# An Analysis of:

# COMMERCIAL FISHING LICENCE, QUOTA, AND VESSEL VALUES

As at March 31, 2006

WEST COAST FISHING FLEET

# PREPARED FOR FISHERIES AND OCEANS - PACIFIC REGION

**Treaty and Aboriginal Policy Directorate** 

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### INTRODUCTION

This report offers assessments of licence, quota, lease, and vessel values as of March 31, 2006 for commercial fisheries in B.C. The assessments are based where possible on market transactions.

The valuations contained in this report represent the best efforts of the contractor to encapsulate prevailing asset value levels in the commercial fishery. The depth and quality of data upon which valuations are based varies dramatically by fishery - some fisheries are active, with ample vessel and licence transactions, while others are very closely held. 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.

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.

Having performed six valuation studies over the past eight years, the contractor has found that the volume of licence and quota transactions in the Pacific fishery is declining, and that valuations are increasingly predicated on general or anecdotal information. This is attributed both to a declining pool of commercial licences (most obvious in the salmon fishery, but also apparent in other fisheries), and also to consolidation of licence and quota holdings in many fisheries; that is, purchase of additional licence/quotas by some harvesters, and exit from the fishery by others.

The contractor cautions that valuations contained in this study, while reflective of March 31, 2006 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.

# **METHODOLOGY**

#### **Valuations Performed**

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

|                         |                    | VALUATION         |             |                      |       |       |  |
|-------------------------|--------------------|-------------------|-------------|----------------------|-------|-------|--|
| Fishery                 | Gear               | Average<br>Vessel |             | age Licence<br>Value | Quota | Lease |  |
|                         |                    | Value             | Full<br>Fee | Reduced<br>Fee       | Value | Value |  |
| Salmon                  | Seine              | X                 | X           | Х                    |       |       |  |
|                         | Gillnet            | X                 | X           | Х                    |       |       |  |
|                         | Troll              | X                 | X           | Х                    |       |       |  |
| Herring – Roe           | Seine              | X                 | Х           | Х                    |       | X     |  |
|                         | Gillnet            | X                 | Х           | X                    |       | X     |  |
| Herring – Spawn on Kelp |                    |                   | X           |                      |       |       |  |
| Halibut                 | Longline           | X                 | X           |                      | X     | X     |  |
| Sablefish               | Longline /<br>Trap | x                 | Х           |                      | X     | X     |  |
| Geoduck /<br>Horseclam  | Dive               | x                 | Х           |                      |       | X     |  |
| Shrimp                  | Trawl              | X                 | X           |                      |       |       |  |
| Prawn                   | Trap               | X                 | Х           |                      |       | X     |  |
| Groundfish              | Trawl              | X                 | X           |                      | X     | X     |  |
| Crab                    | Trap               | X                 | X           |                      |       |       |  |
| Sea Cucumber            | Dive               | X                 | X           |                      |       | X     |  |
| Red Sea Urchin          | Dive               | X                 | Х           |                      |       | X     |  |
| Green Sea Urchin        | Dive               | X                 | Х           |                      |       | X     |  |
| Rockfish                | Hook & Line        | X                 | X           |                      |       | X     |  |
| Schedule II Species     |                    | X                 | Х           |                      |       |       |  |
| Euphausiid              | Trawl              | X                 | X           |                      |       |       |  |

# **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 of similar value. An average value is then determined for each group rather than each vessel (or licence).

#### **Licence Stratification & Valuation Criteria**

Licence stratification is generally quite simple, as each licence within a fishery tends to hold a similar value. Exceptions are fisheries such as salmon and roe herring, where "full-fee" and "reduced-fee" licence distinctions bring different values.

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

#### **Vessel Stratification**

Compared to licence valuation, vessel valuation is complex and by nature, imprecise.

The vessel stratification approach used in this study strives to provide a meaningful profile of the vessels involved in each fishery. The following table shows the vessel categorizations applied to each commercial fishery:

|                                   |      | Classic Style             |       |                           | Modern Style |  |  |
|-----------------------------------|------|---------------------------|-------|---------------------------|--------------|--|--|
| Vessel Type                       | Wood | Aluminium /<br>Fibreglass | Steel | Aluminium /<br>Fibreglass | Steel        |  |  |
| Inside Waters /<br>Smaller Vessel |      |                           |       |                           |              |  |  |
| Outside Waters /<br>Larger Vessel |      |                           |       |                           |              |  |  |

The stratification approach is described as follows:

#### Vessel Type

For each fishery, it is deemed that there is a "small" class of vessels, and a "large" class of vessels. Smaller vessels are typically designed for and utilized in inside or protected waters, while larger vessels may be further utilized in outside, exposed, or offshore waters. An outside/larger vessel, being of greater size and utility, is more valuable than its inside/smaller counterpart.

Vessel-type designations are *relative*, being specific to the fishery being considered. For instance, an inside/smaller groundfish trawl vessel may actually be larger and possess greater value than an outside/larger salmon gillnetter.

Examples of inside/smaller vessels are Skeena River gillnet boats, Boundary Bay crab boats, or "Gulf" trollers. Examples of outside/larger vessels are "San Juan" salmon seiners, west-coast salmon trollers, and Queen Charlotte Islands crab vessels.

#### Vessel "Style"

For each type of vessel there are two "styles" assumed: "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.

In decades past, wood was the default construction material. As materials like steel, fibreglass, and aluminium gained favour, vessels were built with new materials, but using a similar design as in the past. Thus, there is a sizeable class of "classic" vessels constructed from non-wood materials.

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 1990's.

#### Vessel Construction Material

Four construction materials are considered: wood, fibreglass, aluminium, and steel. All else being equal (vessel type and style), it is deemed that wood vessels command the least value, fibreglass and aluminium are next (with the two materials assumed equal in value), with steel vessels being the most valuable.

Vessels constructed of miscellaneous materials (ferro, composite) are assumed to hold the same value as wooden craft.

#### Vessel Stratification Intent

The vessel stratification method used in this study seeks to find a balance between undue complexity (too many classifications, or *individual* vessel valuations) and oversimplicity (glossing over relevant differences). Application of this approach will yield meaningful *overall results* (for example, total fleet value, average vessel value), but is not intended to provide definitive by-vessel valuations.

#### **Information Collection**

This report follows a similar valuation methodology to that applied in prior reports. Valuations were based upon a variety of information, including:

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

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

#### **Valuation Criteria**

Each valuation furnished in the report represents a synthesis of the best information obtained from industry on transaction levels, and application of the contractor's judgement in determining a going rate for licences and quota. There is seldom a "going rate" for licences. 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 collected, current fishery trends, and past price levels; valuations with a low reported confidence level are on this basis.

#### Valuation Trends

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

## **Average Landings and Landed Value**

For each fishery where landings and landed value trends are shown, the average volume and catch per licence, for the most current year, is provided. Except where noted, data is from the DFO Catch Data Unit. For some quota fisheries or fisheries where licence stacking is allowed, these values will not provide a true picture of per-vessel activity; some vessel owners have consolidated quota/licence holdings, while others have partially or totally divested.

## **Licensing Information**

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

- IFMP's: http://www-ops2.pac.dfo-mpo.gc.ca/xnet
- DFO Licensing: http://www.pac.dfo-mpo.gc.ca/ops/fm/Licensing/Default\_e.htm

# **SALMON SEINE**

# **General Description**

| Licence Designation   | AS   |
|---|--|
| Nature of Licence   | Vessel based – vessel owner may make annual application for issuance of licence  |
| Number of Commercial Licences (valued in this study)        | 249  |
| No. of Commercial Communal Lic's (not valued in this study) | 27 (FAS designation – Party based)   |
| Licensing/Management Framework                              | Area Licensing; vessel owner must designate one of two areas, north or south (A and B); periodic area reselection (2006 was last re-selection). Stacking allowed; currently 111 Area A licences and 165 Area B (includes F licences).  |
| Valuation Criteria (Stratification)                         | Full fee and reduced fee licences are valued separately. No difference in value between licence areas was found. Vessels are stratified by size, construction material, and capability.  |
| Additional Information                                      | Competitive fishery. Licences have no associated quota. Vessel-based licence virtually precludes licence leasing. Reduced fee licences may only be held on a vessel where the vessel owner is an aboriginal individual. Vessel-based licence allows harvest of Schedule II species and transporting (packing). |

# **Valuations Performed**

|            | Purchase and Sale       |                |                     | Lease                   |                |                     |
|------------|-------------------------|----------------|---------------------|-------------------------|----------------|---------------------|
| Valuations | Valuation<br>Conducted? | Sample<br>Size | Confidence<br>Level | Valuation<br>Conducted? | Sample<br>Size | Confidence<br>Level |
| Licence    | Yes                     | 5-10           | Med                 | n.a.                    |                |                     |
| Quota      | n.a.                    |                |                     | n.a.                    |                |                     |
| Vessel     | Yes                     | <3             | Low                 | n.a.                    |                |                     |

## **Current Valuation**

### Licence Value at March 31, 2006

| Licence Category | Avg. Licence Value (\$) | Total Licences | Total Value, All Licences (\$millions) |
|------------------|-------------------------|----------------|--|
| AS - Full Fee    | 340,000                 | 231            | 78,540,000                             |
| AS - Reduced Fee | 300,000                 | 18             | 5,400,000                              |
| AS Licences      | 337,108                 | 249            | 83,940,000                             |

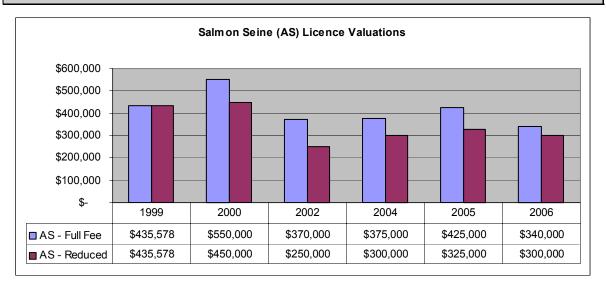
- Values have dropped significantly this year. Last year's values were \$425,000 full fee and \$325,000 reduced fee.
- The Allocation Transfer Program was a significant player, purchasing three licences during the year. The average rate paid by the Program was about 10% higher than that indicated in "industry" transactions.
- Average vessel length: approx. 64 feet; length is a minor valuation factor.
- No discernable difference in values by area.

#### **Vessel Value**

Vessel counts exclude F licences and are best-estimates.

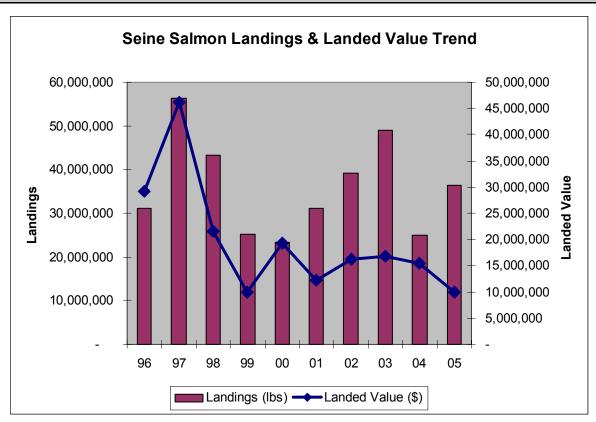
| Vessel Type                       |                |           | Classic Styl             | е         | Modern                   | Total /    |            |
|-----------------------------------|----------------|-----------|--------------------------|-----------|--------------------------|------------|------------|
|                                   |                | Wood      | Aluminum<br>/ Fibreglass | Steel     | Aluminum<br>/ Fibreglass | Steel      | Average    |
| lasida Watana /                   | Est # Vessels  | 13        | 7                        | 4         | 13                       | 1          | 38         |
| Inside Waters /<br>Smaller Vessel | Unit Value     | 25,000    | 125,000                  | 150,000   | 300,000                  | 325,000    | 158,553    |
|                                   | Aggregate Val. | 325,000   | 875,000                  | 600,000   | 3,900,000                | 325,000    | 6,025,000  |
|                                   | Est # Vessels  | 30        | 23                       | 11        | 38                       | 47         | 149        |
| Outside Waters / Larger Vessel    | Unit Value     | 65,000    | 175,000                  | 200,000   | 400,000                  | 500,000    | 314,597    |
|                                   | Aggregate Val. | 1,950,000 | 4,025,000                | 2,200,000 | 15,200,000               | 23,500,000 | 46,875,000 |
|                                   | Est # Vessels  | 43        | 30                       | 15        | 51                       | 48         | 187        |
| Total / Average                   | Average Value  | 52,907    | 163,333                  | 186,667   | 374,510                  | 496,354    | 282,888    |
|                                   | Aggregate Val. | 2,275,000 | 4,900,000                | 2,800,000 | 19,100,000               | 23,825,000 | 52,900,000 |

## **Valuation Trends**



 Values during the period shown have been "propped-up" by government licence purchases (or anticipated purchases), and speculation about an expected quota management plan. Current values have softened due to the ongoing poor financial performance of the salmon fishery.

# **Landings & Landed Value Trends**



#### PACIFIC FLEET LICENCE, QUOTA AND VESSEL VALUATION – AT MARCH 31, 2006

| Avg Landings per Licence (lbs, 2005) | 131,993   |
|--------------------------------------|-----------|
| Avg Landed Value/Licence (2005):     | \$ 36,061 |

 Changes in DFO's commercial salmon management policy post-1997 have resulted in low levels of landings and landed values in the recent past (coho conservation, precautionary management, SARA, wild salmon policy).

#### **Outlook**

- The performance of the commercial salmon fishery does not support the asset values indicated in this valuation, according to many industry participants.
- Asset values are supported largely by government licence retirements and speculation about a looming quota management plan.
- The pink salmon market remains challenging; pinks are a major component of seine salmon landings.
- Improved access to Fraser Sockeye by the Area B fleet in 2006 was an encouraging sign.
- The outlook for commercial salmon fisheries remains "cloudy:"
  - Uncertain access to the resource (allocation issues, SARA, Wild Salmon Policy).
  - Market challenges and opportunities.
  - Rising costs (eg. fuel).
  - Volatile ocean conditions and salmon returns.
  - Prospects for industry rationalization that may bring both improved business performance and further reduce participation in the fishery.

# **SALMON GILLNET**

# **General Description**

| Licence Designation   | AG   |
|---|--|
| Licence Designation   | AG   |
| Nature of Licence   | Vessel based – vessel owner may make annual application for issuance of licence  |
| Number of Commercial Licences (valued in this study)        | 1059   |
| No. of Commercial Communal Lic's (not valued in this study) | 93 (FAG designation, Party-based)  |
| Licensing/Management Framework                              | Area Licensing; vessel owner must designate one of 3 areas: North (C), Johnstone St/Barclay Snd (D), or Fraser River (E); periodic area reselection (2006 was last re-selection).  Stacking allowed; currently 699 Area A, 331 Area D, and 376 Area E (includes FAG and NAG licences)  |
| Valuation Criteria (Stratification)                         | Full fee and reduced fee licences are valued separately Vessels are stratified by size, construction material, and capability  |
| Additional Information                                      | Competitive fishery. An additional 254 personal licences (NAG designation) are held by the Northern Native Fishing Corporation. 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). |

# **Valuations Performed**

|            | Purchase and Sale       |                |                     | Lease                   |                |                     |
|------------|-------------------------|----------------|---------------------|-------------------------|----------------|---------------------|
| Valuations | Valuation<br>Conducted? | Sample<br>Size | Confidence<br>Level | Valuation<br>Conducted? | Sample<br>Size | Confidence<br>Level |
| Licence    | Yes                     | >10            | Med-High            | n.a.                    |                |                     |
| Quota      | n.a.                    |                |                     | n.a.                    |                |                     |
| Vessel     | Yes                     | <3             | Low                 | n.a.                    |                |                     |

## **Current Valuation**

## Licence Value at March 31, 2006

| Licence Category | Avg. Licence Value (\$) | Total Licences | Total Value, All Licences (\$millions) |
|------------------|-------------------------|----------------|--|
| AG - Full Fee    | 80,000                  | 895            | 71,600,000                             |
| AG - Reduced Fee | 68,000                  | 164            | 11.152,000                             |
| AG Licences      | 78,142                  | 1,059          | 82,752,000                             |

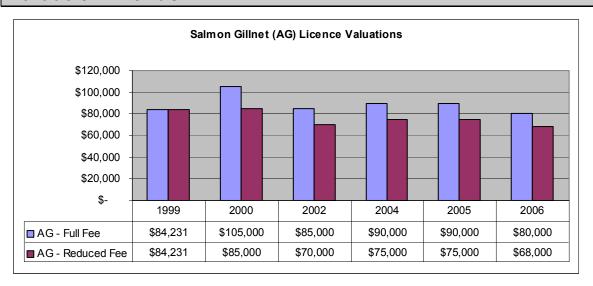
- Values have dropped marginally this year. Last years values were \$90,000 and \$75,000.
- Current (at issuance of this Report) values have softened further, to perhaps \$70,000-75,000.
- The Allocation Transfer Program was a significant player, purchasing 10 licences during the year. The average rate paid by the Program was consistent with that indicated in "industry" transactions.
- Average vessel length approx. 33 feet; length is not a major valuation factor.
- No discernable difference in values by area.

#### **Vessel Value**

Vessel counts exclude F licences and are best-estimates.

