Quota Blocks | 500 | 385,000 | 192,500,000 |
| Total Value | | 4,150,000 | 207,500,000 |

Valuation Comments

Estimates of G licence value range from \$250,000 to \$300,000.

Quota block values range from \$300,000 to \$400,000. Recent transactions are closer to the top end of the range.

The indicated value at March 31, 2013 for a “full” geoduck licence, including ten quota blocks, is \$4.15 million.

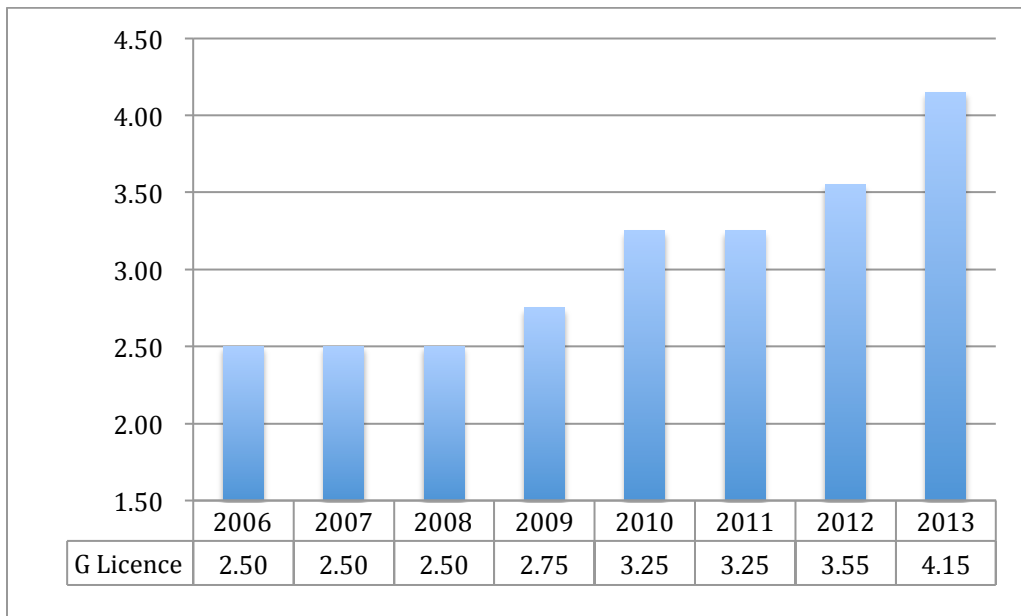
Vessel Value

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 | 108,000 | 2,484,000 |
| Modern Style | 16 | 264,000 | 4,224,000 |
| <i>Total</i> | 39 | 172,000 | 6,708,000 |

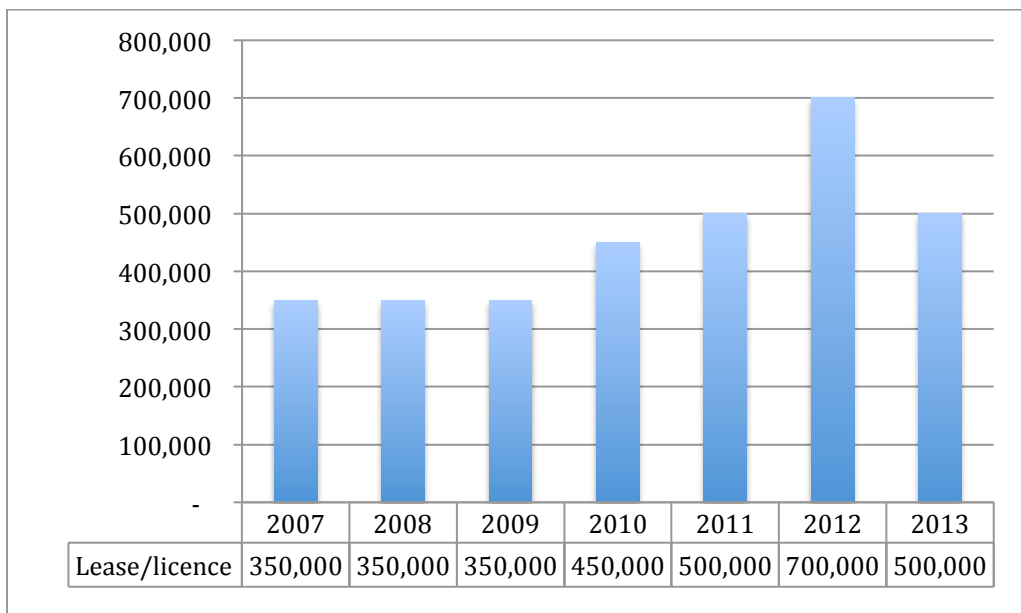
Licensing Trends¹⁷

Recent G Licence Valuations (\$ millions)



Note that the valuations for 2012 onwards are for one G licence and 10 quota blocks; values are presented in this fashion for continuity purposes.

Recent G Licence Lease Rates (\$)



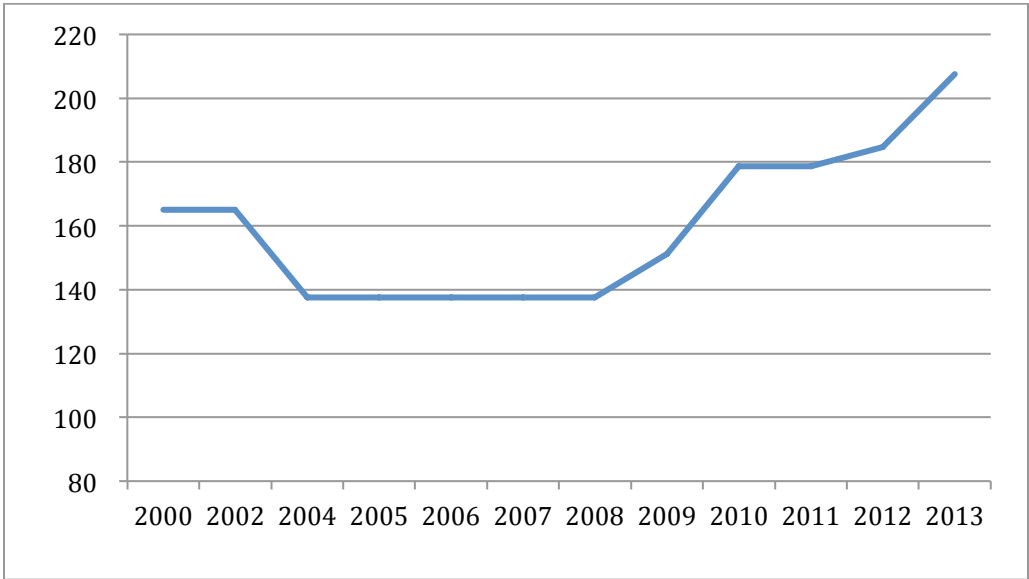
¹⁷ Values in charts are in nominal terms (not adjusted for inflation)

PACIFIC FLEET LICENCE, QUOTA, AND VESSEL VALUATION: AT MARCH 31, 2013

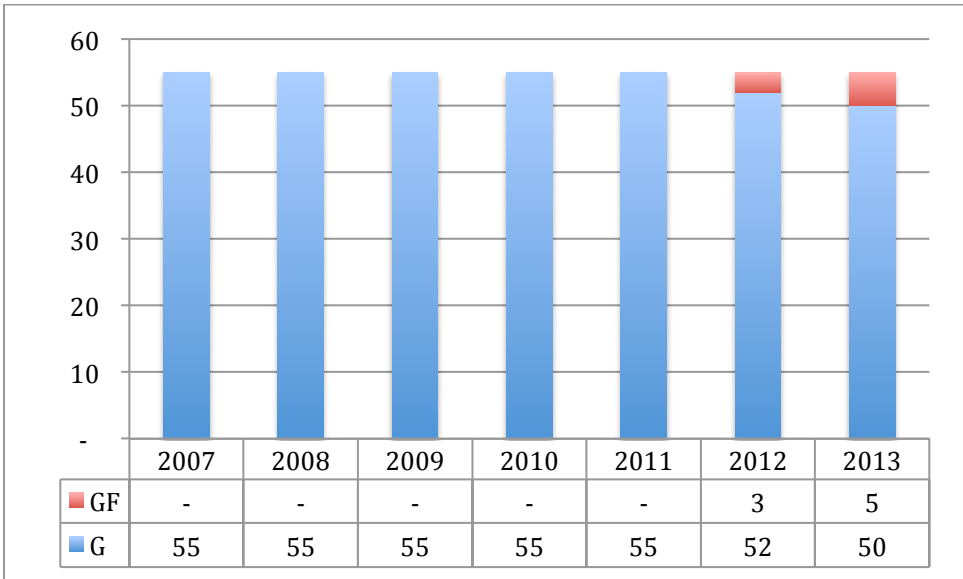
The very-high lease rate in 2012 reflected a surge in geoduck prices. Prices have moderated in 2013 and with them, lease rates.

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

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

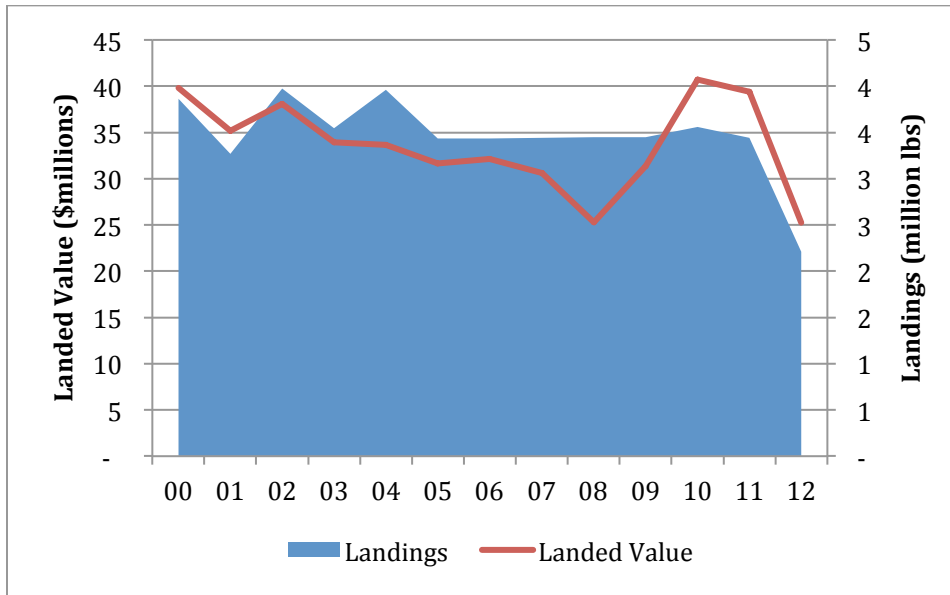


G Licence Counts by Category



Geoduck Landings & Landed Value Trends

Source: DFO Catch Stats



The lower landings level in 2012 reflects incomplete data rather than an actual reduction in catch. The catch has been—and remains—extremely stable in this fishery.

Outlook

Geoduck remains one of the most profitable, and sought after, fisheries.

Under the former licensing system where the 55 licences were not divisible, there was a very limited market for the licences, as their high value stifled transactions. With the quota block system dividing each licence into 10 shares, the liquidity of the quota has been improved, and more transactions are occurring.

This enhanced liquidity and marketability of the assets is likely contributing to higher overall market capitalization in the geoduck fishery.

SHELLFISH: Sea Cucumber

General Description

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

Valuation Parameters

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

Current Valuation

Licence Value at March 31, 2013

| Category | # Licences | Value/Licence (\$) | Total Value (\$) |
|-------------|------------|--------------------|------------------|
| ZD Licences | 85 | 525,000 | 44,625,000 |

Valuation Comments

Estimates of licence value range from \$400,000 to \$600,000 per licence. Anecdotal information suggests the current price is closer to the high end of the range.

No specific sales were found in researching this fishery.

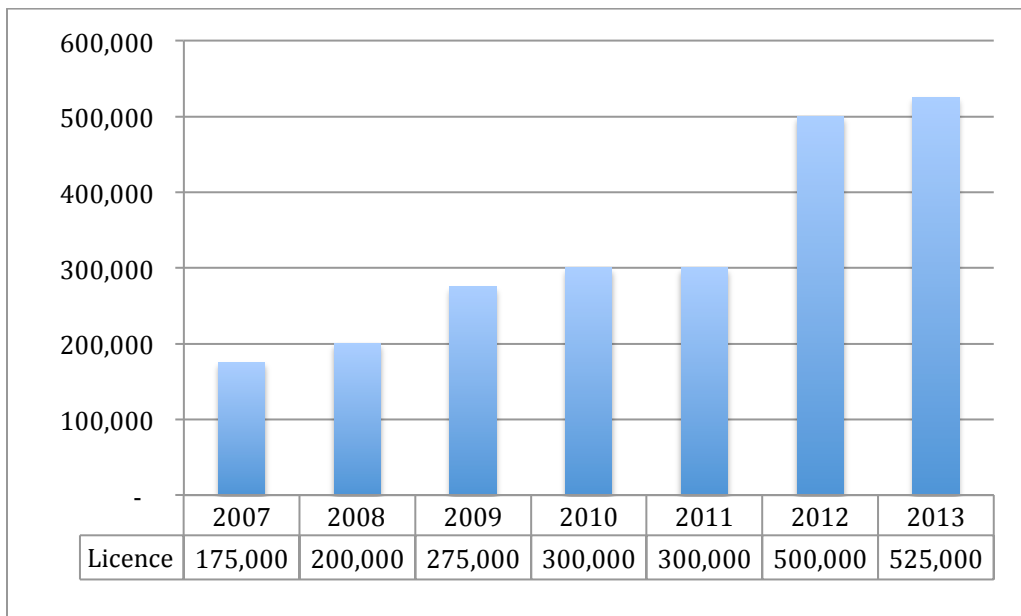
Vessel Value

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.

| Sea Cucumber | # Vessels | Avg Vessel Value (\$) | Aggregate Value (\$) |
|---------------|-----------|-----------------------|----------------------|
| Classic Style | 12 | 108,000 | 1,296,000 |
| Modern Style | 18 | 264,000 | 4,752,000 |
| <i>Total</i> | 30 | 201,600 | 6,048,000 |