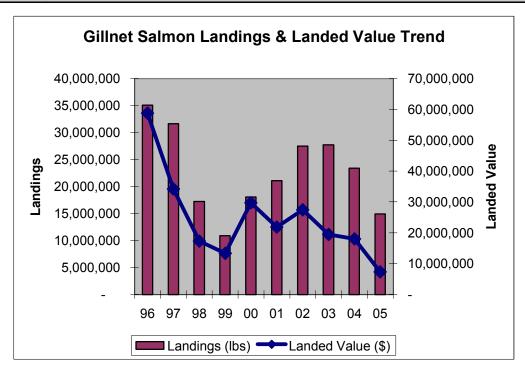
| ,, ,,                             |                | C         | lassic Style             |        | Modern S                 | Style   | T-4-1/             |  |
|-----------------------------------|----------------|-----------|--------------------------|--------|--------------------------|---------|--------------------|--|
| Vessel Type                       |                | Wood      | Aluminum /<br>Fibreglass | Steel  | Aluminum /<br>Fibreglass | Steel   | Total /<br>Average |  |
|                                   | Est # Vessels  | 60        | 250                      | -      | 87                       | -       | 397                |  |
| Inside Waters /<br>Smaller Vessel | Unit Value     | 15,000    | 25,000                   | -      | 75,000                   | -       | 34,446             |  |
|                                   | Aggregate Val. | 900,000   | 6,250,000                | _      | 6,525,000                | -       | 13,675,000         |  |
| O taida Matana (                  | Est # Vessels  | 90        | 220                      | 1      | 175                      | 2       | 488                |  |
| Outside Waters /<br>Larger Vessel | Unit Value     | 35,000    | 50,000                   | 75,000 | 150,000                  | 175,000 | 98,137             |  |
|                                   | Aggregate Val. | 3,150,000 | 11,000,000               | 75,000 | 26,250,000               | 350,000 | 40,825,000         |  |
|                                   | Est # Vessels  | 150       | 470                      | 1      | 262                      | 2       | 885                |  |
| Total / Average                   | Average Value  | 27,000    | 36,702                   | 75,000 | 125,095                  | 175,000 | 61,582             |  |
|                                   | Aggregate Val. | 4,050,000 | 17,250,000               | 75,000 | 32,775,000               | 350,000 | 54,500,000         |  |

## **Valuation Trends**



 Values during the period shown have been "propped-up" by government licence purchases (or anticipated purchases), and speculation about an expected quota management plan. Current values have softened due to the ongoing poor financial performance of the salmon fishery.

## **Landings & Landed Value Trends**



 Avg Landings per Licence (lbs, 2005)
 10,629

 Avg Landed Value/Licence (2005):
 \$ 5,248

#### PACIFIC FLEET LICENCE, QUOTA AND VESSEL VALUATION – AT MARCH 31, 2006

• Changes in DFO's commercial salmon management policy post-1997 have resulted in low levels of landings and landed values in the recent past (coho conservation, precautionary management, SARA, wild salmon policy).

#### Outlook

- The performance of the commercial salmon fishery does not support the asset values indicated in this valuation, according to many industry participants.
- Asset values are supported largely by government licence retirements and speculation about a looming quota management plan.
- Improved access to Fraser Sockeye by the Area D and E fleets in 2006 was an encouraging sign.
- The outlook for commercial salmon fisheries remains "cloudy:"
  - Uncertain access to the resource (allocation issues, SARA, Wild Salmon Policy).
  - Market challenges and opportunities.
  - Rising costs (eg. fuel).
  - Volatile ocean conditions and salmon returns.
  - Prospects for industry rationalization that may bring both improved business performance and further reduce participation in the fishery.

# **SALMON TROLL**

# General Description

| Licence Designation   | AT  |
|---|---|
| Nature of Licence   | Vessel based – vessel owner may make annual application for issuance of licence   |
| Number of Commercial Licences (valued in this study)        | 517   |
| No. of Commercial Communal Lic's (not valued in this study) | 21 (FAT designation, Party-based)   |
| Licensing/Management Framework                              | 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 (2006 was last reselection).  Stacking allowed; currently 246 Area F, 169 Area G, 123 Area H (includes FAT licences). |
| Valuation Criteria (Stratification)                         | Full fee and reduced fee licences are valued separately. Some valuation differences by area are noted. Vessels are stratified by size, construction material, and capability  |
| Additional Information                                      | Competitive fishery.  Vessel-based licence virtually precludes licence leasing.  Reduced fee licences may only be held on a vessel where the vessel owner is an aboriginal individual.  Vessel-based licence allows harvest of Schedule II species and transporting (packing).    |

# Valuations Performed

|            | Purc                    | hase and       | Sale                | Lease |  |                     |
|------------|-------------------------|----------------|---------------------|-------|--|---------------------|
| Valuations | Valuation<br>Conducted? | Sample<br>Size | Confidence<br>Level | -     |  | Confidence<br>Level |
| Licence    | Yes                     | <5             | Med-Hlgh            | n.a.  |  |                     |
| Quota      | n.a.                    |                |                     | n.a.  |  |                     |
| Vessel     | Yes                     | <3             | Low                 | n.a.  |  |                     |

## **Current Valuation**

#### Licence Value at March 31, 2006

| Licence Category | Avg. Licence Value (\$) | Total Licences | Total Value, All Licences (\$millions) |
|------------------|-------------------------|----------------|--|
| AT - Full Fee    | 145,000                 | 494            | 71,623,000                             |
| AT - Reduced Fee | 123,250                 | 23             | 2,834,750                              |
| AT Licences      | 144,032                 | 517            | 74,464,750                             |

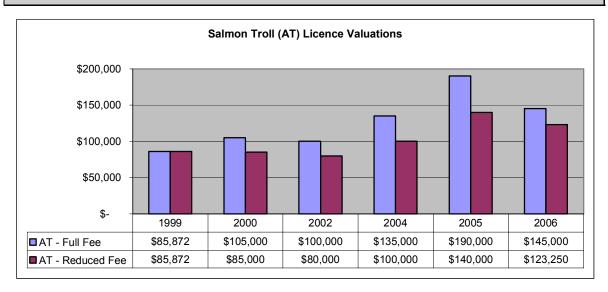
- Licence values softened during the year. Last years values were \$190,000/\$140,000.
- There was far less trading activity uncovered than in last years study.
- Values are now more linked to performance of the fishery than to speculation about buy-back and guota implementation.
- Average vessel length approx. 40 feet; length is not a major valuation factor
- The ATP purchased a single licence, for a substantial premium over the indicated March 31, 2006 valuation.
- Due to pilot individual quota programs in 2006, small quota leasing opportunities have arisen: chinook in Area F (about \$9,000 for the fish entitlement) and sockeye in Area G (about \$3 per fish). These markets are small, not well-developed, and may be transitory.

#### **Vessel Value**

Vessel counts exclude F licences and are best-estimates.

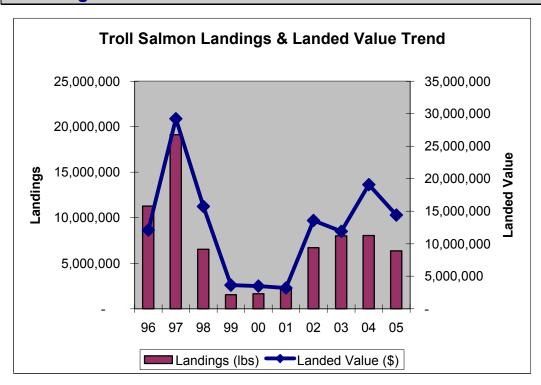
|                                   | Vessel Type    |           | Classic Style            | )         | Modern \$                | Style   | T-4-1/             |  |
|-----------------------------------|----------------|-----------|--------------------------|-----------|--------------------------|---------|--------------------|--|
| Vessel Type                       |                | Wood      | Aluminum /<br>Fibreglass | Steel     | Aluminum /<br>Fibreglass | Steel   | Total /<br>Average |  |
| La sida Maria da 1                | Est # Vessels  | 14        | 5                        | 1         | 7                        | -       | 27                 |  |
| Inside Waters /<br>Smaller Vessel | Unit Value     | 15,000    | 25,000                   | 40,000    | 75,000                   | -       | 33,333             |  |
|                                   | Aggregate Val. | 210,000   | 125,000                  | 40,000    | 525,000                  | -       | 900,000            |  |
| Q taids Malass (                  | Est # Vessels  | 228       | 141                      | 16        | 27                       | 4       | 416                |  |
| Outside Waters /<br>Larger Vessel | Unit Value     | 35,000    | 50,000                   | 75,000    | 150,000                  | 175,000 | 50,433             |  |
|                                   | Aggregate Val. | 7,980,000 | 7,050,000                | 1,200,000 | 4,050,000                | 700,000 | 20,980,000         |  |
| Total / Average                   | Est # Vessels  | 242       | 146                      | 17        | 34                       | 4       | 443                |  |
|                                   | Average Value  | 33,843    | 49,144                   | 72,941    | 134,559                  | 175,000 | 49,391             |  |
|                                   | Aggregate Val. | 8,190,000 | 7,175,000                | 1,240,000 | 4,575,000                | 700,000 | 21,880,000         |  |

## **Valuation Trends**



• The "spike" in 2005 valuation was a result of quota speculation arising from the "Pearse-McRae" report and optimism from promising pilot IQ tests in the fishery.

# **Landings & Landed Value Trends**



 Avg Landings per Licence (lbs, 2005)
 11,781

 Avg Landed Value/Licence (2005):
 \$ 26,757

#### PACIFIC FLEET LICENCE, QUOTA AND VESSEL VALUATION – AT MARCH 31, 2006

• Changes in DFO's commercial salmon management policy post-1997 have resulted in lower levels of landings and landed values in the recent past (coho conservation, precautionary management, SARA, wild salmon policy). However, troll fishery results have rebounded more than in the net fishery.

#### Outlook

- The sense of "buoyancy" that prevailed in the troll licence market in 2005 has dissipated somewhat in 2006.
- The outlook for commercial salmon fisheries remains "cloudy:"
  - Uncertain access to the resource (allocation issues, SARA, Wild Salmon Policy).
  - Market challenges and opportunities.
  - Rising costs (eg. fuel).
  - Volatile ocean conditions and salmon returns.
  - Prospects for industry rationalization that may bring both improved business performance and further reduce participation in the fishery.

# **ROE HERRING SEINE**

# **General Description**

| Licence Designation   | HS   |
|---|--|
| Nature of Licence   | Party based – individual, corporation, or band may make annual application for issuance of licence   |
| Number of Commercial Licences (valued in this study)        | 248  |
| No. of Commercial Communal Lic's (not valued in this study) | 4 (FHS designation)  |
| Licensing/Management Framework                              | 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. |
| Valuation Criteria (Stratification)                         | Full fee and reduced fee licences are valued separately Vessels are stratified by size, construction material, and capability.   |
| Additional Information                                      | Active lease market for licences. There are five stock management areas: QCI, North, Central, WCVI, and Strait of Georgia.   |

# **Valuations Performed**

|            | Purchase and Sale       |                |                     |                         | Lease          |                     |  |  |
|------------|-------------------------|----------------|---------------------|-------------------------|----------------|---------------------|--|--|
| Valuations | Valuation<br>Conducted? | Sample<br>Size | Confidence<br>Level | Valuation<br>Conducted? | Sample<br>Size | Confidence<br>Level |  |  |
| Licence    | Yes                     | <3             | Low                 | Yes                     | >20            | Med-High            |  |  |
| Quota      | n.a.                    |                |                     | n.a.                    |                |                     |  |  |
| Vessel     | Yes                     | <3             | Low                 | n.a.                    |                |                     |  |  |

## **Current Valuation**

#### Licence Value at March 31, 2006

| Licence Category | Avg. Licence<br>Value (\$) | Total Licences | Total Value, All Licences (\$) | Annual Lease Rate<br>(\$) |
|------------------|----------------------------|----------------|--------------------------------|---------------------------|
| HS - Full Fee    | 225,000                    | 196            | 44,100,000                     | 5,000                     |
| HS - Reduced Fee | 180,000                    | 52             | 9,360,000                      | 5,000                     |
| HS Licences      | 215,565                    | 248            | 53,460,000                     | 5,000                     |

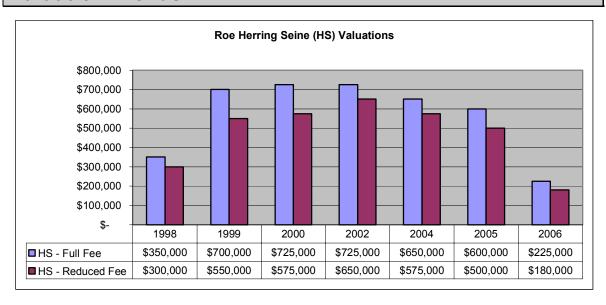
- Transaction values in this fishery have plummeted over the past year. Last year's valuations were \$600,000/500,000.
- The value of an HS licence in the current valuation is only 37.5% of that in the prior valuation.
- Current (Sept 06) values may be even lower.
- There are few transactions tremendous uncertainty regarding values and future prospects prevails.
- Both market and resource challenges are besetting the fishery.

#### **Vessel Value**

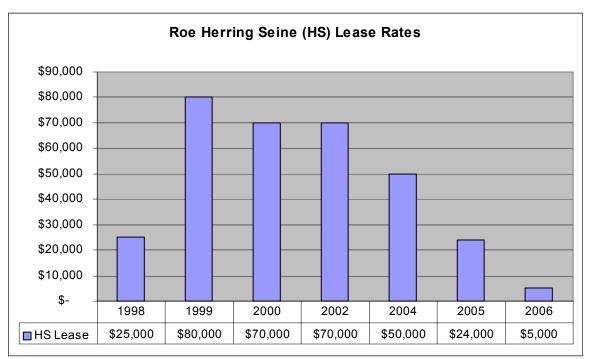
Vessel counts exclude F licences and are best-estimates.

|                                   |                |           | Classic Style            | <b>e</b>  | Moderr                   | n Style    |                    |
|-----------------------------------|----------------|-----------|--------------------------|-----------|--------------------------|------------|--------------------|
| Vessel Type                       |                | Wood      | Aluminum<br>/ Fibreglass | Steel     | Aluminum<br>/ Fibreglass | Steel      | Total /<br>Average |
|                                   | Est # Vessels  | -         | -                        | -         | 2                        | -          | 2                  |
| Inside Waters /<br>Smaller Vessel | Unit Value     | -         | -                        | -         | 300,000                  | -          | 300,000            |
|                                   | Aggregate Val. | -         | -                        | -         | 600,000                  | -          | 600,000            |
| 0 1 1 1 1 1 1 1 1                 | Est # Vessels  | 18        | 13                       | 12        | 36                       | 53         | 132                |
| Outside Waters / Larger Vessel    | Unit Value     | 65,000    | 175,000                  | 200,000   | 400,000                  | 500,000    | 354,129            |
|                                   | Aggregate Val. | 1,170,000 | 2,275,000                | 2,400,000 | 14,400,000               | 26,500,000 | 46,745,000         |
|                                   | Est # Vessels  | 18        | 13                       | 12        | 38                       | 53         | 134                |
| Total / Average                   | Average Value  | 65,000    | 175,000                  | 200,000   | 394,737                  | 500,000    | 353,321            |
|                                   | Aggregate Val. | 1,170,000 | 2,275,000                | 2,400,000 | 15,000,000               | 26,500,000 | 47,345,000         |

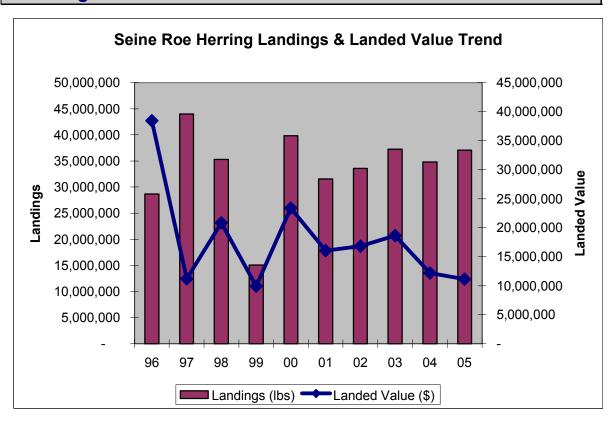
# **Valuation Trends**



• The erosion in values seen since 2002 is a result of weakening market conditions in Japan for BC roe.



## **Landings & Landed Value Trends**



 NOTE - the contractor lacks confidence in the 1999 data point (landings and values appear too low)

| Avg Landings per Licence (lbs, 2005) | 147,242   |
|--------------------------------------|-----------|
| Avg Landed Value/Licence (2005):     | \$ 44,172 |

#### **Outlook**

- Both licence values and lease rates have dropped dramatically in recent years. A strengthening Canadian dollar (relative to the yen) and weakening Japanese demand are largely responsible.
- At 2006 (and expected 2007) volumes and prices, the viability of the fishery is highly marginal.
- Three consecutive years of weakening markets is cause for concern; long-term market outlook is uncertain.
- Short-term resource issues only exacerbate the negativity prevailing in the roe herring fishery.