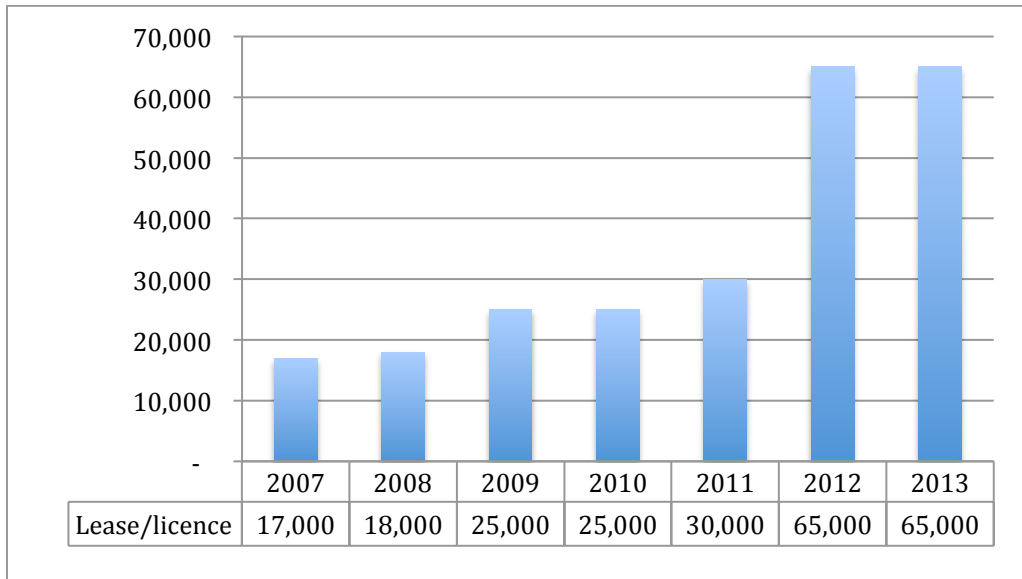
Licensing Trends¹⁸

Recent ZD Licence Valuations (\$)



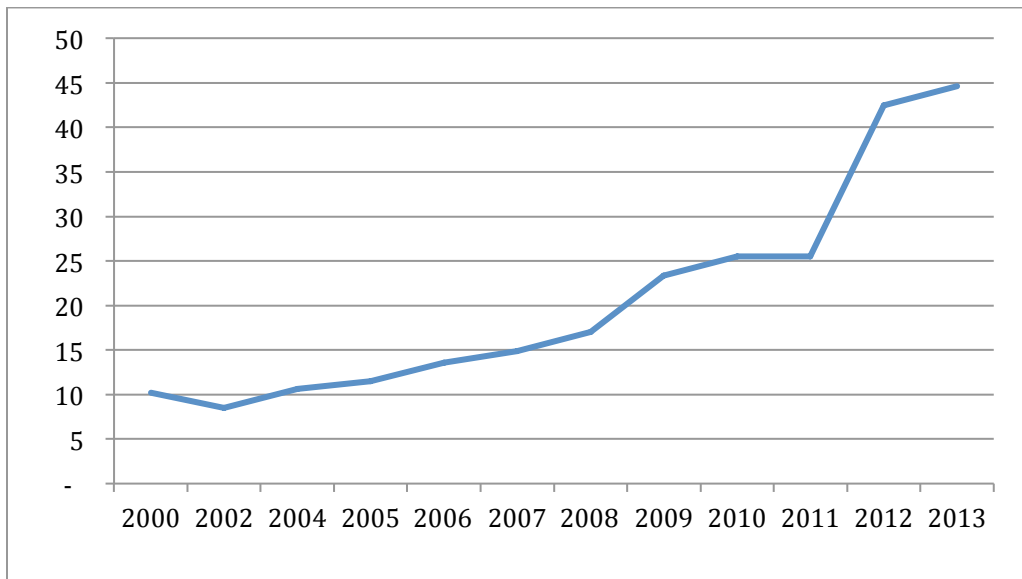
¹⁸ Values in charts are in nominal terms (not adjusted for inflation)

Recent ZD Licence Lease Rates (\$)



Lease rates in the \$50,000 to \$70,000 range per licence were reported.

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

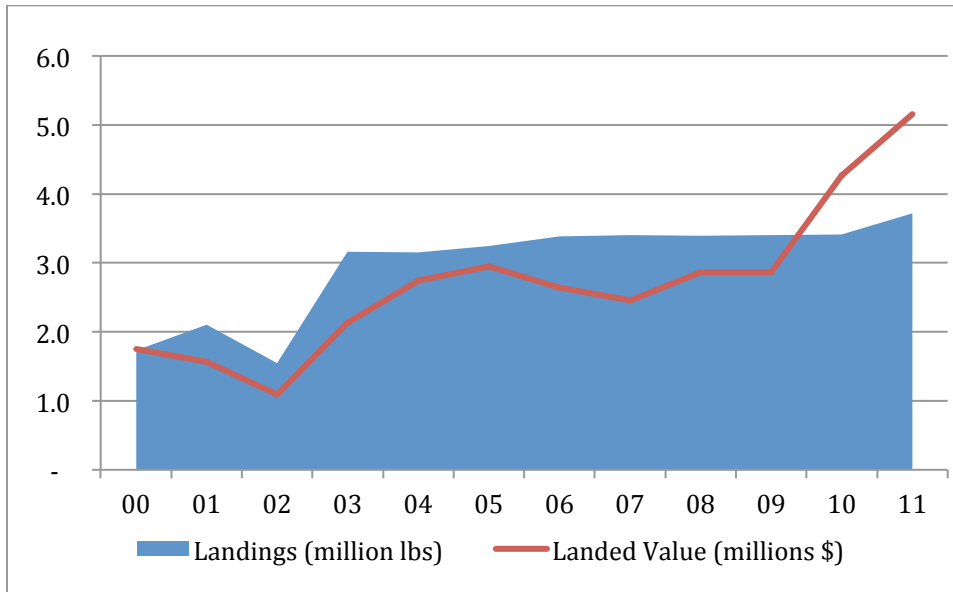


ZD Licence Counts by Category

No chart shown: all 85 licences are category ZD.

Sea Cucumber Landings & Landed Value Trends

Source: DFO Catch Stats



The chart was not updated to include 2012 data because landed value data was unavailable. Landings for 2012 were 3.7 million pounds, the same level as 2011.

While data for the shellfish dive fisheries is of very high quality, lag time in processing the data means that a full dataset may not be available in time for issuance of this report.

Outlook

The recent performance of the sea cucumber fishery has been extremely strong. TACs have been stable or rising and prices have been improving.

There may be some future short term softening of values, as the market in the Orient is currently glutted with product.

SHELLFISH: Red Sea Urchin

General Description

| | |
|--|--|
| <i>Licence Designation</i> | ZC |
| <i>Nature of Licence</i> | Party based – individual, corporation, or band may make annual application for issuance of licence |
| <i>Number of Commercial Licences (valued in this study)</i> | 85 |
| <i>No. of Communal Commercial Lic's (not valued in this study)</i> | 25 (FZC designation – Party-based) |
| <i>Licensing/Management Framework</i> | Quota management – average quota per licence for the 11/12 season approx 91,500 lbs; total quota approx 10 million lbs. Area Licensing – north and south coast. Quota for each area divided by the number of licences in the area to determine per-licence quotas. Stacking allowed – maximum 5 licences per vessel. |
| <i>Additional Information</i> | Quotas not divisible. Currently about 30 vessels fishing ZC licences. A lottery process is used for annual area selection. |

Valuation Parameters

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

Current Valuation

Licence Value at March 31, 2013

| Category | # Licences | Value/ Licence (\$) | Total Value (\$) |
|-------------|------------|---------------------|------------------|
| ZC Licences | 85 | 55,000 | 4,675,000 |

Valuation Comments

Estimates of value and reports of transactions range from \$50,000 to \$70,000 per licence.

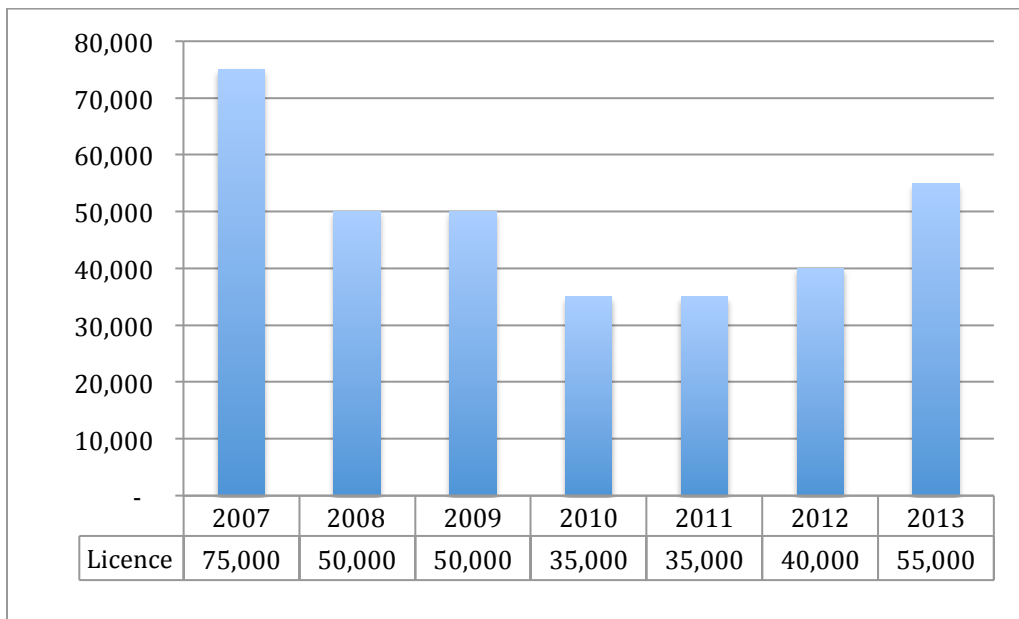
Vessel Value

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 | 81,000 | 972,000 |
| Modern Style | 18 | 200,000 | 3,600,000 |
| <i>Total</i> | 30 | 152,400 | 4,572,000 |

Licensing Trends¹⁹

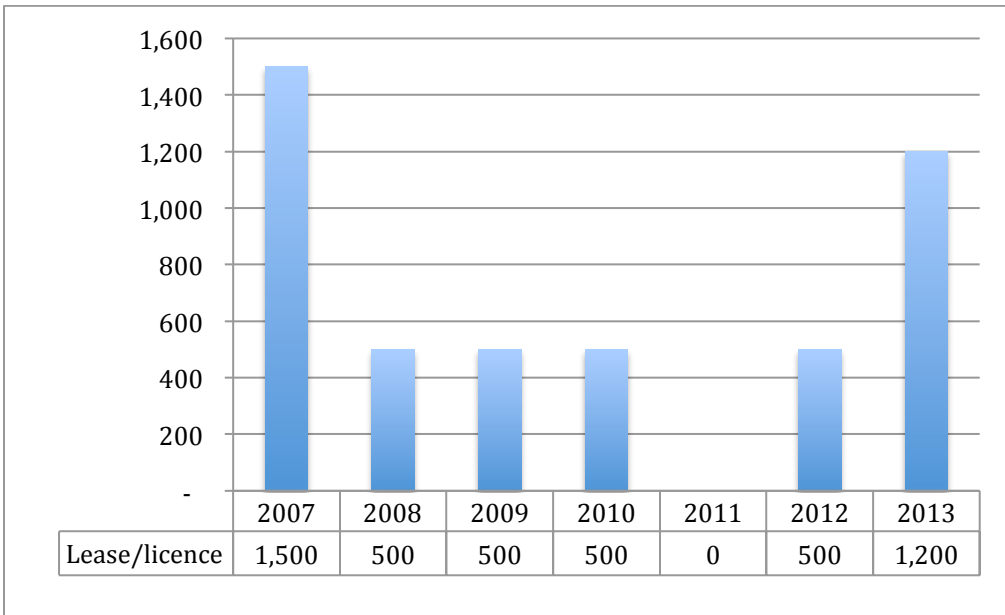
Recent ZC Licence Valuations (\$)



An up-tick in valuation this year is indicative of a modest improvement in this fishery.

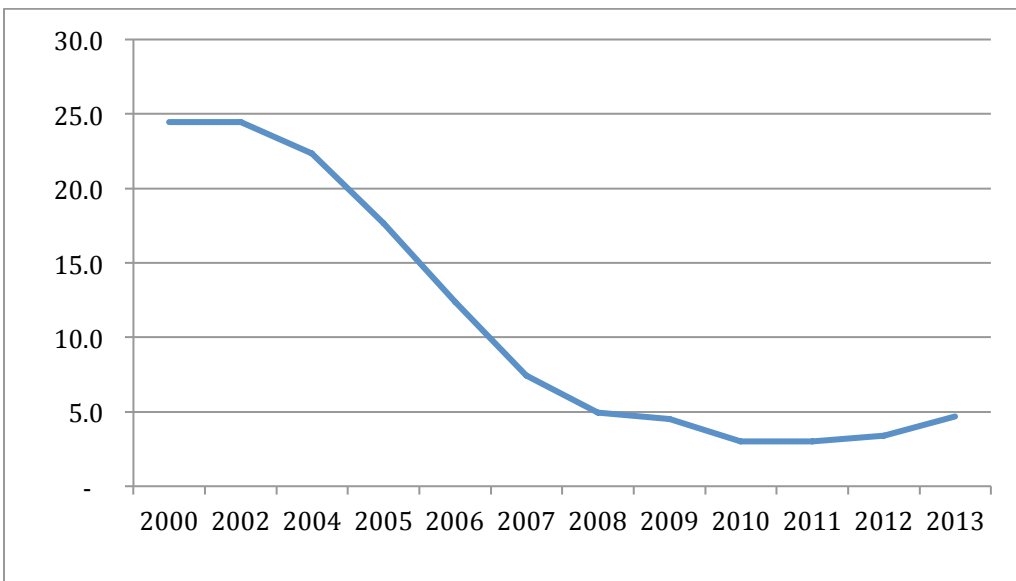
¹⁹ Values in charts are in nominal terms (not adjusted for inflation)

Recent ZC Licence Lease Rates (\$)

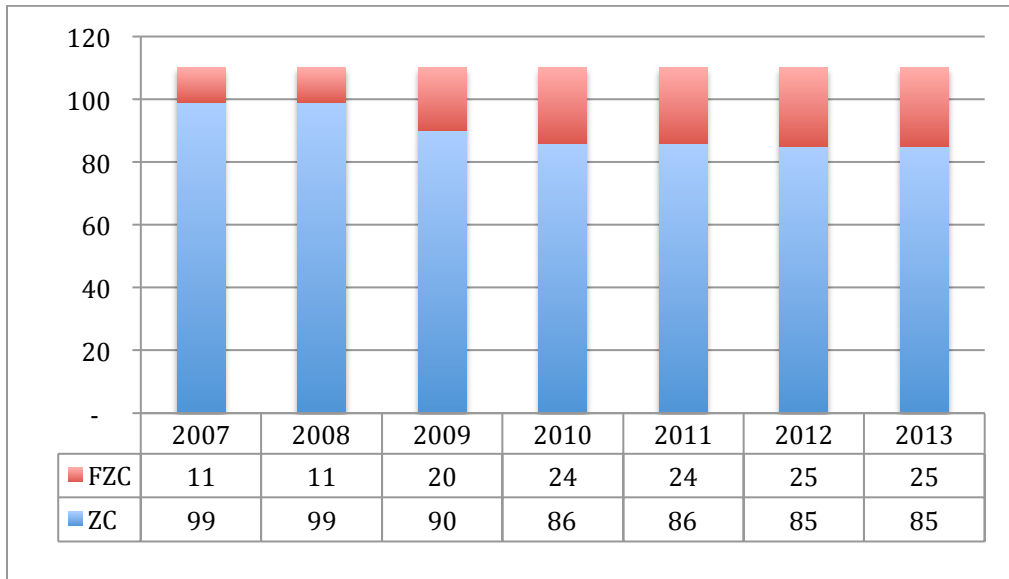


Lease range from \$1,000 to \$1,800 per licence.