# **ROE HERRING GILLNET**

# **General Description**

| Licence Designation   | HG   |
|---|--|
| Nature of Licence   | Party based – individual, corporation, or band may make annual application for issuance of licence   |
| Number of Commercial Licences (valued in this study)        | 1239   |
| No. of Commercial Communal Lic's (not valued in this study) | 29 (FH) designation  |
| Licensing/Management Framework                              | 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.       |
| Valuation Criteria (Stratification)                         | Full fee and reduced fee licences are valued separately. Skiffs/punts are stratified by size and capability; because DFO does not formally track skiffs used in this fishery, valuation is a rough estimate of fleet size and composition. |
| Additional Information                                      | Active lease market for licences. Licences are operated on punts and skiffs. There are five stock management areas: QCI, North, Central, WCVI, and Strait of Georgia.  |

# **Valuations Performed**

|            | Purc                    | hase and       | Sale                | Lease                   |                |                     |
|------------|-------------------------|----------------|---------------------|-------------------------|----------------|---------------------|
| Valuations | Valuation<br>Conducted? | Sample<br>Size | Confidence<br>Level | Valuation<br>Conducted? | Sample<br>Size | Confidence<br>Level |
| Licence    | Yes                     | 5-10           | High                | Yes                     | >100           | High                |
| Quota      | n.a.                    |                |                     | n.a.                    |                |                     |
| Vessel     | Yes                     | <3             | Low                 | n.a.                    |                |                     |

## **Current Valuation**

#### Licence Value at March 31, 2006

| Licence Category | Avg. Licence<br>Value (\$) | Total Licences | Total Value, All<br>Licences (\$) | Annual Lease<br>Rate (\$) |
|------------------|----------------------------|----------------|-----------------------------------|---------------------------|
| HG - Full Fee    | 40,000                     | 915            | 36,600,000                        | 3,000                     |
| HG - Reduced Fee | 27,500                     | 324            | 8,910,000                         | 3,000                     |
| HG Licences      | 36,731                     | 1,239          | 45,510,000                        | 3,000                     |

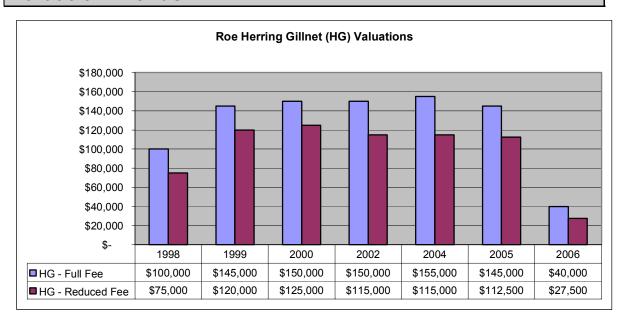
- Transaction values in this fishery have plummeted over the past year. Last year's valuations were \$145,000/112,500.
- The value of an HG licence in the current valuation is only 27.5% of that in the prior valuation.
- There are few transactions tremendous uncertainty regarding values and future prospects prevails.
- Both market and resource challenges are besetting the fishery.

#### **Vessel Value**

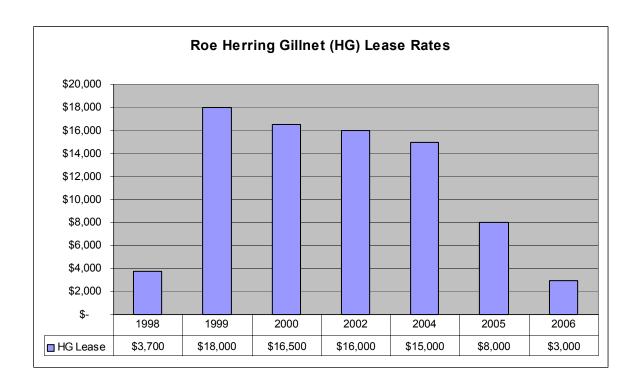
Vessel counts exclude F licences and are best-estimates.

|                                   |                | Classic Style |                          |       | Modern Style             |       | T . 4 . 1 ,        |  |
|-----------------------------------|----------------|---------------|--------------------------|-------|--------------------------|-------|--------------------|--|
| Vessel Type                       |                | Wood          | Aluminum /<br>Fibreglass | Steel | Aluminum /<br>Fibreglass | Steel | Total /<br>Average |  |
|                                   | Est # Vessels  | -             | 100                      | _     | -                        | _     | 100                |  |
| Inside Waters /<br>Smaller Vessel | Unit Value     | -             | 10,000                   | -     | -                        | -     | 10,000             |  |
|                                   | Aggregate Val. | -             | 1,000,000                | -     | -                        | -     | 1,000,000          |  |
|                                   | Est # Vessels  | -             | 130                      | -     | 170                      | -     | 300                |  |
| Outside Waters /<br>Larger Vessel | Unit Value     | -             | 25,000                   | -     | 65,000                   | -     | 47,667             |  |
|                                   | Aggregate Val. | -             | 3,250,000                | -     | 11,050,000               | -     | 14,300,000         |  |
| Total / Average                   | Est # Vessels  | _             | 230                      | _     | 170                      | _     | 400                |  |
|                                   | Average Value  | _             | 18,478                   | _     | 65,000                   | _     | 38,250             |  |
|                                   | Aggregate Val. | -             | 4,250,000                | _     | 11,050,000               | _     | 15,300,000         |  |

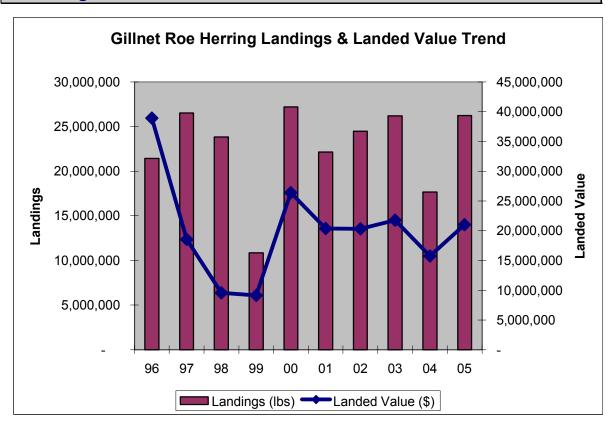
# **Valuation Trends**



• The erosion in values seen since 2002 is a result of weakening market conditions in Japan for BC roe.



# **Landings & Landed Value Trends**



| Avg Landings per Licence (lbs, 2005) | 20,689       |
|--------------------------------------|--------------|
| Avg Landed Value/Licence (2005):     | \$<br>16,551 |

### **Outlook**

- Both licence values and lease rates have dropped dramatically in recent years. A strengthening Canadian dollar (relative to the yen) and weakening Japanese demand are largely responsible.
- At 2006 (and expected 2007) volumes and prices, the viability of the fishery is highly marginal.
- Three consecutive years of weakening markets is cause for concern; long-term market outlook is uncertain.
- Short-term resource issues only exacerbate the negativity prevailing in the roe herring fishery

## **HERRING SPAWN ON KELP**

# **General Description**

| Licence Designation   | J   |
|---|---|
| Nature of Licence   | Party based – individual, corporation, or band may make annual application for issuance of licence  |
| Number of Commercial Licences (valued in this study)        | 36  |
| No. of Commercial Communal Lic's (not valued in this study) | 3 (FJ designation) An additional 7 FJ licences are issued annually to the Heiltsuk.   |
| Licensing/Management Framework                              | Quota system – each licence entitled to harvest 16,000 lbs (8 short tons) of product. Licences are not technically transferable   |
| Valuation Criteria (Stratification)                         | Each licence is assumed to hold the same value.  No vessel valuation provided for this fishery. Vessel mix varies by-operation and year-to-year.                                  |
| Additional Information                                      | 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. |

# Valuations Performed

| Purchase and Sale |                         |                |                     | Lease                   |                |                     |  |
|-------------------|-------------------------|----------------|---------------------|-------------------------|----------------|---------------------|--|
| Valuations        | Valuation<br>Conducted? | Sample<br>Size | Confidence<br>Level | Valuation<br>Conducted? | Sample<br>Size | Confidence<br>Level |  |
| Licence           | Yes                     | <3             | Very Low            | n.a.                    |                |                     |  |
| Quota             | n.a.                    |                |                     | n.a.                    |                |                     |  |
| Vessel            | n.a.                    |                |                     | n.a.                    |                |                     |  |

## **Current Valuation**

### Licence Value at March 31, 2006

| Licence Category          | Value per Licence | # Licences | Total Value, All Licences (\$) |
|---------------------------|-------------------|------------|--------------------------------|
| Spawn on Kelp (J) Licence | \$ 275,000        | 36         | 9,900,000                      |

- Valuation in this fishery has nose-dived vs. the prior year, when J licence value was pegged at \$500,000.
- Valuation is based on discussion of values with industry participants.

#### PACIFIC FLEET LICENCE, QUOTA AND VESSEL VALUATION – AT MARCH 31, 2006

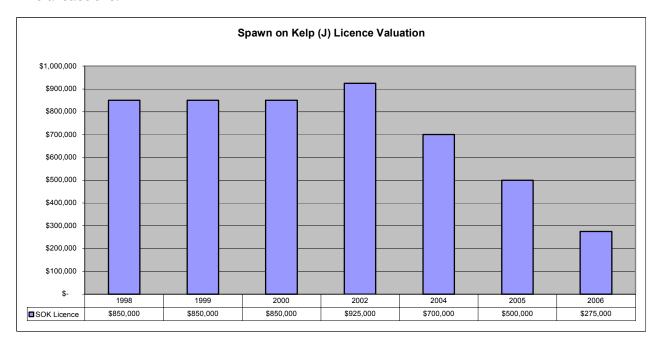
- Industry reports indicate that 22 licences were not fished this year, due to expected poor performance.
- The market for finished product remains very weak (\$6-8 per lb.), insufficient to allow for profitable operations.
- An ATP purchase this year was markedly higher than the indicated valuation (more than 100%).

#### **Vessel Value**

• No valuation provided, since no specific vessels are associated with a licence

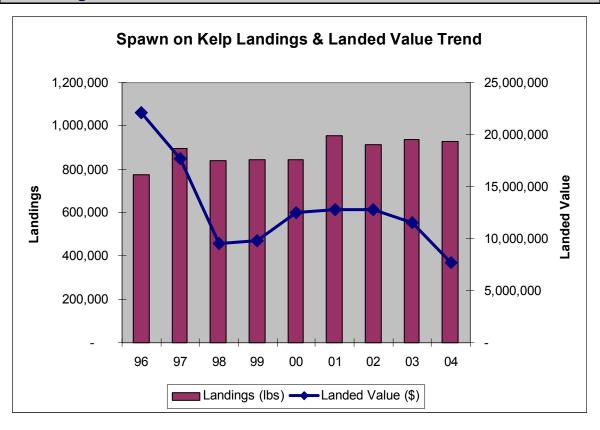
### **Valuation Trends**

• Note that each valuation shown below is a "best guess"... not based on tangible transactions.



 Rapidly eroding licence valuation estimates are a result of a softening Japanese market for BC spawn on kelp.

# **Landings & Landed Value Trends**



| Avg Landings per Licence (lbs, 2004) | 20,373     |
|--------------------------------------|------------|
| Avg Landed Value/Licence (2004):     | \$ 166,435 |

• There is no landings or landed value data for 2005. It is believed that the 2005 saw a decline in both landings and landed value vs. the prior season.

### **Outlook**

- The problems in the SOK fishery mirror those seen in the roe herring fisheries:
  - Soft markets (Japan)
  - Short term downturn in herring stocks
  - Inability to mount profitable operations given prices, costs, and resource abundance
- The immediate or long-term market outlook is extremely uncertain.

# **HALIBUT**

# **General Description**

| Licence Designation   | L  |
|---|--|
| Nature of Licence   | Vessel based – vessel owner may make annual application for issuance of licence  |
| Number of Commercial Licences (valued in this study)        | 407  |
| No. of Commercial Communal Lic's (not valued in this study) | 29 (FL designation, Party-based)   |
| Licensing/Management Framework                              | Quota management system.  Quota is separable from licence and divisible into one-pound increments. Quota can be reallocated (transferred) amongst L licensed vessels on a temporary or permanent basis (FL's temporary only).  Vessel must hold a halibut licence to hold or fish halibut.  There is a minimum quantity of quota to be held on L licences (permanent allocation); see Management Plan for details. |
| Valuation Criteria (Stratification)                         | Licences are valued on a per-foot basis; quota is valued on a per-pound basis.  Vessels are stratified by size, construction material, and capability  |
| Additional Information                                      | About half, or 200, of the L-licensed fleet actively fish for halibut.  Quotas and harvests have been relatively stable in recent years (10-12 million pound range).  Quota in current management plan is 11.66 million pounds.  Vessel-based licence allows harvest of Schedule II species and transporting (packing).  |

# **Valuations Performed**

|            | Purc                    | hase and       | Sale                |                         | Lease          |                     |
|------------|-------------------------|----------------|---------------------|-------------------------|----------------|---------------------|
| Valuations | Valuation<br>Conducted? | Sample<br>Size | Confidence<br>Level | Valuation<br>Conducted? | Sample<br>Size | Confidence<br>Level |
| Licence    | Yes                     | <3             | Low                 | n.a.                    |                |                     |
| Quota      | Yes                     | 5-10           | High                | Yes                     | 10-15          | High                |
| Vessel     | Yes                     | <3             | Low                 | n.a.                    |                |                     |

30 Halibut Fishery

## **Current Valuation**

#### Licence & Quota Value at March 31, 2006

| Licence Category          | Value per Foot /<br>Ib of Quota (\$) | Est # Feet / Lbs<br>of Quota | Total Value, All<br>Licences (\$) | Annual Lease<br>Rate (\$) |
|---------------------------|--------------------------------------|------------------------------|-----------------------------------|---------------------------|
| Halibut (L) Licence       | 1,300                                | 17,338                       | 22,539,660                        | n.a.                      |
| Halibut Quota             | 29.00                                | 11,631,200                   | 337,304,800                       | 2.15                      |
| Halibut Lic / Quota Value |                                      |                              | 359,844,460                       |                           |

- Average vessel length is assumed to be 42.6 feet; average licence value \$53,380.
- Active fishers leasing quota have continued to show strong resistance to high lease prices, causing lease rates to fall, particularly from 2004 levels.
- Quota valuation is down from last year's level of \$35 per pound. This could be attributed to a "correction" from an over-heated market in 2005, the influence of lower lease rates on quota value, and the implementation of the three-year pilot integrated groundfish program.
- The ATP was an active buyer this year, purchasing six blocks of quota at a price averaging \$29 per lb. (consistent with this years' valuation).

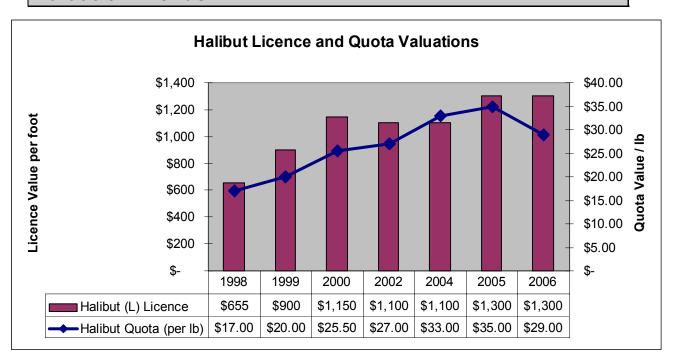
#### **Vessel Value**

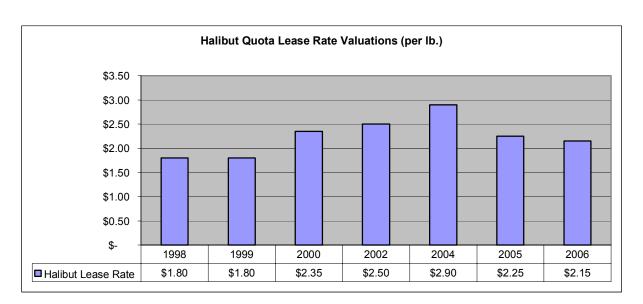
Vessel counts exclude F licences and are best-estimates.

| Vessel Type                       |                |           | Classic Style            |           |                          | Modern Style |                    |
|-----------------------------------|----------------|-----------|--------------------------|-----------|--------------------------|--------------|--------------------|
|                                   |                | Wood      | Aluminum /<br>Fibreglass | Steel     | Aluminum /<br>Fibreglass | Steel        | Total /<br>Average |
| La cida Matara (                  | Est # Vessels  | 26        | 46                       | -         | 22                       | 1            | 95                 |
| Inside Waters /<br>Smaller Vessel | Unit Value     | 15,000    | 50,000                   | -         | 100,000                  | 125,000      | 52,789             |
|                                   | Aggregate Val. | 390,000   | 2,300,000                | -         | 2,200,000                | 125,000      | 5,015,000          |
| 0 (2:42 ) (4:42 )                 | Est # Vessels  | 99        | 120                      | 20        | 50                       | 23           | 314                |
| Outside Waters /<br>Larger Vessel | Unit Value     | 35,000    | 80,000                   | 100,000   | 300,000                  | 400,000      | 125,414            |
|                                   | Aggregate Val. | 3,465,000 | 9,600,000                | 2,000,000 | 15,000,000               | 9,200,000    | 39,380,000         |
|                                   | Est # Vessels  | 125       | 166                      | 20        | 72                       | 24           | 407                |
| Total / Average                   | Average Value  | 30,840    | 71,687                   | 100,000   | 238,889                  | 388,542      | 108,545            |
|                                   | Aggregate Val. | 3,855,000 | 11,900,000               | 2,000,000 | 17,200,000               | 9,325,000    | 44,280,000         |

31 Halibut Fishery

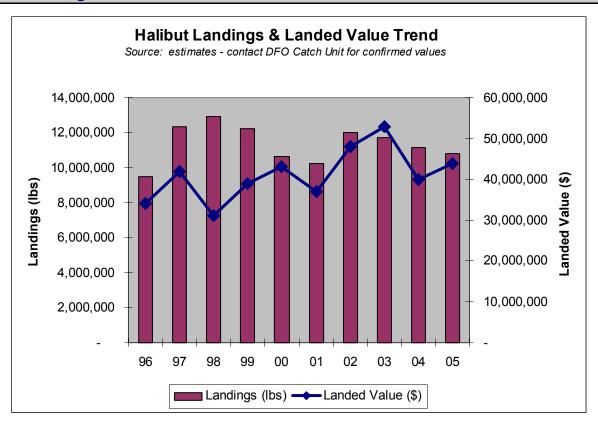
# Valuation Trends





32 Halibut Fishery

### **Landings & Landed Value Trends**



| Avg Landings per Licence (lbs, 2005) | 24,741     |
|--------------------------------------|------------|
| Avg Landed Value/Licence (2005):     | \$ 100,298 |

### **Outlook**

- Halibut remains a fundamentally strong fishery, with a stable, well-managed resource, and generally firm markets.
- The halibut industry is currently learning to adjust to pilot Groundfish Integration program:
  - 100% electronic monitoring
  - accountability for all rockfish bycatch
  - trading of groundfish species amongst groundfish sectors (halibut, sablefish, groundfish trawl, rockfish (ZN), lingcod, and dogfish) for bycatch purposes
  - establishing sector rules to govern access to other species, quota trading, etc.
  - developing operating procedures that work under the new program
- The pressing issue for the halibut fleet is being able to access required rockfish bycatch, at reasonable cost, to allow target halibut to be harvested cost effectively.

33 Halibut Fishery

#### PACIFIC FLEET LICENCE, QUOTA AND VESSEL VALUATION – AT MARCH 31, 2006

- It is envisioned that Groundfish Integration will improve rockfish management and conservation, with long term benefits to the fisheries.
- It is feared (by some) that Groundfish Integration may be un-necessarily complex, and may result in escalating lease rates for rockfish for bycatch purposes, compromising the economic viability of the fisheries.
- Adaptation to the Pilot Groundfish Integration program is key to the outlook for the halibut fishery.
- Impacts from implementation of the Species at Risk act are uncertain; many rockfish species sometimes encountered in the halibut fishery are currently in the SARA assessment process

34 Halibut Fishery

# SABLEFISH (BLACK COD)

# **General Description**

| Licence Designation   | К  |
|---|--|
| Nature of Licence   | Vessel based – vessel owner may make annual application for issuance of licence  |
| Number of Commercial Licences (valued in this study)        | 46   |
| No. of Commercial Communal Lic's (not valued in this study) | 2 (FK designation, Party-based)  |
| Licensing/Management Framework                              | 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 reallocated (transferred) amongst K licensed vessels on a temporary or permanent basis (FK's temporary only). |
| Valuation Criteria (Stratification)                         | Licences are valued on a per-licence basis; quota is valued on a per-pound basis.  Vessels are stratified by size, construction material, and capability   |
| Additional Information                                      | About 20 vessels actively fishing currently.  Vessel-based licence allows harvest of Schedule II species and transporting (packing).   |

# **Valuations Performed**

|            | Purchase and Sale       |                |                     | Lease                   |                |                     |
|------------|-------------------------|----------------|---------------------|-------------------------|----------------|---------------------|
| Valuations | Valuation<br>Conducted? | Sample<br>Size | Confidence<br>Level | Valuation<br>Conducted? | Sample<br>Size | Confidence<br>Level |
| Licence    | Yes                     | <3             | Low                 | n.a.                    |                |                     |
| Quota      | Yes                     | 3-5            | Med                 | Yes                     | 3-5            | Med                 |
| Vessel     | Yes                     | <3             | Low                 | n.a.                    |                |                     |

### Licence & Quota Value at March 31, 2005

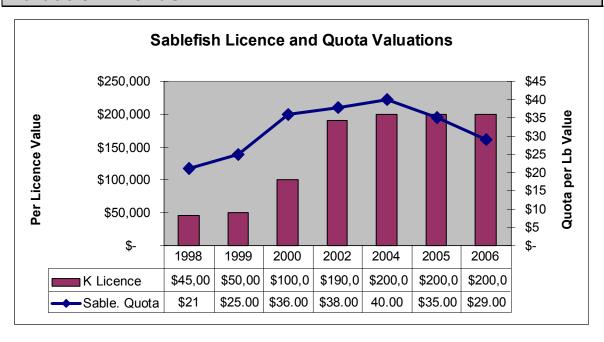
| Licence Category        | Value per Licence / Ib<br>of Quota (\$) | # Licences / Lbs<br>of Quota | Total Value, All<br>Licences (\$) | Annual Lease<br>Rate (\$) |
|-------------------------|---|------------------------------|-----------------------------------|---------------------------|
| Sablefish (K) Licence   | 200,000                                 | 46                           | 9,200,000                         | n.a.                      |
| Sablefish Quota (j-cut) | 29.00                                   | 5,122,520                    | 148,553,080                       | 2.25                      |
| Sablefish Value         |   |                              | 157,753,080                       |                           |

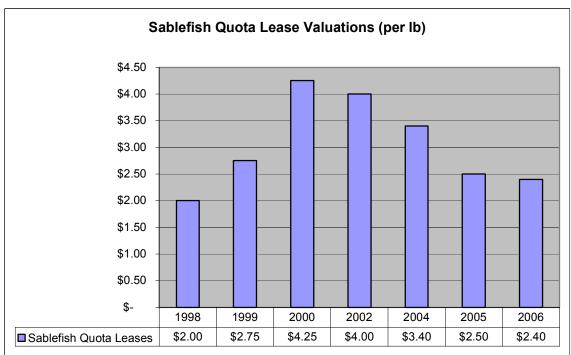
- Valuation is down from last year's level of \$35 per lb. Quota reduction, market correction, and the effects of the Pilot Groundfish Integration proposal are attributed causes.
- Average vessel length is 63 feet.
- Quota valuations are per "j-cut" pound, which is about 68% of fresh round weight.
- Quota transactions ranged from \$28-32 per j-cut pound
- The number of reported transactions for K quota remains low.

#### **Vessel Value**

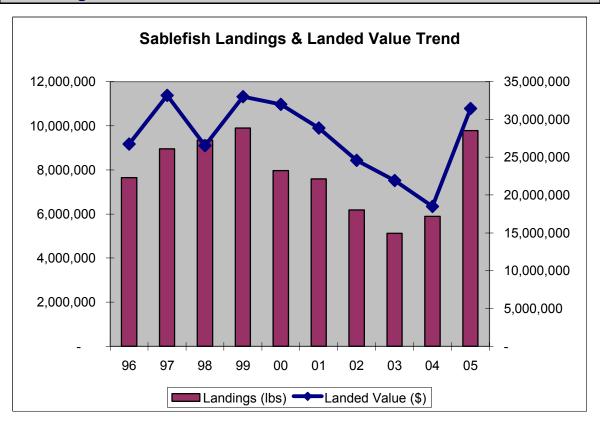
Vessel counts exclude F licences and are best-estimates.

|                                   |                |         | Classic Style            |           |                          | Modern Style |                    |  |
|-----------------------------------|----------------|---------|--------------------------|-----------|--------------------------|--------------|--------------------|--|
| Vessel Type                       |                | Wood    | Aluminum /<br>Fibreglass | Steel     | Aluminum /<br>Fibreglass | Steel        | Total /<br>Average |  |
|                                   | Est # Vessels  | 1       | 2                        | -         | 4                        | -            | 7                  |  |
| Inside Waters /<br>Smaller Vessel | Unit Value     | 25,000  | 125,000                  | -         | 300,000                  | -            | 210,714            |  |
|                                   | Aggregate Val. | 25,000  | 250,000                  | -         | 1,200,000                | -            | 1,475,000          |  |
|                                   | Est # Vessels  | 7       | 7                        | 6         | 6                        | 13           | 39                 |  |
| Outside Waters /<br>Larger Vessel | Unit Value     | 65,000  | 175,000                  | 200,000   | 400,000                  | 500,000      | 302,051            |  |
|                                   | Aggregate Val. | 455,000 | 1,225,000                | 1,200,000 | 2,400,000                | 6,500,000    | 11,780,000         |  |
|                                   | Est # Vessels  | 8       | 9                        | 6         | 10                       | 13           | 46                 |  |
| Total / Average                   | Average Value  | 60,000  | 163,889                  | 200,000   | 360,000                  | 500,000      | 288,152            |  |
|                                   | Aggregate Val. | 480,000 | 1,475,000                | 1,200,000 | 3,600,000                | 6,500,000    | 13,255,000         |  |





### **Landings & Landed Value Trends**



| Avg Landings per Licence (lbs, 2005) | 203,640 |
|--------------------------------------|---------|
| Avg Landed Value/Licence (2005):     | 654,724 |

### **Outlook**

- Sablefish remains a fundamentally strong fishery, with a stable, well-managed resource, and generally firm markets.
- The sablefish industry is currently learning to adjust to pilot Groundfish Integration program:
  - 100% electronic monitoring
  - accountability for all rockfish bycatch
  - trading of groundfish species amongst groundfish sectors (halibut, sablefish, groundfish trawl, rockfish (ZN), lingcod, and dogfish) for bycatch purposes
  - establishing sector rules to govern access to other species, quota trading, etc.
  - developing operating procedures that work under the new program
- The pressing issue for the sablefish fleet is being able to access required rockfish bycatch, at reasonable cost, to allow target black cod to be harvested cost effectively.

#### PACIFIC FLEET LICENCE, QUOTA AND VESSEL VALUATION – AT MARCH 31, 2006

- It is envisioned that Groundfish Integration will improve rockfish management and conservation, with long term benefits to the fisheries.
- It is feared (by some) that Groundfish Integration may be un-necessarily complex, and may result in escalating lease rates for rockfish for bycatch purposes, compromising the economic viability of the fisheries.
- Adaptation to the Pilot Groundfish Integration program is a key to the outlook for the sablefish fishery.
- Industry leaders are gravely concerned about potential environmental and economic impacts of a burgeoning sablefish aquaculture industry.
- Impacts from implementation of the Species at Risk act are uncertain; many rockfish species sometimes encountered in the sablefish fishery are currently in the SARA assessment process.

## **GEODUCK / HORSECLAM**

# **General Description**

| Licence Designation   | G   |
|---|---|
| Nature of Licence   | Vessel based – vessel owner may make annual application for issuance of licence   |
| Number of Commercial Licences (valued in this study)        | 55  |
| No. of Commercial Communal Lic's (not valued in this study) | nil   |
| Licensing/Management Framework                              | Area Licensing: three areas, the north coast, WCVI, and inside waters of Vancouver Island. Each of the 55 "G" licence eligibilities selects an area annually. The number of licence eligibilities fishing each area may change annually according to the proportion of the total quota assigned to each area.  Licence stacking allowed, 3 licences maximum per vessel.  Quota management – each licence may harvest 1/55 of the total quota, or 62,500 lbs in 2006 |
| Valuation Criteria (Stratification)                         | Valuation is on a per-licence basis – each licence possesses the same value Vessels are stratified by size, construction material, and capability   |
| Additional Information                                      | Dive fishery. 41 vessels currently operating the 55 licences. Quotas not divisible. Vessel-based licence allows harvest of Schedule II species and transporting (packing).  |

## **Valuations Performed**

|            | Purc                    | hase and S     | Sale                |                         | Lease          |                     |
|------------|-------------------------|----------------|---------------------|-------------------------|----------------|---------------------|
| Valuations | Valuation<br>Conducted? | Sample<br>Size | Confidence<br>Level | Valuation<br>Conducted? | Sample<br>Size | Confidence<br>Level |
| Licence    | Yes                     | Nil            | Very Low            | Yes                     | <3             | Med                 |
| Quota      | n.a.                    |                |                     | n.a.                    |                |                     |
| Vessel     | Yes                     | <3             | Low                 | n.a.                    |                |                     |

### Licence Value at March 31, 2006

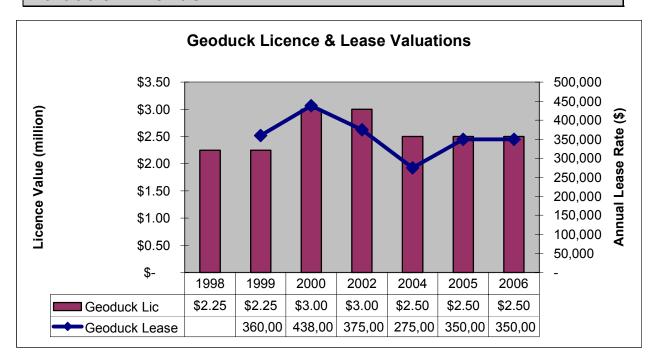
| Licence Category    | Value per<br>Licence | # Licences | Total Value, All<br>Licences (\$) | Annual Lease<br>Rate (\$) |
|---------------------|----------------------|------------|-----------------------------------|---------------------------|
| Geoduck (G) Licence | \$ 2,500,000         | 55         | 137,500,000                       | 350,000                   |

• there have been no known transactions in this fishery for several years (covering the last six valuation reports), so valuation is extremely subjective

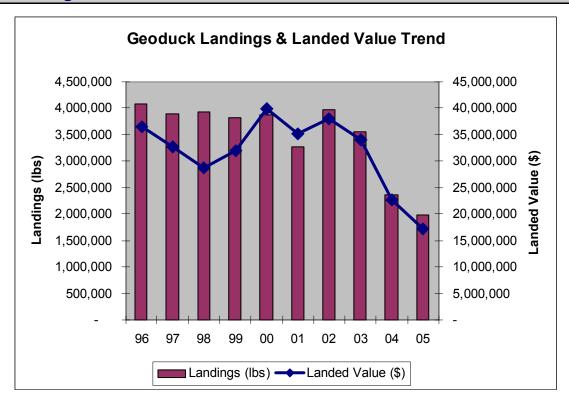
#### **Vessel Value**

Vessel counts exclude F licences and are best-estimates.

| Vessel Type                       |                | Classic Style |                          |         | Modern Style             |       |                    |
|-----------------------------------|----------------|---------------|--------------------------|---------|--------------------------|-------|--------------------|
|                                   |                | Wood          | Aluminum /<br>Fibreglass | Steel   | Aluminum /<br>Fibreglass | Steel | Total /<br>Average |
|                                   | Est # Vessels  | 3             | 6                        | -       | 4                        | _     | 13                 |
| Inside Waters /<br>Smaller Vessel | Unit Value     | 10,000        | 10,000                   | -       | 75,000                   | -     | 30,000             |
|                                   | Aggregate Val. | 30,000        | 60,000                   | -       | 300,000                  | -     | 390,000            |
|                                   | Est # Vessels  | 3             | 15                       | 2       | 8                        | -     | 28                 |
| Outside Waters /<br>Larger Vessel | Unit Value     | 15,000        | 40,000                   | 50,000  | 125,000                  | -     | 62,321             |
|                                   | Aggregate Val. | 45,000        | 600,000                  | 100,000 | 1,000,000                | -     | 1,745,000          |
|                                   | Est # Vessels  | 6             | 21                       | 2       | 12                       | _     | 41                 |
| Total / Average                   | Average Value  | 12,500        | 31,429                   | 50,000  | 108,333                  | _     | 52,073             |
|                                   | Aggregate Val. | 75,000        | 660,000                  | 100,000 | 1,300,000                | _     | 2,135,000          |



## **Landings & Landed Value Trends**



#### PACIFIC FLEET LICENCE, QUOTA AND VESSEL VALUATION – AT MARCH 31, 2006

• the contractor is not confident that 2004 and 2005 data is correct (too large a reduction in landings and landed value).

| Avg Landings per Licence (lbs, 2003) | 64,495     |
|--------------------------------------|------------|
| Avg Landed Value/Licence (2003):     | \$ 617,691 |

### **Outlook**

- Geoduck has long been a lucrative fishery, with the bulk of sales into the growing China market.
- Rapid pace of growth of the Chinese economy a positive selling into a growing market.
- Growth of supply from Washington State, including farmed geoducks, a dampening influence.
- Impacts of the Species at Risk Act implementation: the sea otter recovery program has an adverse impact on geoduck stocks, geoducks being a favored diet of sea otters; as sea otter abundance and range grows, so does the impact on geoduck biomass.
- Overall, a well-managed fishery with a reasonably positive outlook.

# SHRIMP (TRAWL)

# **General Description**

| Licence Designation   | S  |
|---|--|
| Nature of Licence   | Vessel based – vessel owner may make annual application for issuance of licence  |
| Number of Commercial Licences (valued in this study)        | 234  |
| No. of Commercial Communal Lic's (not valued in this study) | 11 (FS designation, Party-based)   |
| Licensing/Management Framework                              | 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.  |
| Valuation Criteria (Stratification)                         | Licences are valued on a per-foot basis.  Vessels are stratified by size, construction material, and capability.   |
| Additional Information                                      | 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). |

# Valuations Performed

|            | Purc                    | hase and       | Sale                | Lease                   |                |                     |  |
|------------|-------------------------|----------------|---------------------|-------------------------|----------------|---------------------|--|
| Valuations | Valuation<br>Conducted? | Sample<br>Size | Confidence<br>Level | Valuation<br>Conducted? | Sample<br>Size | Confidence<br>Level |  |
| Licence    | Yes                     | 5-10           | Med                 | n.a.                    |                |                     |  |
| Quota      | n.a.                    |                |                     | n.a.                    |                |                     |  |
| Vessel     | Yes                     | <3             | Low                 | n.a.                    |                |                     |  |

### Licence Value at March 31, 2006

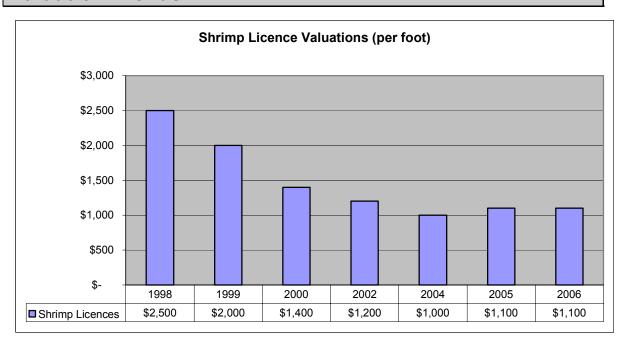
| Licence Category            | Value per Foot | Est # Feet | Total Value, All Licences (\$) |
|-----------------------------|----------------|------------|--------------------------------|
| Shrimp Trawl (S)<br>Licence | \$ 1,100       | 9,594      | 10,553,400                     |

- the average vessel length is estimated at 41 feet; average licence value \$45,100
- valuation unchanged from prior year
- the fishery, as currently configured, is quite unattractive low prices and a high cost structure make for an un-economic endeavour.
- Large licences are valued higher than average, while small licences are in the \$800-1,000 per foot range.