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

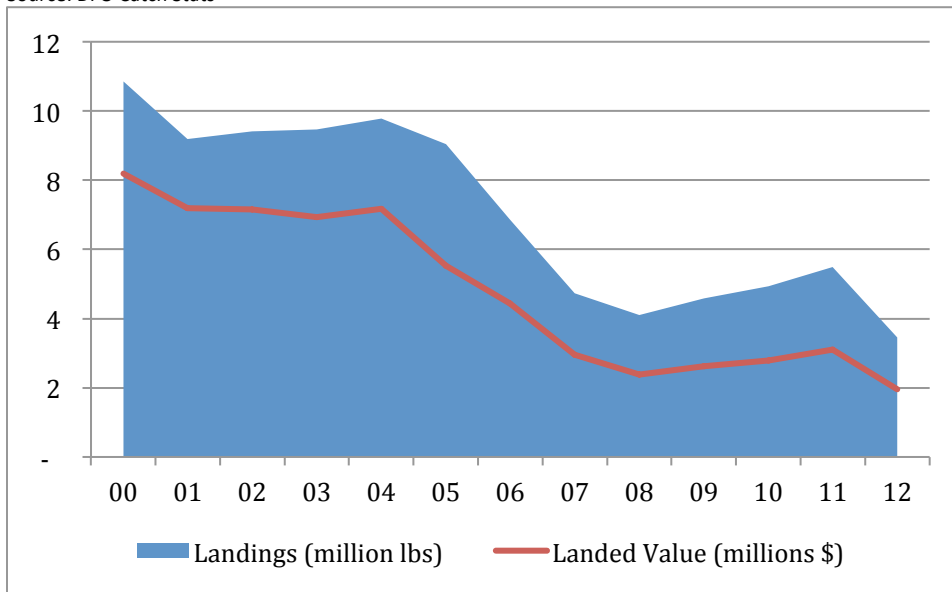


ZC Licence Counts by Category



Red Sea Urchin Landings & Landed Value Trends

Source: DFO Catch Stats



The 2012 landings and landed value data is believed to be incomplete, as anecdotal reports indicate that higher landings were seen than in the previous year. While data for the shellfish dive fisheries is of very high quality, lag time in processing the data means that a full dataset may not be available in time for issuance of this report.

Outlook

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

SHELLFISH: Green Sea Urchin

General Description

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

Valuation Parameters

| | |
|--------------------------|--|
| Valuations performed: | ZA licence Annual lease rate Vessels |
| Basis for valuation: | Anecdotal information |
| Confidence in valuation: | Low |

Current Valuation

Licence Value at March 31, 2013

| Category | # Licences | Value/ Licence (\$) | Total Value (\$) |
|-------------|------------|---------------------|------------------|
| ZA Licences | 49 | 40,000 | 1,960,000 |

Valuation Comments

Little or no market activity in this category.

Estimates of value range from \$35,000 to \$50,000 per licence.

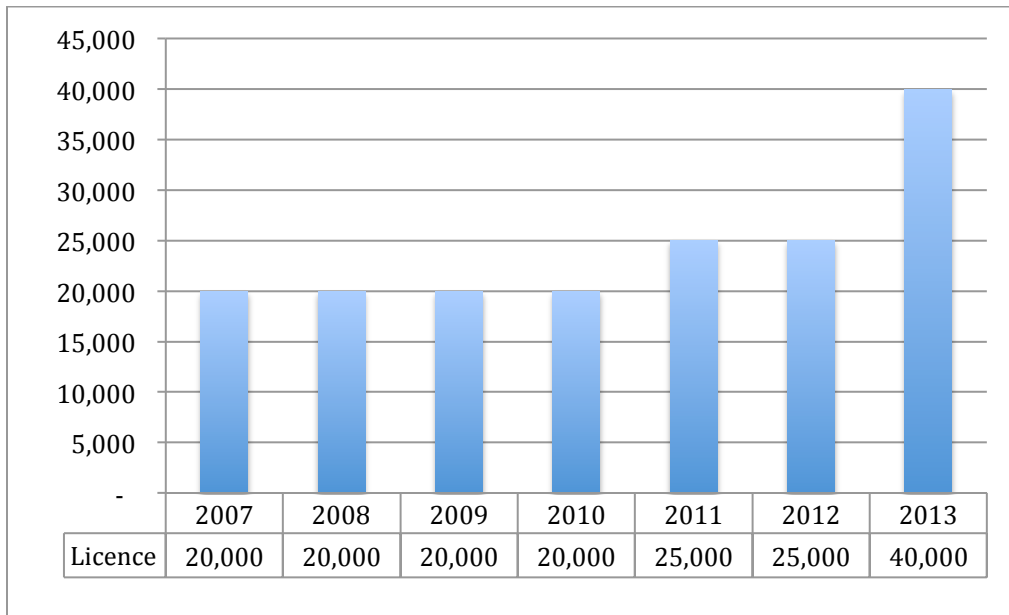
Vessel Value

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

| Green Sea Urchin | # Vessels | Avg Vessel Value (\$) | Aggregate Value (\$) |
|------------------|-----------|-----------------------|----------------------|
| Classic Style | 6 | 81,000 | 486,000 |
| Modern Style | 9 | 200,000 | 1,800,000 |
| <i>Total</i> | 15 | 152,400 | 2,286,000 |

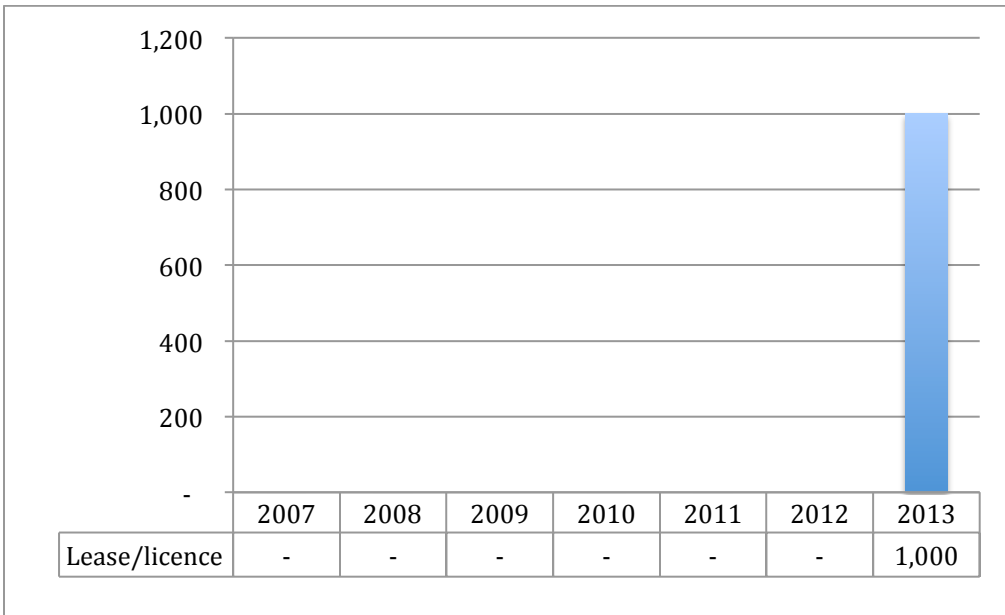
Licensing Trends²⁰

Recent ZA Licence Valuations (\$)