#### **Vessel Value**

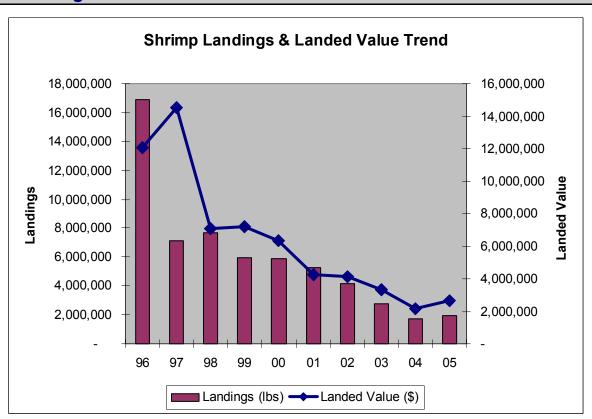
Vessel counts exclude F licences and are best-estimates.

| .,                                | \/             |           | Classic Style            | 9         | Modern                   | _ , , ,   |                    |
|-----------------------------------|----------------|-----------|--------------------------|-----------|--------------------------|-----------|--------------------|
| Vessel Type                       |                | Wood      | Aluminum /<br>Fibreglass | Steel     | Aluminum /<br>Fibreglass | Steel     | Total /<br>Average |
|                                   | Est # Vessels  | 22        | 31                       | 3         | 6                        | 3         | 65                 |
| Inside Waters /<br>Smaller Vessel | Unit Value     | 15,000    | 25,000                   | 40,000    | 75,000                   | 100,000   | 30,385             |
|                                   | Aggregate Val. | 330,000   | 775,000                  | 120,000   | 450,000                  | 300,000   | 1,975,000          |
| 0 12:12 10/21                     | Est # Vessels  | 31        | 87                       | 15        | 22                       | 14        | 169                |
| Outside Waters /<br>Larger Vessel | Unit Value     | 35,000    | 50,000                   | 125,000   | 300,000                  | 400,000   | 115,444            |
|                                   | Aggregate Val. | 1,085,000 | 4,350,000                | 1,875,000 | 6,600,000                | 5,600,000 | 19,510,000         |
|                                   | Est # Vessels  | 53        | 118                      | 18        | 28                       | 17        | 234                |
| Total / Average                   | Average Value  | 26,698    | 43,432                   | 110,833   | 251,786                  | 347,059   | 91,816             |
|                                   | Aggregate Val. | 1,415,000 | 5,125,000                | 1,995,000 | 7,050,000                | 5,900,000 | 21,485,000         |



• The erosion in licence values is linked to reduction in the pink shrimp price received by fishermen, resulting from production gluts in other global shrimp fisheries.

### **Landings & Landed Value Trends**



| Avg Landings per Licence (lbs, 2005) | 7,844        |
|--------------------------------------|--------------|
| Avg Landed Value/Licence (2005):     | \$<br>10,777 |

### Outlook

- the BC shrimp fishery has been impacted by the development of an industrial shrimp fishery in Atlantic Canada, with prices for pink shrimp having dropped dramatically
- the fleet has access to a small volume of high-value species (eg. Side-stripe) and large quantities of low value shrimp (pink)
- the shrimp fishery has explored options for restoring financial viability in the fishery, but has been unable to implement a new fishery management regime
- in the absence of a rationalized fishery, the BC shrimp fishery will likely remain an opportunistic one.
- There is currently some feeling in the industry that the shrimp fishery will improve in the future; whether this is based on pure optimism or improving fundamentals remains to be seen.

# PRAWN (TRAP)

# **General Description**

| Licence Designation   | W   |
|---|---|
| Nature of Licence   | Vessel based – vessel owner may make annual application for issuance of licence   |
| Number of Commercial Licences (valued in this study)        | 245   |
| No. of Commercial Communal Lic's (not valued in this study) | 7 (FW designation, Party-based)   |
| Licensing/Management Framework                              | 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. |
| Valuation Criteria (Stratification)                         | Licences are valued on a per-foot basis.  Vessels are stratified by size, construction material, and capability   |
| Additional Information                                      | 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).   |

# Valuations Performed

| Valuations | Purc                    | hase and       | Sale                | Lease                   |                |                     |  |
|------------|-------------------------|----------------|---------------------|-------------------------|----------------|---------------------|--|
|            | Valuation<br>Conducted? | Sample<br>Size | Confidence<br>Level | Valuation<br>Conducted? | Sample<br>Size | Confidence<br>Level |  |
| Licence    | Yes                     | 5-10           | Med                 | Yes                     | 5-10           | Med                 |  |
| Quota      | n.a.                    |                |                     | n.a.                    |                |                     |  |
| Vessel     | Yes                     | <3             | Low                 | n.a.                    |                |                     |  |

#### Licence Value at March 31, 2006

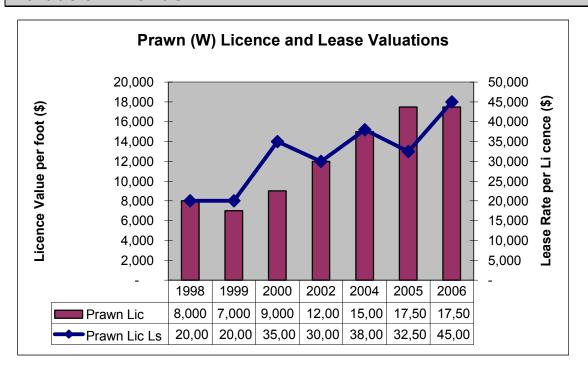
| Licence Category  | Value | per Foot | Est # Feet | Total Value, | All Licences (\$) | Annual Lease Rate (\$) |
|-------------------|-------|----------|------------|--------------|-------------------|------------------------|
| Prawn (W) Licence | \$    | 17,500   | 8,943      | 156          | ,493,50           | 45,000                 |

- average vessel length 36.5 feet; average licence value \$638,750.
- market is very active.
- transaction values range from \$13,000 \$20,000+
- valuation is confounded by the fact that many W licences are married to shrimp or other licences, and that many deals are "package" deals involving multiple licences, vessels, and gear. Thus, apportionment of value to the prawn licence may be quite arbitrary.
- small licences are attractive for use as "stackers;" large licences are becoming attractive to salmon seine vessel owners seeking diversification into the prawn fishery.
- The ATP purchased a single licence for less than the indicated valuation.
- leases range from \$40,000 \$50,000

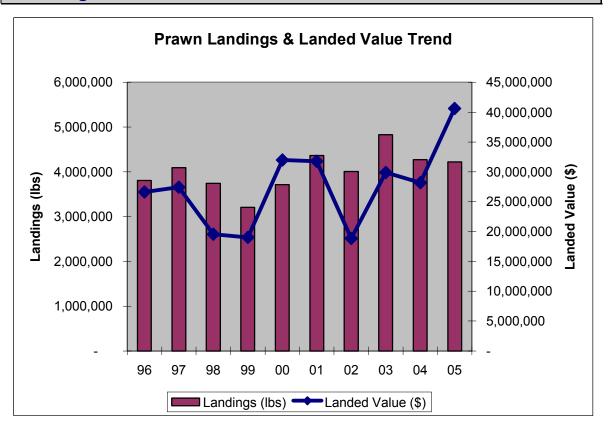
#### **Vessel Value**

Vessel counts exclude F licences and are best-estimates.

|                                   |                |           | Classic Style            |         | Modern \$                | T-4-1/  |                    |
|-----------------------------------|----------------|-----------|--------------------------|---------|--------------------------|---------|--------------------|
| Vessel Type                       |                | Wood      | Aluminum /<br>Fibreglass | Steel   | Aluminum /<br>Fibreglass | Steel   | Total /<br>Average |
|                                   | Est # Vessels  | 36        | 37                       | 1       | 41                       | _       | 115                |
| Inside Waters /<br>Smaller Vessel | Unit Value     | 15,000    | 50,000                   | 65,000  | 100,000                  | _       | 57,000             |
|                                   | Aggregate Val. | 540,000   | 1,850,000                | 65,000  | 4,100,000                | -       | 6,555,000          |
| O taida Mataur (                  | Est # Vessels  | 33        | 58                       | 4       | 34                       | 1       | 130                |
| Outside Waters /<br>Larger Vessel | Unit Value     | 35,000    | 80,000                   | 100,000 | 300,000                  | 400,000 | 129,192            |
|                                   | Aggregate Val. | 1,155,000 | 4,640,000                | 400,000 | 10,200,000               | 400,000 | 16,795,000         |
| Total / Average                   | Est # Vessels  | 69        | 95                       | 5       | 75                       | 1       | 245                |
|                                   | Average Value  | 24,565    | 68,316                   | 93,000  | 190,667                  | 400,000 | 95,306             |
|                                   | Aggregate Val. | 1,695,000 | 6,490,000                | 465,000 | 14,300,000               | 400,000 | 23,350,000         |



## **Landings & Landed Value Trends**



| Avg Landings per Licence (lbs, 2005) | 16,765  |
|--------------------------------------|---------|
| Avg Landed Value/Licence (2005):     | 161,197 |

### **Outlook**

- as demonstrated by high asset values, the prawn fishery has been successful in terms of stable or rising catches and values.
- the prawn fishery is currently constrained by the short duration of fishing seasons a longer season could allow for improved product and market development (eg. more valuable size assortment, live product).
- the industry is currently engaged in a Future Management Options exercise to explore fishery reform for the future.
- Impacts from implementation of the Species at Risk act are uncertain.
- Wild spotted prawns have a very favorable market niche, particularly in Japan.
- The outlook for the fishery is generally positive.

## **GROUNDFISH TRAWL**

# **General Description**

| Licence Designation   | Т  |
|---|--|
| Nature of Licence   | Vessel based – vessel owner may make annual application for issuance of licence  |
| Number of Commercial Licences (valued in this study)        | 141  |
| No. of Commercial Communal Lic's (not valued in this study) | 1 (FT designation, Party-based)  |
| Licensing/Management Framework                              | 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. |
| Valuation Criteria (Stratification)                         | Licences are valued on a per-foot basis, quota on a per pound basis. Groundfish and hake are valued separately. Vessels are stratified by size, construction material, and capability  |
| Additional Information                                      | 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).  |

# **Valuations Performed**

| Valuations | Purc                    | hase and       | Sale                | Lease                   |                |                     |  |
|------------|-------------------------|----------------|---------------------|-------------------------|----------------|---------------------|--|
|            | Valuation<br>Conducted? | Sample<br>Size | Confidence<br>Level | Valuation<br>Conducted? | Sample<br>Size | Confidence<br>Level |  |
| Licence    | Yes                     | <3             | Med                 | n.a.                    |                |                     |  |
| Quota      | Yes                     | 5-10           | Med                 | Yes                     | 5-10           | Med                 |  |
| Vessel     | Yes                     | <3             | Low                 | n.a.                    |                |                     |  |

#### Licence and Quota Value at March 31, 2006

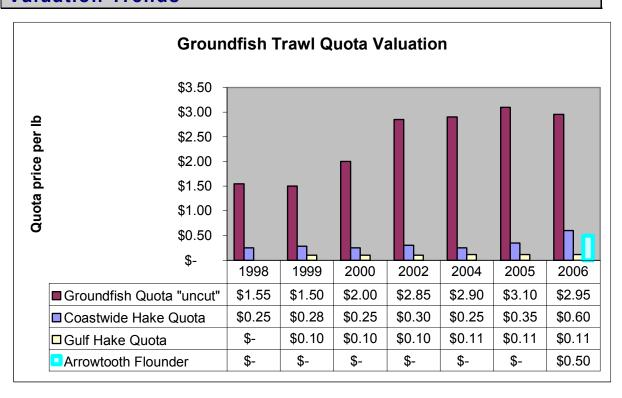
| Licence Category                   | per Foot / Ib<br>f Quota | Est # Feet /<br>Lbs of Quota | Total Value, All<br>Licences (\$) | Annual<br>Lease<br>Rate (\$) |
|------------------------------------|--------------------------|------------------------------|-----------------------------------|------------------------------|
| Groundfish Licence                 | \$<br>1,500              | 8,883                        | 13,324,500                        | n.a.                         |
| Groundfish Quota (uncut)           | \$<br>2.95               | 88,287,616                   | 260,448,468                       | 0.18                         |
| Coastwide Hake Quota               | \$<br>0.60               | 209,719,189                  | 125,831,513                       | 0.05                         |
| Gulf Hake Quota                    | \$<br>0.11               | 22,046,000                   | 2,245,060                         | n.a.                         |
| Arrowtooth Flounder Quota (Turbot) | \$<br>0.50               | 33,069,000                   | 16,534,500                        | 0.02                         |
| Total                              |                          |                              | 402,029,541                       |                              |

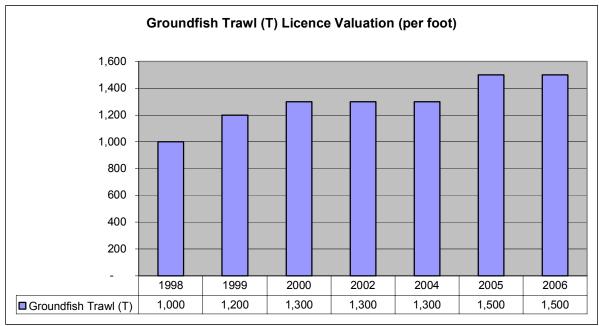
- "uncut" groundfish trawl quota is down marginally from last years' level of \$3.05, while coastwide hake quota value is up substantially (to \$0.60 per lb from \$0.35).
- Average vessel length 62 feet; average licence value \$93,000 (without quota)
- Licences with high holdings caps valued in the \$2,000/ft. range, those with low caps in \$1,000/ft. range
- quota sales range from \$2.75 \$3.05
- no value is provided for gulf hake quota leases, as values are nominal
- Arrowtooth flounder (turbot) is now part of the IVQ program, and thus, a valuation for this quota is provided.
- In the current year, a worsening business climate (lower prices due largely to exchange rates, and rising fuel costs) acted to reduce quota values. On the other hand, the Pilot Groundfish Integration proposal, by opening up new avenues for leasing-out of rockfish, served as an inflationary influence on quota values.
- Hake products are currently enjoying strong demand and historically high product values.

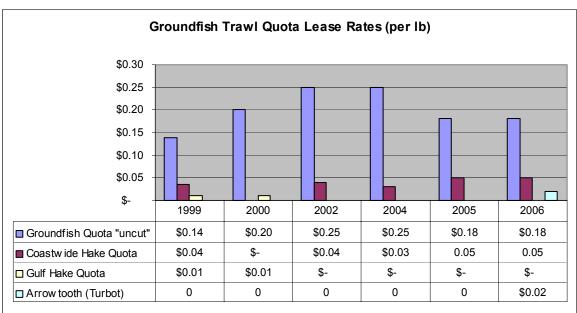
#### **Vessel Value**

Vessel counts exclude F licences and are best-estimates.

| .,                                |                |           | Classic Sty              | le         | Moderi                   | n Style    |                    |
|-----------------------------------|----------------|-----------|--------------------------|------------|--------------------------|------------|--------------------|
| Vessel Type                       |                | Wood      | Aluminum /<br>Fibreglass | Steel      | Aluminum /<br>Fibreglass | Steel      | Total /<br>Average |
|                                   | Est # Vessels  | 6         | 6                        | 2          | 6                        | 1          | 21                 |
| Inside Waters /<br>Smaller Vessel | Unit Value     | 15,000    | 60,000                   | 65,000     | 200,000                  | 300,000    | 99,048             |
|                                   | Aggregate Val. | 90,000    | 360,000                  | 130,000    | 1,200,000                | 300,000    | 2,080,000          |
|                                   | Est # Vessels  | 19        | 9                        | 40         | 15                       | 37         | 120                |
| Outside Waters / Larger Vessel    | Unit Value     | 65,000    | 175,000                  | 300,000    | 400,000                  | 600,000    | 358,417            |
|                                   | Aggregate Val. | 1,235,000 | 1,575,000                | 12,000,000 | 6,000,000                | 22,200,000 | 43,010,000         |
|                                   | Est # Vessels  | 25        | 15                       | 42         | 21                       | 38         | 141                |
| Total / Average                   | Average Value  | 53,000    | 129,000                  | 288,810    | 342,857                  | 592,105    | 319,787            |
|                                   | Aggregate Val. | 1,325,000 | 1,935,000                | 12,130,000 | 7,200,000                | 22,500,000 | 45,090,000         |

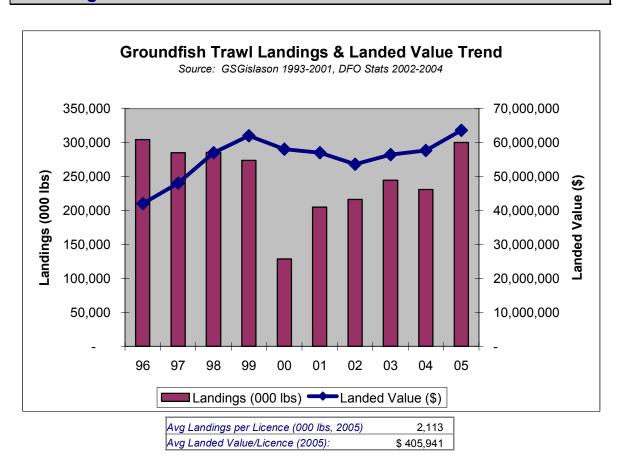






- no valuation for gulf hake in 2002, 2004, 2005, and 2006; low value and utilization by the fleet contribute to no discernable market for quota.
- With the addition of arrowtooth flounder to the IQ program, this quota is now traded.