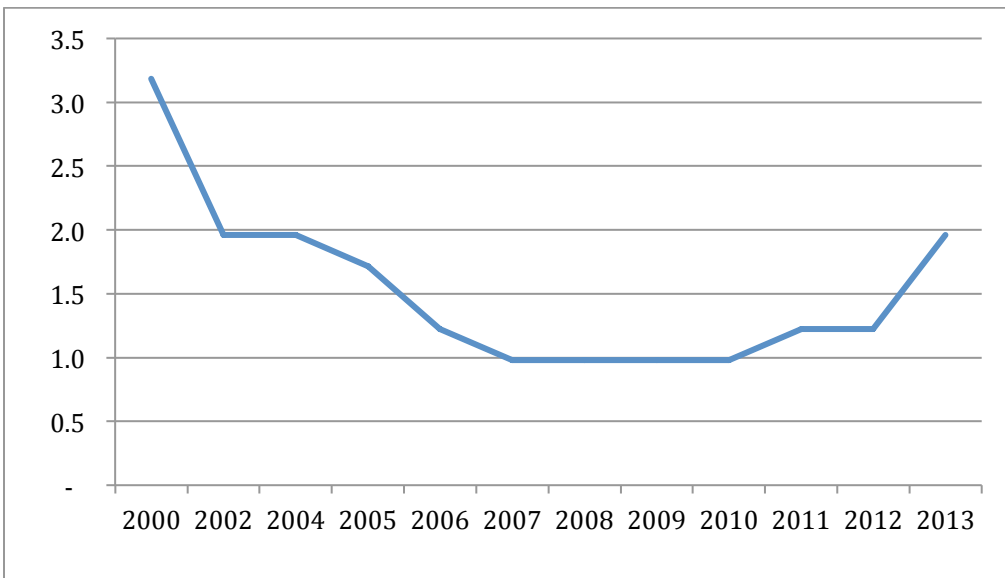
²⁰ Values in charts are in nominal terms (not adjusted for inflation)

Recent ZA Licence Lease Rates (\$)



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

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

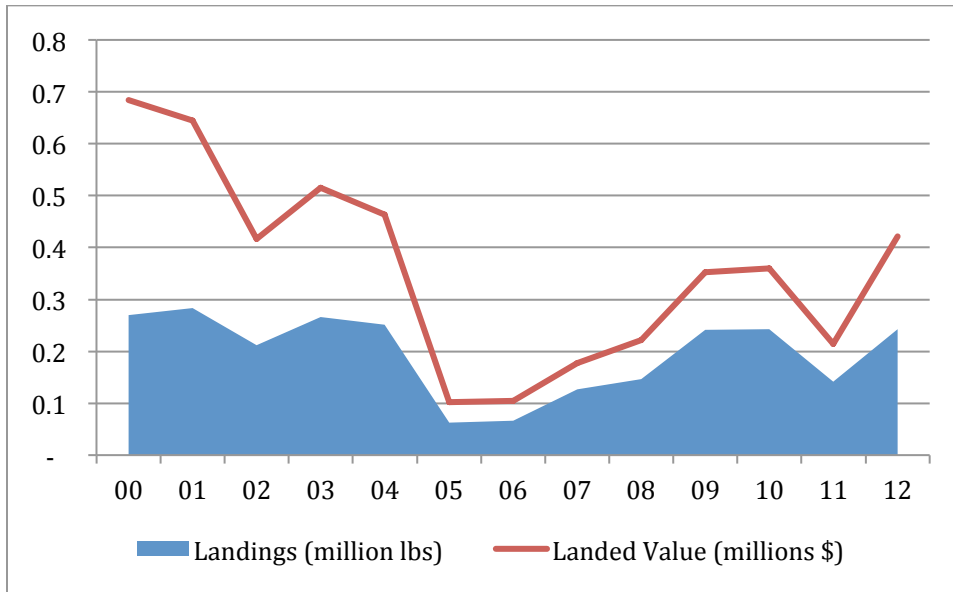


Licence Counts by Category

No chart shown: all 49 licences are category ZA.

Green Sea Urchin Landings & Landed Value Trends

Source: DFO Catch Stats



While data for the shellfish dive fisheries is of very high quality, lag time in processing the data means that a full dataset may not be available in time for issuance of this report.

Outlook

As with the red sea urchins, the green sea urchin fishery has seen a modest up-tick in the past year, which is reflected in firming licence values.

SHELLFISH: Euphausiid

General Description

| | |
|--|--|
| <i>Licence Designation</i> | ZF |
| <i>Nature of Licence</i> | Party based – individual, corporation, or band may make annual application for issuance of licence |
| <i>Number of Commercial Licences (valued in this study)</i> | 18 |
| <i>No. of Communal Commercial Lic's (not valued in this study)</i> | 1 (FZF designation) |
| <i>Licensing/Management Framework</i> | Competitive plankton (krill) fishery using trawl gear. Vessels vie for share of the annual 500 ton TAC. |
| <i>Additional Information</i> | Fishery primarily in mainland inlets of Georgia Strait |

Valuation Parameters

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

Current Valuation

Licence Value at March 31, 2013

| Category | # Licences | Value/ Licence (\$) | Total Value (\$) |
|-------------|------------|---------------------|------------------|
| ZF Licences | 18 | 30,000 | 540,000 |

Valuation Comments

Valuation estimates range from \$20,000 to \$40,000 per licence.

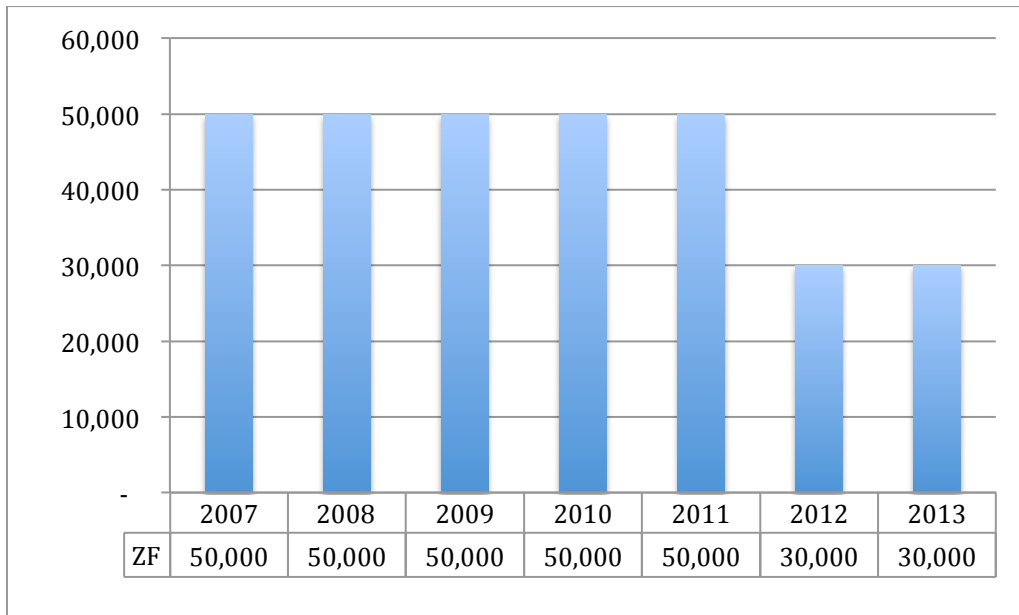
Vessel Value

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

| Euphausiid | # Vessels | Avg Vessel Value | Aggregate Value |
|---------------|-----------|------------------|-----------------|
| Classic Style | 4 | 120,000 | 480,000 |
| Modern Style | 7 | 567,000 | 3,969,000 |
| <i>Total</i> | 11 | 404,455 | 4,449,000 |