### **Landings & Landed Value Trends**



#### Outlook

- Quotas are relatively stable, allowing markets to be served in a consistent manner.
- Stock outlook is largely healthy; many shorter-lived species (hake, pacific cod) have rebounded dramatically in recent years.
- The groundfish trawl sector is strongly reliant on sales of fresh groundfish fillets to the Western USA market; a strengthening of the Canadian dollar relative to US currency has had a moderating impact on ex-vessel prices. Rising fuel costs have further impaired profitability.
- The Pilot Groundfish Integration proposal has had less effect on the groundfish trawl sector than on the other groundfish sectors, since:
  - Groundfish trawl has long had 100% monitoring (at-sea observers)
  - The trawl IVQ program already featured multi-specie accountability and quota trading amongst participants
  - The bulk of rockfish quotas, the "currency" of integration, are held by the trawl fleet.

### PACIFIC FLEET LICENCE, QUOTA AND VESSEL VALUATION – AT MARCH 31, 2006

• Impacts from implementation of the Species at Risk act are uncertain; many rockfish species that are both targeted and encountered as bycatch in the groundfish trawl fishery are currently in the SARA assessment process.

## **CRAB**

# **General Description**

|   | 1  |
|---|--|
| Licence Designation   | R  |
| Nature of Licence   | Vessel based – vessel owner may make annual application for issuance of licence  |
| Number of Commercial Licences (valued in this study)        | 206  |
| No. of Commercial Communal Lic's (not valued in this study) | 16 (FR designation, Party-based)   |
| Licensing/Management Framework                              | Area Licensing – 7 areas.  No stacking allowed – must select a single area.  Area re-selection generally allowed every 3 years; a re-selection was completed in September, 2005 to apply to the years 2006-08.  Fishery managed on basis of time, area, size, sex, and trap limits (limits vary by area)   |
| Valuation Criteria (Stratification)                         | Licences valued on a per foot basis Vessels are stratified by size, construction material, and capability  |
| Additional Information                                      | Competitive fishery. Currently, the resource and market situation is reasonably healthy. Area A (QCI/Hecate Strait) is the predominant area in terms of landings and landed value. Vessel licence allows harvest of Schedule II species and transporting (packing). Vessel-based licence virtually precludes licence leasing, though a small market is emerging for FR (commercial communal party-based) licences. |

# **Valuations Performed**

|            | Purc                    | Purchase and Sale |                     |                         | Lease          |                     |  |
|------------|-------------------------|-------------------|---------------------|-------------------------|----------------|---------------------|--|
| Valuations | Valuation<br>Conducted? | Sample<br>Size    | Confidence<br>Level | Valuation<br>Conducted? | Sample<br>Size | Confidence<br>Level |  |
| Licence    | Yes                     | 5-10              | Med                 | n.a.                    |                |                     |  |
| Quota      | n.a.                    |                   |                     | n.a.                    |                |                     |  |
| Vessel     | Yes                     | <3                | Low                 | n.a.                    |                |                     |  |

#### Licence Value at March 31, 2006

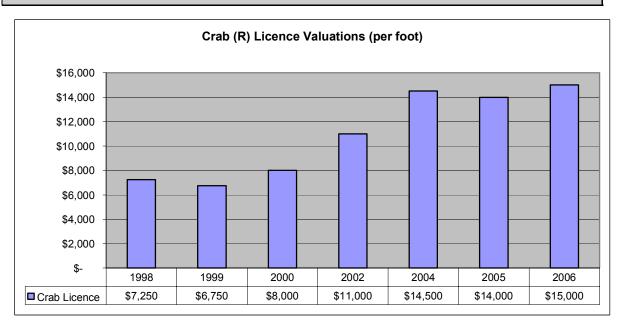
| Licence Category | Valu | e per Foot | Est # Feet | Total Value, All Licences (\$) |
|------------------|------|------------|------------|--------------------------------|
| Crab (R) Licence | \$   | 15,000     | 6,592      | 98,880,000                     |

- Valuation is up modestly from the 2005 level of \$14,000 per foot.
- Average vessel 32 feet; average licence value \$480,000
- Estimates of value range from \$12,000 20,000 per foot. A wide variance, with variation based on length, area, and value apportionment amongst assets (boat, licences, gear).
- Area A (Queen Charlotte) licences traded at a premium (perhaps \$17,000 per foot on average), while all other areas possess similar value (\$10,000 12,000 per foot).
- The licence market is currently quite strong and active, in spite of lower catch rates the past couple of years in many areas.
- It is believed that after March 31, 2006, the market for crab licences has softened somewhat.

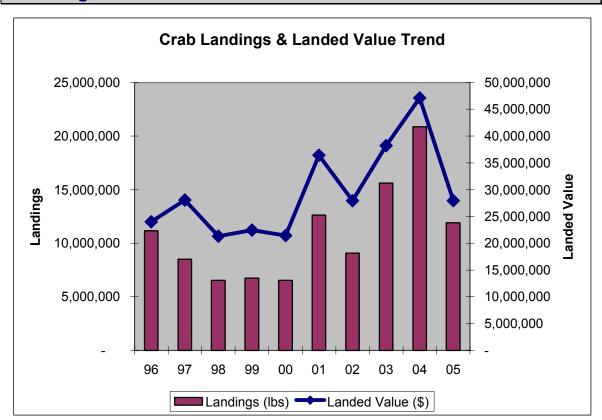
#### **Vessel Value**

Vessel counts exclude F licences and are best-estimates.

|                                |                | Classic Style |                             |         | Moder                       | n Style   | Total /            |
|--------------------------------|----------------|---------------|-----------------------------|---------|-----------------------------|-----------|--------------------|
| Vessel Type                    |                | Wood          | Aluminum<br>/<br>Fibreglass | Steel   | Aluminum<br>/<br>Fibreglass | Steel     | Total /<br>Average |
|                                | Est # Vessels  | 3             | 51                          | 1       | 92                          | 2         | 149                |
| Inside Waters / Smaller Vessel | Unit Value     | 15,000        | 50,000                      | 65,000  | 100,000                     | 125,000   | 81,275             |
|                                | Aggregate Val. | 45,000        | 2,550,000                   | 65,000  | 9,200,000                   | 250,000   | 12,110,000         |
| Outside                        | Est # Vessels  | 6             | 18                          | 5       | 24                          | 4         | 57                 |
| Waters /<br>Larger Vessel      | Unit Value     | 35,000        | 80,000                      | 100,000 | 300,000                     | 400,000   | 192,105            |
|                                | Aggregate Val. | 210,000       | 1,440,000                   | 500,000 | 7,200,000                   | 1,600,000 | 10,950,000         |
|                                | Est # Vessels  | 9             | 69                          | 6       | 116                         | 6         | 206                |
| Total / Average                | Average Value  | 28,333        | 57,826                      | 94,167  | 141,379                     | 308,333   | 111,942            |
|                                | Aggregate Val. | 255,000       | 3,990,000                   | 565,000 | 16,400,000                  | 1,850,000 | 23,060,000         |



## **Landings & Landed Value Trends**



| Avg Landings per Licence (lbs, 2005) | 53,589     |
|--------------------------------------|------------|
| Avg Landed Value/Licence (2005):     | \$ 125,936 |

### **Outlook**

- The current economics of the crab fishery do not necessarily support high licence values.
- Some participants are concerned at the lack of a coastwide crab fishery association; lack of cohesion and coordination makes it difficult to introduce management reforms.
- The crab fishery is basically healthy, but with some management/economic issues to be addressed.

## **SEA CUCUMBER**

# **General Description**

| Licence Designation   | ZD  |
|---|---|
| Nature of Licence   | Party based – individual, corporation, or band may make annual application for issuance of licence  |
| Number of Commercial Licences (valued in this study)        | 85  |
| No. of Commercial Communal Lic's (not valued in this study) | 0   |
| Licensing/Management Framework                              | Quota management – each licence receives 1/85 of the allowable catch – 15,255 pounds per licence under current fishing plan Area Licensing – 4 areas: North, Central, WCVI, St. of Georgia Stacking allowed – maximum 5 licences per vessel |
| Valuation Criteria (Stratification)                         | Valuation is on a per-licence basis – each licence possesses the same value (no difference by area) Vessels are stratified by size, construction material, and capability   |
| Additional Information                                      | Quotas not divisible. Allowed harvest is set on a fixed precautionary rate: 4.2% of the estimated biomass; this has allowed for steadily growing quotas. Currently approx. 32 vessels operating the 85 licences.                            |

## **Valuations Performed**

|            | Purchase and Sale       |                | Sale                | Lease                   |                |                     |  |
|------------|-------------------------|----------------|---------------------|-------------------------|----------------|---------------------|--|
| Valuations | Valuation<br>Conducted? | Sample<br>Size | Confidence<br>Level | Valuation<br>Conducted? | Sample<br>Size | Confidence<br>Level |  |
| Licence    | Yes                     | nil            | Low                 | Yes                     | <3             | Med                 |  |
| Quota      | n.a.                    |                |                     | n.a.                    |                |                     |  |
| Vessel     | Yes                     | <3             | Low                 | n.a.                    |                |                     |  |

### Licence Value at March 31, 2006

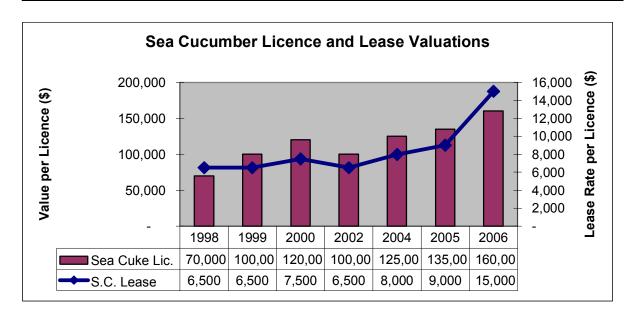
| Licence Category             | Value per<br>Licence | # Licences | Total Value, All<br>Licences (\$) | Annual Lease<br>Rate (\$) |
|------------------------------|----------------------|------------|-----------------------------------|---------------------------|
| Sea Cucumber (ZD)<br>Licence | \$ 160,000           | 85         | 13,600,000                        | 15,000                    |

- The current year valuation has risen to \$160,000 per licence vs. \$135,000.
- This valuation is based on anecdotal reports of developments in the fishery and in the licence marketplace. No tangible transactions were unearthed. This is a tightly held fishery.
- Values and markets in the fishery appear to be strengthening, though a lack of transactions make valuation imprecise.

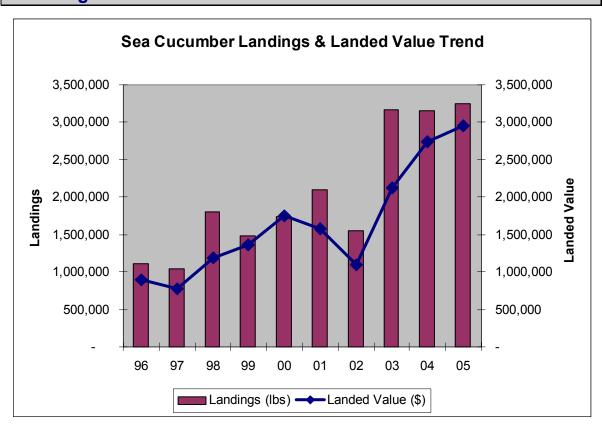
#### **Vessel Value**

Vessel counts exclude F licences and are best-estimates.

|                                   |                |        | Classic Style            |       | Modern St                | yle   | T-4-1/             |
|-----------------------------------|----------------|--------|--------------------------|-------|--------------------------|-------|--------------------|
| Vessel Type                       |                | Wood   | Aluminum /<br>Fibreglass | Steel | Aluminum /<br>Fibreglass | Steel | Total /<br>Average |
|                                   | Est # Vessels  | 1      | 9                        | _     | 14                       | _     | 24                 |
| Inside Waters /<br>Smaller Vessel | Unit Value     | 10,000 | 10,000                   | -     | 75,000                   | -     | 47,917             |
|                                   | Aggregate Val. | 10,000 | 90,000                   | -     | 1,050,000                | -     | 1,150,000          |
|                                   | Est # Vessels  | -      | 4                        | -     | 4                        | -     | 8                  |
| Outside Waters /<br>Larger Vessel | Unit Value     | -      | 40,000                   | -     | 125,000                  | -     | 82,500             |
|                                   | Aggregate Val. | -      | 160,000                  | -     | 500,000                  | -     | 660,000            |
|                                   | Est # Vessels  | 1      | 13                       | -     | 18                       | -     | 32                 |
| Total / Average                   | Average Value  | 10,000 | 19,231                   | -     | 86,111                   | -     | 56,563             |
|                                   | Aggregate Val. | 10,000 | 250,000                  | -     | 1,550,000                | -     | 1,810,000          |



# Landings & Landed Value Trends



#### PACIFIC FLEET LICENCE, QUOTA AND VESSEL VALUATION – AT MARCH 31, 2006

| Avg Landings per Licence (lbs, 2005) | 38,158       |
|--------------------------------------|--------------|
| Avg Landed Value/Licence (2005):     | \$<br>34,717 |

## Outlook

- Although a relatively small fishery in absolute terms, the sea cucumber industry has
  done an admirable job of improving both landings volumes and values over the past
  several years
- Continued conservative management combined with stock assessment work and improving product care are keys to future success
- Impacts from implementation of the Species at Risk act are uncertain

## **RED SEA URCHIN**

## **General Description**

| Licence Designation   | ZC  |
|---|---|
| Nature of Licence   | Party based – individual, corporation, or band may make annual application for issuance of licence  |
| Number of Commercial Licences (valued in this study)        | 99  |
| No. of Commercial Communal Lic's (not valued in this study) | 11 (FZC designation – Party-based)  |
| Licensing/Management Framework                              | Quota management – each licence receives an equal share of the TAC – 96,706 pounds per licence under current fishing plan.  Area Licensing – north and south coast. 93 licences in the north, 17 in the south.  Stacking allowed – maximum 5 licences per vessel. |
| Valuation Criteria (Stratification)                         | Valuation is on a per-licence basis – each licence possesses the same value (no difference by area). Vessels are stratified by size, construction material, and capability.   |
| Additional Information                                      | Quotas not divisible. Currently 41 vessels fishing 104 licences. A lottery process is used for annual area selection.   |

## Valuations Performed

|            | Purchase and Sale       |                |                     | Lease                   |                |                     |  |
|------------|-------------------------|----------------|---------------------|-------------------------|----------------|---------------------|--|
| Valuations | Valuation<br>Conducted? | Sample<br>Size | Confidence<br>Level | Valuation<br>Conducted? | Sample<br>Size | Confidence<br>Level |  |
| Licence    | Yes                     | 3-5            | Med                 | Yes                     | 3-5            | Med                 |  |
| Quota      | n.a.                    |                |                     | n.a.                    |                |                     |  |
| Vessel     | Yes                     | <3             | Low                 | n.a.                    |                |                     |  |

# **Current Valuation**

### Licence Value at March 31, 2006

| Licence Category        | Value per<br>Licence | # Licences | Total Value, All<br>Licences (\$) | Annual Lease<br>Rate (\$) |  |
|-------------------------|----------------------|------------|-----------------------------------|---------------------------|--|
| Red Urchin (ZC) Licence | \$ 125,000           | 99         | 12,375,000                        | 5,000                     |  |

• This is a depressed fishery; increasing competition from Russia, and now China and North Korea, have slashed margins.

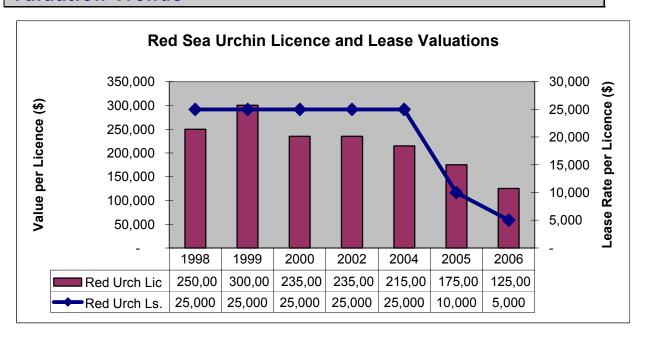
- Valuation is down from last year's level of \$175,000.
- There is concern that it may not be economical to harvest the full current-year quota (as occurred in 2005).