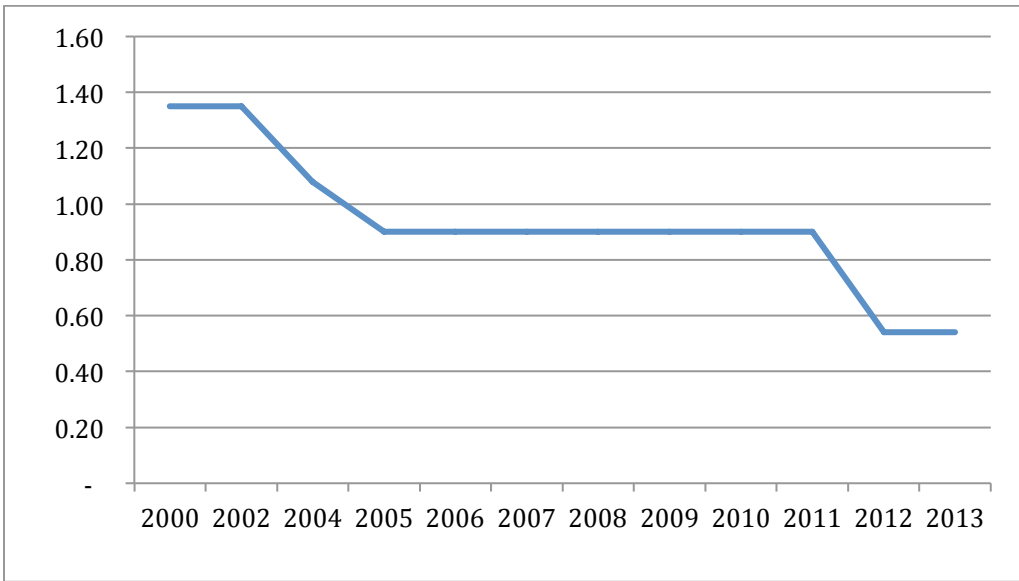
Licensing Trends²¹

Recent ZF Licence Valuations (\$)

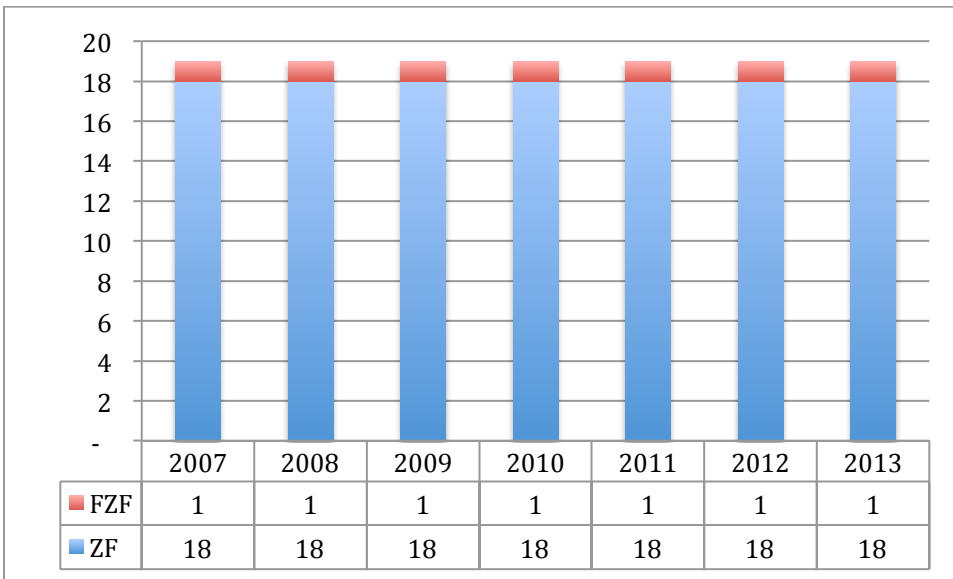


²¹ Values in charts are in nominal terms (not adjusted for inflation)

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

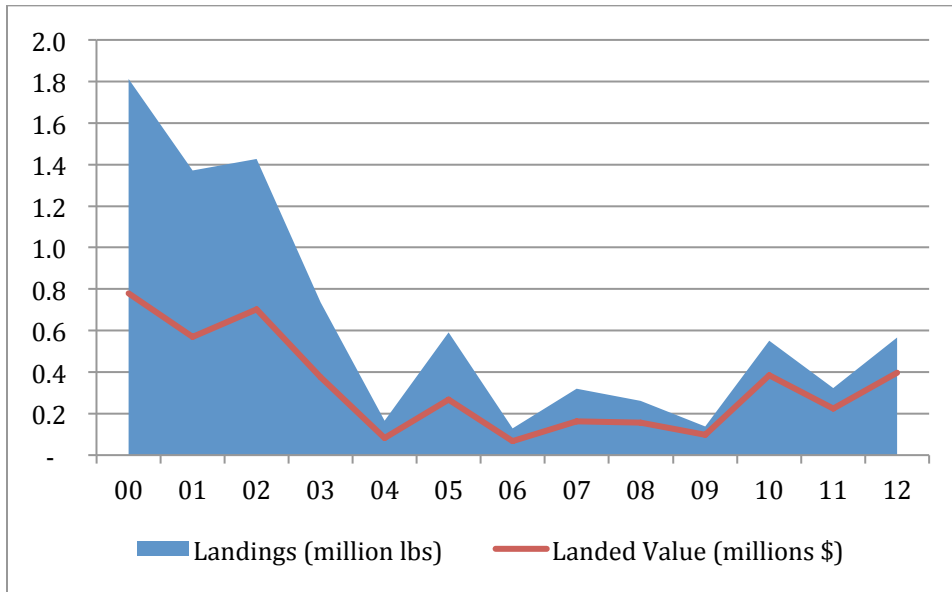


Licence Counts by Category



Euphausiid Landings & Landed Value Trends

Source: DFO Catch Stats



Outlook

This is a very small-scale fishery with sporadic participation and marginal returns to harvesters. No change in the outlook for the fishery was reported by informants.

Schedule II Species

General Description

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

Valuation Parameters

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

Current Valuation

Licence Value at March 31, 2013

| Category | # Licences | Value/ Licence Ft (\$) | Total Value (\$) |
|------------|------------|---------------------------|------------------|
| C Licences | 451 | 225 | 3,450,150 |

Valuation Comments

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

These licences are sometimes acquired and then relinquished to allow un-marrying of vessel based licences.