#### **Vessel Value**

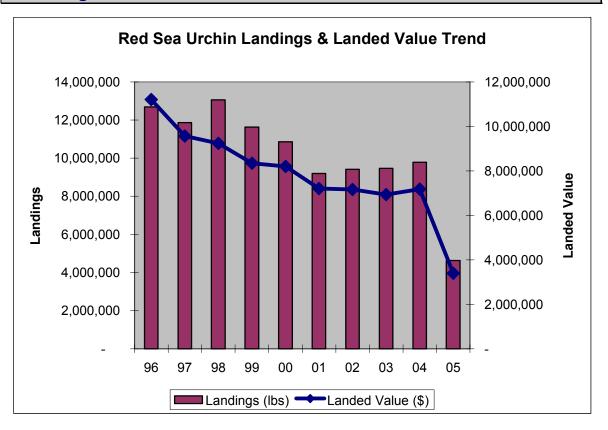
Vessel counts exclude F licences and are best-estimates.

|                                   |                | Classic Style |                          |       | Modern Style             |       | _ , , ,            |  |
|-----------------------------------|----------------|---------------|--------------------------|-------|--------------------------|-------|--------------------|--|
| Vessel Type                       |                | Wood          | Aluminum /<br>Fibreglass | Steel | Aluminum /<br>Fibreglass | Steel | Total /<br>Average |  |
|                                   | Est # Vessels  | 1             | 14                       | -     | 16                       | -     | 31                 |  |
| Inside Waters /<br>Smaller Vessel | Unit Value     | 10,000        | 10,000                   | -     | 75,000                   | -     | 43,548             |  |
|                                   | Aggregate Val. | 10,000        | 140,000                  | -     | 1,200,000                | -     | 1,350,000          |  |
|                                   | Est # Vessels  | -             | 3                        | -     | 7                        | -     | 10                 |  |
| Outside Waters /<br>Larger Vessel | Unit Value     | -             | 40,000                   | -     | 125,000                  | -     | 99,500             |  |
|                                   | Aggregate Val. | -             | 120,000                  | -     | 875,000                  | -     | 995,000            |  |
| Total / Average                   | Est # Vessels  | 1             | 17                       | -     | 23                       | _     | 41                 |  |
|                                   | Average Value  | 10,000        | 15,294                   | -     | 90,217                   | -     | 57,195             |  |
|                                   | Aggregate Val. | 10,000        | 260,000                  | -     | 2,075,000                | -     | 2,345,000          |  |

### **Valuation Trends**



### **Landings & Landed Value Trends**



| Avg Landings per Licence (lbs, 2005) | 42,031       |
|--------------------------------------|--------------|
| Avg Landed Value/Licence (2005):     | \$<br>30,810 |

#### **Outlook**

- The red sea urchin fishery faces the challenge of enhancing quality and values into a "mature" Japanese market place.
- Increasing competition from Russia, China, and North Korea has resulted in reduced demand and price levels for BC product.
- It is uncertain how the current market flux will be resolved.
- Urchin stocks are currently healthy and the fishery is considered well-managed
- Impacts of the Species at Risk Act implementation: the sea otter recovery program
  has an adverse impact on urchin stocks, urchins being a favored diet of sea otters;
  as sea otter abundance and range grows, so does the impact on urchin biomass and
  fisheries
- Excerpt from the Red Urchin fishery management plan:

Sea otter populations are expanding and because they are major predators on red sea urchins they are expected to have an impact on all red sea urchin fisheries in the

### PACIFIC FLEET LICENCE, QUOTA AND VESSEL VALUATION – AT MARCH 31, 2006

future. The commercial industry has identified sea otters as the single largest threat to the stability of the fishery. It is believed that sea otters and commercial urchin harvesting cannot co-exist.

## **GREEN SEA URCHIN**

## **General Description**

| Licence Designation   | ZA  |
|---|---|
| Nature of Licence   | Party based – individual, corporation, or band may make annual application for issuance of licence  |
| Number of Commercial Licences (valued in this study)        | 49  |
| No. of Commercial Communal Lic's (not valued in this study) | 0   |
| Licensing/Management Framework                              | Quota management – each licence receives an equal share of the TAC – 8,368 pounds per licence under current fishing plan.  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. |
| Valuation Criteria (Stratification)                         | Valuation is on a per-licence basis – each licence possesses the same value (no difference by area). Vessels are stratified by size, construction material, and capability  |
| Additional Information                                      | A three-year management plan in effect: 2003-2006<br>Quotas not divisible<br>Currently 19 vessels fishing 49 licences.  |

# Valuations Performed

|            | Purchase and Sale       |                |                     | Lease |    |                     |
|------------|-------------------------|----------------|---------------------|-------|----|---------------------|
| Valuations | Valuation<br>Conducted? | Sample<br>Size | Confidence<br>Level | ·     |    | Confidence<br>Level |
| Licence    | Yes                     | Nil            | Low                 | Yes   | <3 | Low                 |
| Quota      | n.a.                    |                |                     | n.a.  |    |                     |
| Vessel     | Yes                     | <3             | Low                 | n.a.  |    |                     |

### **Current Valuation**

### Licence Value at March 31, 2006

| Licence Category             | Value per<br>Licence | # Licences | Total Value, All<br>Licences (\$) | Annual Lease<br>Rate (\$) |
|------------------------------|----------------------|------------|-----------------------------------|---------------------------|
| Green Urchin (ZA)<br>Licence | \$ 25,000            | 49         | 1,225,000                         | 2,000                     |

• No transactions unearthed - estimates of value range from \$10,000 - 30,000.

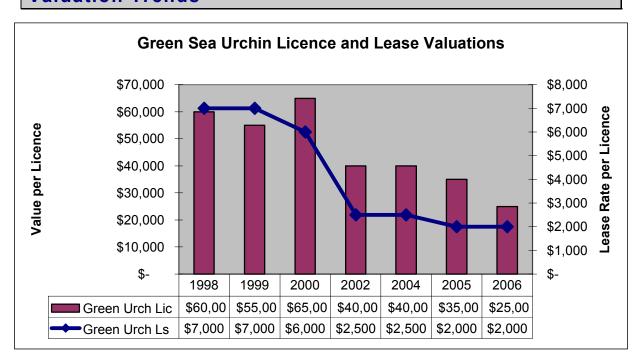
• Influx of supply from Russia has negatively impacted the market for BC green urchins in Japan.

#### **Vessel Value**

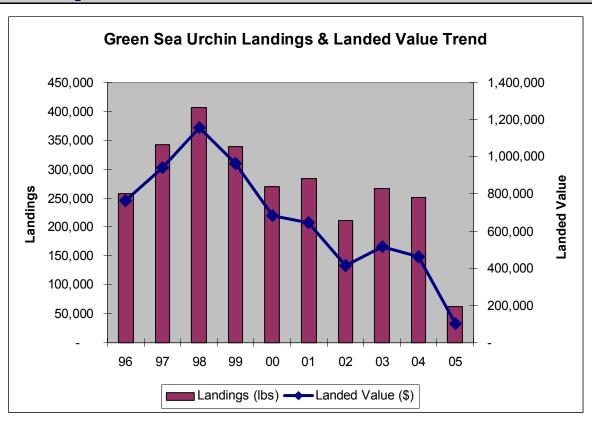
Vessel counts exclude F licences and are best-estimates.

|                                   |                | Classic Style |                          |       | Modern Style             |       | _ , , ,            |
|-----------------------------------|----------------|---------------|--------------------------|-------|--------------------------|-------|--------------------|
| Vessel Type                       |                | Wood          | Aluminum /<br>Fibreglass | Steel | Aluminum /<br>Fibreglass | Steel | Total /<br>Average |
|                                   | Est # Vessels  | 1             | 6                        | -     | 10                       | -     | 17                 |
| Inside Waters /<br>Smaller Vessel | Unit Value     | 10,000        | 10,000                   | -     | 75,000                   | -     | 48,235             |
|                                   | Aggregate Val. | 10,000        | 60,000                   | -     | 750,000                  | -     | 820,000            |
|                                   | Est # Vessels  | -             | -                        | -     | 2                        | -     | 2                  |
| Outside Waters /<br>Larger Vessel | Unit Value     | _             | -                        | -     | 125,000                  | -     | 125,000            |
|                                   | Aggregate Val. | -             | -                        | -     | 250,000                  | -     | 250,000            |
| Total / Average                   | Est # Vessels  | 1             | 6                        | -     | 12                       | -     | 19                 |
|                                   | Average Value  | 10,000        | 10,000                   | -     | 83,333                   | -     | 56,316             |
|                                   | Aggregate Val. | 10,000        | 60,000                   | -     | 1,000,000                | -     | 1,070,000          |

### **Valuation Trends**



### **Landings & Landed Value Trends**



| Avg Landings per Licence (lbs, 2005) | 1,279 |
|--------------------------------------|-------|
| Avg Landed Value/Licence (2005):     | 2,075 |

#### **Outlook**

- The green sea urchin fishery faces the challenge of enhancing quality and values into a "mature" Japanese market place
- Increasing competition from Russia, China, and North Korea has resulted in reduced demand and price levels for BC product.
- It is uncertain how the current market flux will be resolved.
- Green urchin stocks are generally healthy
- Impacts of the Species at Risk Act implementation: the sea otter recovery program
  has an adverse impact on urchin stocks, urchins being a favored diet of sea otters;
  as sea otter abundance and range grows, so does the impact on urchin biomass and
  fisheries
- Excerpt from the Green Urchin fishery management plan:
  - Sea otter populations are expanding in BC, and because sea otters are a major predator on green urchins, they are expected to have an impact on the fishery in the future.

# **ROCKFISH HOOK & LINE**

# **General Description**

| Licence Designation   | ZN   |
|---|--|
| Nature of Licence   | Party based – individual, corporation, or band may make annual application for issuance of licence   |
| Number of Commercial Licences (valued in this study)        | 246 (180 Outside, 66 Inside)   |
| No. of Commercial Communal Lic's (not valued in this study) | 16 (FZN designation – 11 Outside, 5 Inside)  |
| Licensing/Management Framework                              | Fishing Options (A,B,C,D) for Outside licences.  No option selection for Inside licences.  Overall Fishery TACs  Monthly trip limits  A proposal has been put forward by industry to move to an individual vessel quota program; no decision made to-date. |
| Valuation Criteria (Stratification)                         | Inside and Outside licences are valued separately: valuations on a per-foot basis.  Vessels are stratified by size, construction material, and capability.   |
| Additional Information                                      | The inside fishery is severely constrained due to inshore rockfish conservation measures. Unlimited stacking of Inside ZN licences.  |

## **Valuations Performed**

|            | Purchase and Sale       |                |                     | Lease                   |                |                     |
|------------|-------------------------|----------------|---------------------|-------------------------|----------------|---------------------|
| Valuations | Valuation<br>Conducted? | Sample<br>Size | Confidence<br>Level | Valuation<br>Conducted? | Sample<br>Size | Confidence<br>Level |
| Licence    | Yes                     | 5-10           | Med                 | Yes                     | 5-10           | Med                 |
| Quota      | n.a.                    |                |                     | n.a.                    |                |                     |
| Vessel     | Yes                     | <3             | Low                 | n.a.                    |                |                     |

### **Current Valuation**

#### Licence Value at March 31, 2006

| Licence Category                  | Value per Foot | Est # Feet | Total Value, All<br>Licences (\$) | Annual Lease<br>Rate (\$) |
|-----------------------------------|----------------|------------|-----------------------------------|---------------------------|
| Rockfish (ZN) Licence             |                |            |                                   |                           |
| Outside                           | \$ 6,000       | 7,560      | 45,360,000                        | 9,500                     |
| Rockfish (ZN) Licence Inside      | \$ 1,000       | 2,310      | 2,310,000                         | 2,500                     |
| Rockfish (ZN) Licence<br>Combined | \$ 4,830       | 9,870      | 47,670,000                        |                           |

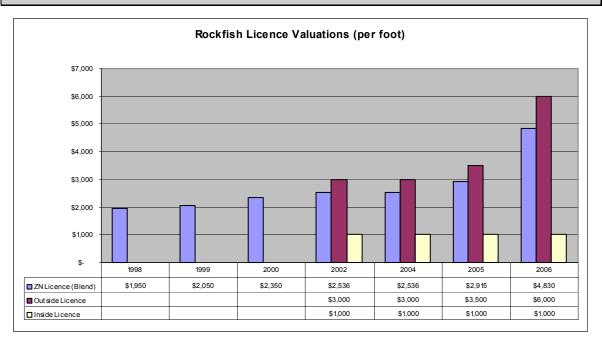
- Outside ZN licence values spiked dramatically during the valuation period, to \$6,000 per foot from \$3,500 per foot in 2005. Inside licence values have remained at low levels.
- This appreciation was attributable to speculation arising from implementation of the groundfish integration initiative ZN licences are viewed as an important source of rockfish bycatch for prosecuting other groundfish fisheries.
- Inside vessel length assumed to be 35', average value \$35,000; Outside vessel length 42', average value \$252,000.
- In the months following March 31, 2006, prices for ZN licences fell dramatically, to approximately \$125,000-150,000 per outside licences. Early experience with the integrated groundfish fishery program indicated that the supply of rockfish for bycatch purposes was not as tight as had been feared; thus, less of a premium for ZN licences.

#### **Vessel Value**

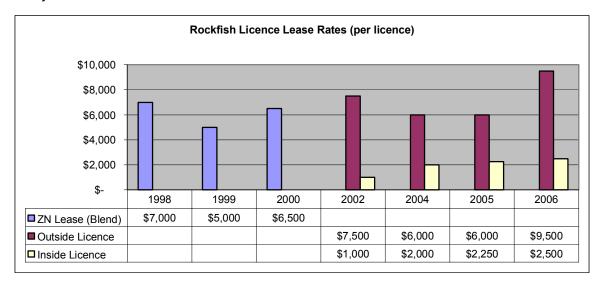
Vessel counts exclude F licences and are best-estimates.

|                                   |                | Classic Style |                          |         | Modern                   | Style     | Total              |
|-----------------------------------|----------------|---------------|--------------------------|---------|--------------------------|-----------|--------------------|
| Vessel Type                       |                | Wood          | Aluminum /<br>Fibreglass | Steel   | Aluminum /<br>Fibreglass | Steel     | Total /<br>Average |
|                                   | Est # Vessels  | 31            | 36                       | 1       | 27                       | -         | 95                 |
| Inside Waters /<br>Smaller Vessel | Unit Value     | 15,000        | 50,000                   | 65,000  | 100,000                  | -         | 52,947             |
|                                   | Aggregate Val. | 465,000       | 1,800,000                | 65,000  | 2,700,000                | -         | 5,030,000          |
| Outside Material                  | Est # Vessels  | 57            | 50                       | 9       | 24                       | 11        | 153                |
| Outside Waters /<br>Larger Vessel | Unit Value     | 35,000        | 80,000                   | 100,000 | 200,000                  | 300,000   | 99,052             |
|                                   | Aggregate Val. | 1,995,000     | 4,000,000                | 900,000 | 4,800,000                | 3,300,000 | 15,155,000         |
|                                   | Est # Vessels  | 88            | 86                       | 10      | 51                       | 11        | 246                |
| Total / Average                   | Average Value  | 27,955        | 67,442                   | 96,500  | 147,059                  | 300,000   | 81,402             |
|                                   | Aggregate Val. | 2,460,000     | 5,800,000                | 965,000 | 7,500,000                | 3,300,000 | 20,025,000         |

### **Valuation Trends**

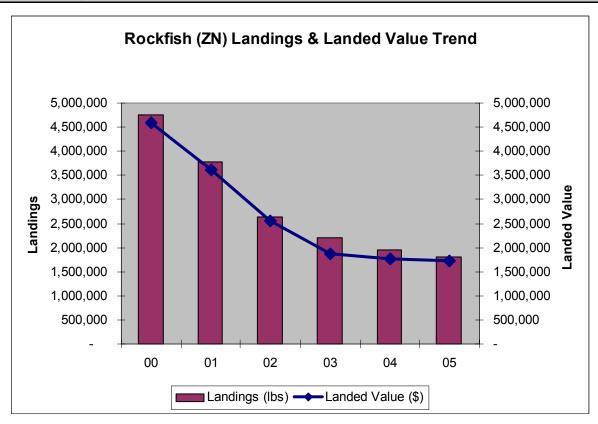


 Rapid appreciation in recent years is largely attributable to speculative buying by owners of other groundfish licences for the purpose of securing access to rockfish bycatch.



 The option of stacking multiple inside licences on a single vessel on a temporary basis affords a leasing opportunity for inside licences

### **Landings & Landed Value Trends**



| Avg Landings per Licence (lbs, 2005) | 6,914       |
|--------------------------------------|-------------|
| Avg Landed Value/Licence (2005):     | \$<br>6,596 |

#### **Outlook**

- Inshore rockfish conservation measures have had a major ongoing negative effect on Inside ZN licences.
- The ZN fishery is currently learning to adjust to pilot Groundfish Integration program:
  - 100% electronic monitoring
  - accountability for all rockfish bycatch
  - trading of groundfish species amongst groundfish sectors (halibut, sablefish, groundfish trawl, rockfish (ZN), lingcod, and dogfish) for bycatch purposes
  - establishing sector rules to govern access to other species, quota trading, etc.
  - developing operating procedures that work under the new program
- Increasingly, ZN licences are viewed as a source of access to rockfish bycatch for other hook and line fisheries (halibut, dogfish, lingcod, sablefish) and for the

#### PACIFIC FLEET LICENCE, QUOTA AND VESSEL VALUATION – AT MARCH 31, 2006

sablefish trap fishery. A large percentage of ZN licences are owned by fishermen also owning other groundfish licences.

- A proposal to bring an IQ program to the ZN fishery is under consideration.
- It is envisioned that Groundfish Integration will improve rockfish management and conservation, with long term benefits to the fisheries.
- It is feared (by some) that Groundfish Integration may be un-necessarily complex, and may result in escalating lease rates for rockfish for bycatch purposes, compromising the economic viability of the fisheries.
- Impacts from implementation of the Species at Risk act are uncertain; many rockfish species that are both targeted and encountered as bycatch in the rockfish hook and line fishery are currently in the SARA assessment process.
- Markets for rockfish products are generally healthy, though a strengthening Canadian dollar has placed downward pressure on prices received by BC participants.