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

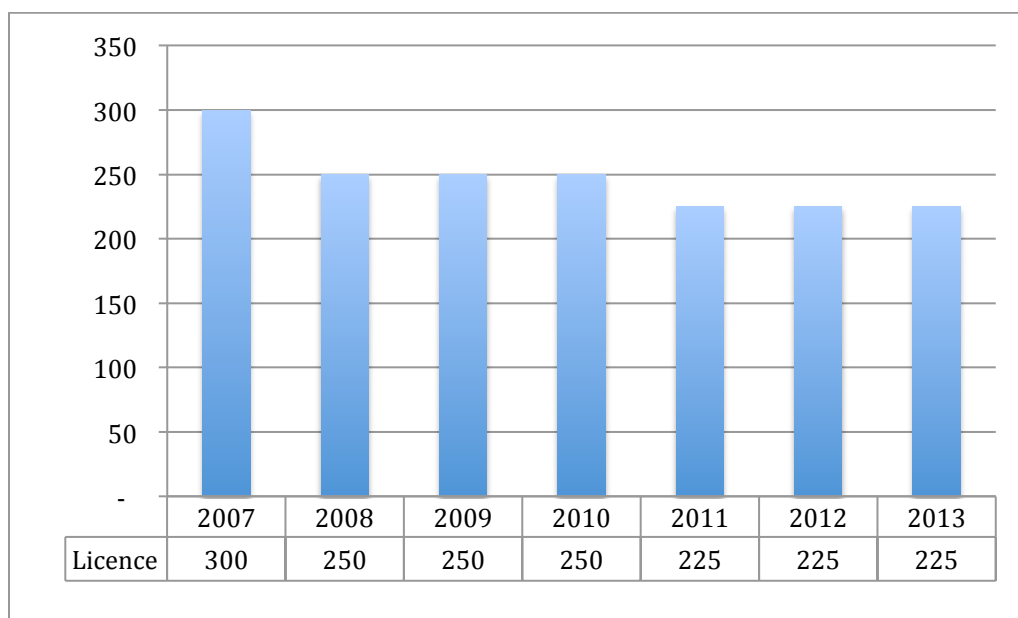
Vessel Value

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

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

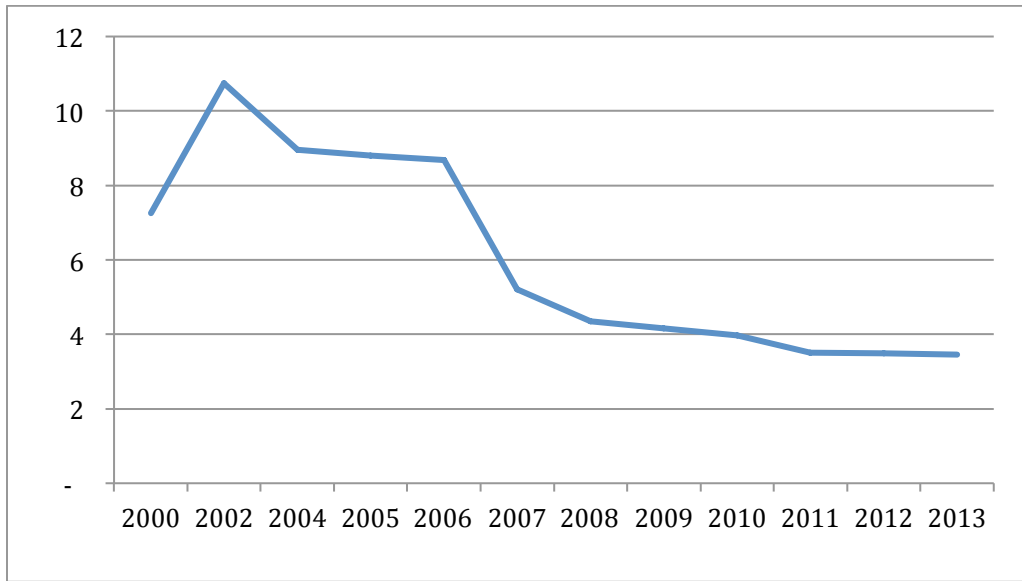
Licensing Trends²²

Recent C Licence Valuations (\$ per foot)



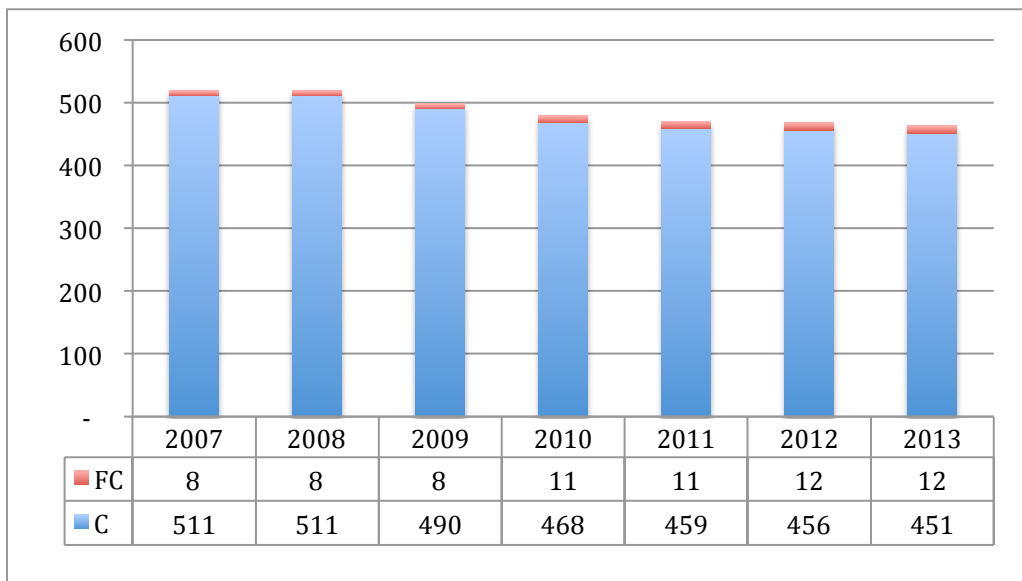
²² Values in charts are in nominal terms (not adjusted for inflation)

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



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

Licence Counts by Category



Landings & Landed Value Trends

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

Outlook

C licences bring few fishing rights. Some participants think that this category could disappear.

Summary

Aggregate Value of Licences and Quota at March 31, 2013

| Fishery Grouping | Fishery | Licence Designation | # Licences | Aggregate Licence Value (\$ millions) | Average Licence Value (\$) | Aggregate Quota Value (\$millions) | Total Licence & Quota Value (\$ millions) | |
|------------------|-------------------------|---------------------|------------|---------------------------------------|----------------------------|------------------------------------|---|------|
| Salmon | Seine | AS | 210 | 62.3 | 296,429 | - | 62.3 | |
| | Gillnet | AG | 822 | 44.1 | 53,601 | - | 44.1 | |
| | Troll | AT | 404 | 44.3 | 109,604 | - | 44.3 | |
| Pelagics | Herring – Roe Seine | HS | 241 | 22.2 | 92,158 | - | 22.2 | |
| | Herring – Roe Gillnet | HG | 1,101 | 46.8 | 42,484 | - | 46.8 | |
| | Herring - Spawn on Kelp | J | 36 | 9.0 | 250,000 | - | 9.0 | |
| | Tuna | USA 68 | 110 | - | - | - | - | |
| | Sardine | ZS | 25 | 5.0 | 200,000 | - | 5.0 | |
| Groundfish | Halibut | L | 345 | 18.4 | 53,250 | 342.7 | 361.1 | |
| | Sablefish | K | 43 | 11.8 | 275,000 | 199.4 | 211.3 | |
| | Groundfish Trawl | T | 137 | 10.8 | 78,750 | 287.6 | 298.4 | |
| | Rockfish Inside | ZN | 57 | 2.0 | 35,000 | - | 2.0 | |
| | Rockfish Outside | ZN | 163 | 22.8 | 140,000 | - | 22.8 | |
| | Lingcod Hook & Line | | | | - | - | 25.9 | 25.9 |
| | Dogfish Hook & Line | | | | - | - | 2.7 | 2.7 |
| Shellfish | Prawn | W | 195 | 28.1 | 657,000 | - | 128.1 | |
| | Crab | R | 189 | 114.9 | 608,000 | - | 114.9 | |
| | Shrimp | S | 217 | 8.0 | 36,900 | - | 8.0 | |
| | Geoduck | G | 50 | 15.0 | 300,000 | 192.5 | 207.5 | |
| | Sea Cucumber | ZD | 85 | 44.6 | 525,000 | - | 44.6 | |
| | Red Sea Urchin | ZC | 85 | 4.7 | 55,000 | - | 4.7 | |
| | Green Sea Urchin | ZA | 49 | 2.0 | 40,000 | - | 2.0 | |
| | Euphausiid | ZF | 18 | 0.5 | 30,000 | - | 0.5 | |
| Schedule II | Schedule II Species | C | 451 | 3.5 | 7,650 | - | 3.5 | |
| | | | | 620.7 | | \$1,051 | 1,671.5 | |