# **SCHEDULE II SPECIES**

# **General Description**

| Licence Designation   | С   |
|---|---|
| Nature of Licence   | Vessel based – vessel owner may make annual application for issuance of licence   |
| Number of Commercial Licences (valued in this study)        | 511   |
| No. of Commercial Communal Lic's (not valued in this study) | 8 (FC designation – Party-based)  |
| Licensing/Management Framework                              | Allows participation in Schedule II fisheries and transporting.  Various time, area, gear, TAC, and trip limit measures in place.   |
| Valuation Criteria (Stratification)                         | Licences are valued on a per-foot basis.  Vessels are stratified by size, construction material, and capability   |
| Additional Information                                      | Competitive fisheries. 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). |

# Valuations Performed

|            | Purchase and Sale       |                |                     | Lease                   |                |                     |
|------------|-------------------------|----------------|---------------------|-------------------------|----------------|---------------------|
| Valuations | Valuation<br>Conducted? | Sample<br>Size | Confidence<br>Level | Valuation<br>Conducted? | Sample<br>Size | Confidence<br>Level |
| Licence    | Yes                     | 3-5            | Med                 | n.a.                    |                |                     |
| Quota      | n.a.                    |                |                     | n.a.                    |                |                     |
| Vessel     | Yes                     | <3             | Low                 | n.a.                    |                |                     |

### **Current Valuation**

#### Licence Value at March 31, 2006

| Licence Category       | Value per Foot | Est # Feet | Total Value, All Licences (\$) |
|------------------------|----------------|------------|--------------------------------|
| Schedule II (C)Licence | \$ 500         | 17,374     | 8,687,000                      |

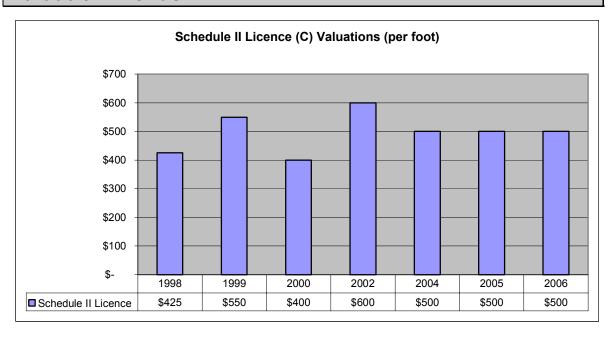
- Average vessel length estimated at 34', average licence value \$17,000
- Market is generally soft; prices range from as little as \$150/foot to \$1,000/foot; buyers requiring a specific length licence willing to pay more.
- Lingcod and dogfish quotas will be allocated to qualifying Schedule II licences (including C licences), and although quota cannot be permanently transferred for three years, a lease market is already developing.
- Dogfish quota is expected to lease for  $2 \frac{1}{2}$  per pound, and lingcod for 20-25 cents per pound.

#### **Vessel Value**

Vessel counts exclude F licences and are best-estimates.

|                                   |                | C         | Classic Style            |         | Modern                   | Style     | Tatal              |  |
|-----------------------------------|----------------|-----------|--------------------------|---------|--------------------------|-----------|--------------------|--|
| Vessel Type                       |                | Wood      | Aluminum /<br>Fibreglass | Steel   | Aluminum /<br>Fibreglass | Steel     | Total /<br>Average |  |
|                                   | Est # Vessels  | 111       | 222                      | -       | 91                       | 2         | 426                |  |
| Inside Waters /<br>Smaller Vessel | Unit Value     | 15,000    | 50,000                   | -       | 100,000                  | 125,000   | 51,913             |  |
|                                   | Aggregate Val. | 1,665,000 | 11,100,000               | -       | 9,100,000                | 250,000   | 22,115,000         |  |
| O table Males t                   | Est # Vessels  | 33        | 21                       | 6       | 22                       | 3         | 85                 |  |
| Outside Waters /<br>Larger Vessel | Unit Value     | 35,000    | 80,000                   | 100,000 | 300,000                  | 400,000   | 132,176            |  |
|                                   | Aggregate Val. | 1,155,000 | 1,680,000                | 600,000 | 6,600,000                | 1,200,000 | 11,235,000         |  |
|                                   | Est # Vessels  | 144       | 243                      | 6       | 113                      | 5         | 511                |  |
| Total / Average                   | Average Value  | 19,583    | 52,593                   | 100,000 | 138,938                  | 290,000   | 65,264             |  |
|                                   | Aggregate Val. | 2,820,000 | 12,780,000               | 600,000 | 15,700,000               | 1,450,000 | 33,350,000         |  |

## **Valuation Trends**



# **Landings & Landed Value Trends**

No data available

#### **Outlook**

• C licences remain low-valued, as Schedule II privileges accompany all classes of vessel-based licence.

### **EUPHAUSIID**

# **General Description**

| Licence Designation   | ZF  |
|---|---|
| Nature of Licence   | Party based – individual, corporation, or band may make annual application for issuance of licence                  |
| Number of Commercial Licences (valued in this study)        | 18  |
| No. of Commercial Communal Lic's (not valued in this study) | 1 (FZF designation)   |
| Licensing/Management Framework                              | Competitive plankton (krill) fishery using trawl gear. Vessels vie for share of the annual 500 ton TAC.             |
| Valuation Criteria (Stratification)                         | Licences are valued on a per-licence basis.  Vessels are stratified by size, construction material, and capability. |
| Additional Information                                      | Fishery primarily in mainland inlets of Georgia Strait  |

## Valuations Performed

|            | Purc                    | hase and       | Sale                | Lease                   |                |                     |  |
|------------|-------------------------|----------------|---------------------|-------------------------|----------------|---------------------|--|
| Valuations | Valuation<br>Conducted? | Sample<br>Size | Confidence<br>Level | Valuation<br>Conducted? | Sample<br>Size | Confidence<br>Level |  |
| Licence    | Yes                     | Nil            | Low                 | No                      |                |                     |  |
| Quota      | n.a.                    |                |                     | n.a.                    |                |                     |  |
| Vessel     | Yes                     | <3             | Low                 | n.a.                    |                |                     |  |

### **Current Valuation**

### Licence Value at March 31, 2006

| Licence Category        | Value per Licence | # Licences | Total Value, All Licences (\$) |
|-------------------------|-------------------|------------|--------------------------------|
| Euphausiid (ZF) Licence | \$ 50,000         | 18         | 900,000                        |

• Estimated value based on industry discussions. No transactions. Weak market. No change from the prior year.

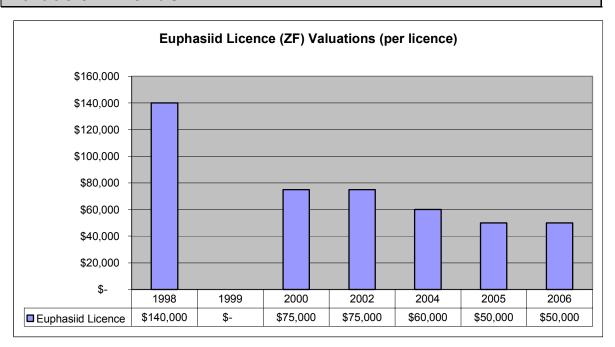
81 Euphausiid Fishery

### **Vessel Value**

Vessel counts exclude F licences and are best-estimates.

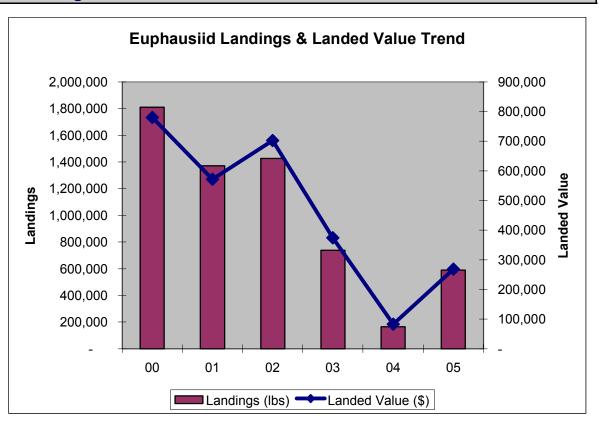
|                                   |                |         | Classic Style            |         | Modern                   | Style     | T-4-1/             |  |
|-----------------------------------|----------------|---------|--------------------------|---------|--------------------------|-----------|--------------------|--|
| Vessel Type                       |                | Wood    | Aluminum /<br>Fibreglass | Steel   | Aluminum /<br>Fibreglass | Steel     | Total /<br>Average |  |
|                                   | Est # Vessels  | -       | -                        | 1       | 3                        | -         | 4                  |  |
| Inside Waters /<br>Smaller Vessel | Unit Value     | -       | -                        | 150,000 | 300,000                  | -         | 262,500            |  |
|                                   | Aggregate Val. | -       | -                        | 150,000 | 900,000                  | -         | 1,050,000          |  |
| O taida Mata a t                  | Est # Vessels  | 3       | 4                        | 1       | 4                        | 2         | 14                 |  |
| Outside Waters /<br>Larger Vessel | Unit Value     | 65,000  | 175,000                  | 200,000 | 400,000                  | 500,000   | 263,929            |  |
|                                   | Aggregate Val. | 195,000 | 700,000                  | 200,000 | 1,600,000                | 1,000,000 | 3,695,000          |  |
|                                   | Est # Vessels  | 3       | 4                        | 2       | 7                        | 2         | 18                 |  |
| Total / Average                   | Average Value  | 65,000  | 175,000                  | 175,000 | 357,143                  | 500,000   | 263,611            |  |
|                                   | Aggregate Val. | 195,000 | 700,000                  | 350,000 | 2,500,000                | 1,000,000 | 4,745,000          |  |

## Valuation Trends



82 Euphausiid Fishery

## **Landings & Landed Value Trends**



| Avg Landings per Licence (lbs, 2005) | 32,772 |
|--------------------------------------|--------|
| Avg Landed Value/Licence (2005):     | 14,914 |

#### **Outlook**

- Euphausiid industry having trouble increasing values in part because of competitive nature of fishery (sub-optimal handling practices) and in part because low quotas pre-empt meaningful market development
- This fishery has difficulty attaining higher quotas because of the perception of some that plankton fisheries are destructive to the food chain.

# SUMMARY

# **Licence Valuation Totals**

| Fishery                 | Licence<br>Designation | # of Licences | Total Value \$ | Average<br>Value \$ |
|-------------------------|------------------------|---------------|----------------|---------------------|
| Salmon – Seine          | AS                     | 249           | 83,940,000     | 337,108             |
|                         | FAS                    | 27            | -              |                     |
|                         | AG                     | 1059          | 82,752,000     | 78,142              |
| Salmon – Gillnet        | FAG                    | 93            | -              |                     |
|                         | N                      | 254           | -              |                     |
| Salmon – Troll          | AT                     | 517           | 74,464,750     | 144,032             |
| Cumon from              | FAT                    | 21            | -              |                     |
| Roe Herring – Seine     | HS                     | 248           | 53,460,000     | 215,565             |
| Noe Herring – Seine     | FHS                    | 4             | -              |                     |
| Poo Horring Cillnot     | HG                     | 1239          | 45,510,000     | 36,731              |
| Roe Herring – Gillnet   | FH                     | 27            | -              |                     |
| Herring – Spawn on Kelp | J                      | 36            | 9,900,000      | 275,000             |
|                         | FJ                     | 2             | -              |                     |
|                         | Other F                | 7             |                |                     |
| Halibut                 | L                      | 407           | 22,539,660     | 55,380              |
| Transut                 | FL                     | 29            |                |                     |
| Sablefish               | K                      | 46            | 9,200,000      | 200,000             |
| Gabiciisii              | FK                     | 2             |                |                     |
| Geoduck / Horseclam     | G                      | 55            | 137,500,000    | 2,500,000           |
| Shrimp (Trawl)          | S                      | 234           | 10,553,400     | 45,100              |
| Chimp (Hawi)            | FS                     | 11            | -              |                     |
| Prawn ( Trap )          | W                      | 245           | 156,493,750    | 638,750             |
| Trawii ( Trap )         | FW                     | 7             | -              |                     |
| Groundfish Trawl        | Т                      | 141           | 13,324,500     | 94,500              |
| Orbananan mawi          | FT                     | 1             | -              | -                   |
| Crab                    | R                      | 206           | 98,880,000     | 480,000             |
| Ciab                    | FR                     | 16            | -              | -                   |
| Sea Cucumber            | ZD                     | 85            | 13,600,000     | 160,000             |

84 Summary

| Fishery                | Licence<br>Designation | # of Licences | Total Value \$ | Average<br>Value \$ |
|------------------------|------------------------|---------------|----------------|---------------------|
| Red Sea Urchin         | ZC                     | 99            | 12,375,000     | 125,000             |
|                        | FZC                    | 11            | -              |                     |
| Green Sea Urchin       | ZA                     | 49            | 1,225,000      | 25,000              |
|                        | ZN -<br>Outside        | 180           | 45,360,000     | 252,000             |
| Rockfish Hook & Line   | ZN -<br>Inside         | 66            | 2,310,000      | 35,000              |
|                        | FZN -<br>Outside       | 11            |                |                     |
|                        | FZN -<br>Inside        | 5             | -              |                     |
| Schedule II            | С                      | 511           | 8,687,000      | 17,000              |
| Sofication 11          | FC                     | 8             | -              |                     |
| Euphausiid             | ZF                     | 18            | 900,000        | 50,000              |
| Lupriausiiu            | FZF                    | 1             | -              |                     |
| Total Pacific Licenses |                        |               | 882,975,060    |                     |

# **Quota Valuation Totals**

| Fishery          | Quota Type          | Price per lb. (\$) | Approx. # of lbs. | Total Value \$ millions |
|------------------|---------------------|--------------------|-------------------|-------------------------|
| Halibut          | Halibut             | 29.00              | 11,631,200        | 337,304,800             |
| Sablefish        | Sablefish           | 29.00              | 5,122,520         | 148,553,080             |
| Groundfish Trawl | Groundfish          | 2.95               | 88,287,616        | 260,448,468             |
| Groundfish Trawl | Hake - Offshore     | 0.60               | 209,719,189       | 125,831,513             |
| Groundfish Trawl | Hake - Gulf         | 0.11               | 22,046,000        | 2,425,060               |
| Groundfish Trawl | Arrowtooth (turbot) | 0.50               | 33,069,000        | 16,534,500              |
| Quota Total      |                     |                    |                   | 891,097,421             |

Grand Total Value Licences and Quota: \$1,774,072,481

85 Summary

## **Individual Vessel Valuation Summary**

The following table shows valuation by stratification for vessel value estimations provided in the report. A fleet total value cannot be calculated using the present valuation methodology, since many vessels are involved in multiple fisheries. The total fleet size is approximately 3247 vessels.

| 2004 Current<br>Valuation | Inside<br>Wood | Outside<br>Wood | Inside<br>Alum<br>Classic | Outside<br>Alum<br>Classic | Inside<br>Steel<br>Classic | Outside<br>Steel<br>Classic | Inside<br>Alum<br>Modern | Outside<br>Alum<br>Modern | Inside<br>Steel<br>Modern | Outside<br>Steel<br>Modern |
|---------------------------|----------------|-----------------|---------------------------|----------------------------|----------------------------|-----------------------------|--------------------------|---------------------------|---------------------------|----------------------------|
| Salmon Seine              | 25,000         | 65,000          | 125,000                   | 175,000                    | 150,000                    | 200,000                     | 300,000                  | 400,000                   | 325,000                   | 500,000                    |
| Salmon Gillnet            | 15,000         | 35,000          | 25,000                    | 50,000                     | 40,000                     | 75,000                      | 75,000                   | 150,000                   | 100,000                   | 175,000                    |
| Salmon Troll              | 15,000         | 35,000          | 25,000                    | 50,000                     | 40,000                     | 75,000                      | 75,000                   | 150,000                   | 100,000                   | 175,000                    |
| Roe Herring SN            | 25,000         | 65,000          | 125,000                   | 175,000                    | 150,000                    | 200,000                     | 300,000                  | 400,000                   | 325,000                   | 500,000                    |
| Roe Herring GN            | -              | -               | 10,000                    | 25,000                     | -                          | -                           | 45,000                   | 65,000                    | -                         | -                          |
| Halibut                   | 15,000         | 35,000          | 50,000                    | 80,000                     | 65,000                     | 100,000                     | 100,000                  | 300,000                   | 125,000                   | 400,000                    |
| Sablefish                 | 25,000         | 65,000          | 125,000                   | 175,000                    | 150,000                    | 200,000                     | 300,000                  | 400,000                   | 325,000                   | 500,000                    |
| Geoduck                   | 10,000         | 15,000          | 10,000                    | 40,000                     | 25,000                     | 50,000                      | 75,000                   | 125,000                   | 100,000                   | 150,000                    |
| Shrimp                    | 15,000         | 35,000          | 25,000                    | 50,000                     | 40,000                     | 125,000                     | 75,000                   | 300,000                   | 100,000                   | 400,000                    |
| Prawn                     | 15,000         | 35,000          | 50,000                    | 80,000                     | 65,000                     | 100,000                     | 100,000                  | 300,000                   | 125,000                   | 400,000                    |
| Groundfish                | 15,000         | 65,000          | 60,000                    | 175,000                    | 65,000                     | 300,000                     | 200,000                  | 400,000                   | 300,000                   | 600,000                    |
| Crab                      | 15,000         | 35,000          | 50,000                    | 80,000                     | 65,000                     | 100,000                     | 100,000                  | 300,000                   | 125,000                   | 400,000                    |
| Sea Cucumber              | 10,000         | 15,000          | 10,000                    | 40,000                     | 25,000                     | 50,000                      | 75,000                   | 125,000                   | 100,000                   | 150,000                    |
| Red Urchins               | 10,000         | 15,000          | 10,000                    | 40,000                     | 25,000                     | 50,000                      | 75,000                   | 125,000                   | 100,000                   | 150,000                    |
| Green Urchins             | 10,000         | 15,000          | 10,000                    | 40,000                     | 25,000                     | 50,000                      | 75,000                   | 125,000                   | 100,000                   | 150,000                    |
| ZN                        | 15,000         | 35,000          | 50,000                    | 80,000                     | 65,000                     | 100,000                     | 100,000                  | 200,000                   | 125,000                   | 300,000                    |
| Sched II                  | 15,000         | 35,000          | 50,000                    | 80,000                     | 65,000                     | 100,000                     | 100,000                  | 300,000                   | 125,000                   | 400,000                    |
| Euphasiid                 | 25,000         | 65,000          | 125,000                   | 175,000                    | 150,000                    | 200,000                     | 300,000                  | 400,000                   | 325,000                   | 500,000                    |

86 Summary