



Fisheries and Oceans  
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Canada

# CANADIAN FISHERIES STATISTICS 2006

ECONOMIC ANALYSIS AND STATISTICS  
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## Preface

The annual statistical snapshot Canadian Fisheries Statistics (formerly entitled Annual Statistical Review of Canadian Fisheries) is an overview of the structure, evolution and value of the fishing industry in Canada and the place this industry occupies in Canada and in the world. This 2006 edition provides statistics for 2004 to 2006, inclusive. Additional detailed tables on Canadian fisheries are included in a CD-ROM accompanying this publication.

The Canadian fisheries covered in this report include commercial marine and freshwater fisheries, as well as aquaculture. For information on recreational fisheries in Canada, please refer to the Statistical Services website at <http://www.dfo-mpo.gc.ca/stats/recreational-eng.htm>.

This publication is available on the Statistical Services website, in pdf, at <http://www.dfo-mpo.gc.ca/stats/commercial/cfs/2006/cfs06-eng.htm>.

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## Methodology and data sources

Data on marine fisheries are provided by the DFO statistical units in the Maritimes, Gulf, Quebec, Newfoundland and Labrador and Pacific Regions, and are then integrated at the Ottawa headquarters office. Data on freshwater fisheries are provided by the DFO Central and Arctic regional office while aquaculture data are obtained from Statistics Canada.

The primary classification system used in this publication for fisheries is the FAO's "*International Standard Statistical Classification of Aquatic Animals and Plants*" (ISSCAAP)<sup>1</sup>. ISSCAAP divides commercial species in groups based on their characteristics related to taxonomy, ecology and economics.

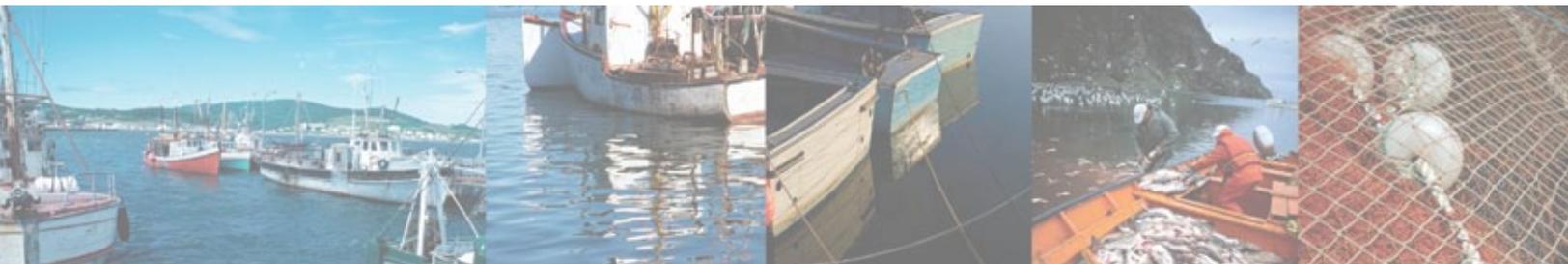
In terms of Canadian imports and exports, species are grouped according to the Harmonized System (HS) of classification, with data from Statistics Canada.

Note that figures in the detailed tables may not add up to the totals due to rounding, confidential data or, in certain instances, differences in the estimation methods.

## Symbols and abbreviations

t	metric tonnes
,000t	thousands of metric tonnes
\$	Canadian dollar
\$m	millions of Canadian dollars
'	foot
"	inch
DFO	Fisheries and Oceans Canada
NAICS	North American Industrial Classification System
NAFO	Northwest Atlantic Fisheries Organization
FAO	Food and Agriculture Organization of the United Nations
AAFC	Agriculture and Agri-Food Canada
ASML	Annual Survey of Manufactures and Logging
Atl.	Atlantic
Pac.	Pacific
#	number
IQ	individual quota
..	not available (n/a)
...	not applicable
x	confidential data
-	zero (0)

<sup>1</sup> Latest version: FAO, 2001. Report of the nineteenth session of the Coordinating Working Party on Fishery Statistics (Nouméa, New Caledonia, July 10-13 2001). *FAO Fisheries Report*, No. 656.



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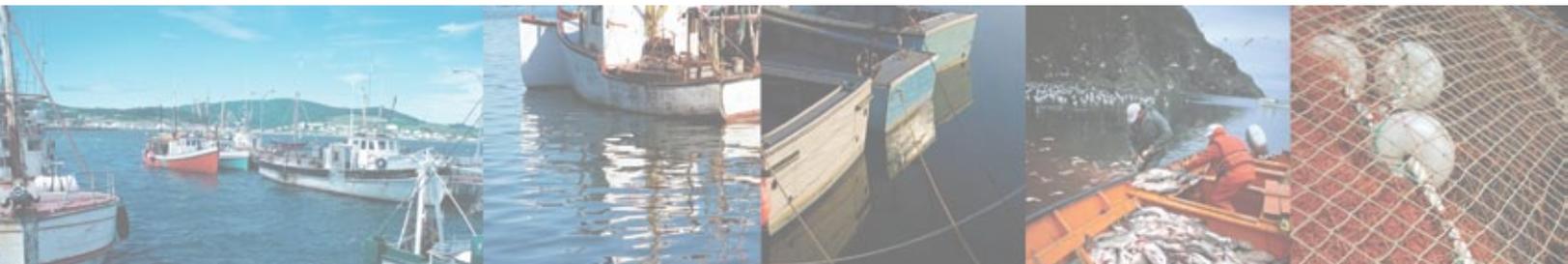
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# 1 Fisheries and the Canadian economy

CD - Section 1: 1.1.1 - 1.1.3, 1.2.1 - 1.2.4

## 1.1 Gross value

Total landings from marine commercial fishing in Canada have reached a value of \$1.9 billion (1.1 million tonnes) in 2006. This translates into a \$197 million (-9%) decrease compared to 2005, owing mainly to the snow crab price drop as well as lower prices for herring, clams, Pacific geoduck and Pacific Dungeness crab. As for the value of freshwater fisheries, it has increased slightly with a total value of \$68 million in 2006, 3% more than in 2005.

Overall, aquaculture production fared better than the commercial fisheries. In 2006, the value of aquaculture production increased by \$198 million to reach a total of \$913 million, which represents an increase of 28%. This is mainly due to a 20% increase in the production volume of farmed salmon, coupled with an increase in value by \$0.82/kg (+15%).

The gross revenue of the fish and seafood processing industry reached \$4.2 billion in 2006, 2% less than 2005. A good part of the year-to-year variation in the value of Canadian seafood production is due to fluctuations between the Canadian and US currencies. This is because an estimated 85%<sup>2</sup> of Canadian seafood production is exported, primarily to the United States. As such, the relative value of the two currencies play an important role in determining the annual performance of the Canadian seafood sector, with a weaker Canadian dollar as compared to the US dollar generating higher seafood values.

**Table 1.1: Value of the commercial fisheries, aquaculture and processing in Canada, 2004-2006**

Industry	Production value <sup>4</sup> (\$m)			% change 2005-06
	2004	2005	2006	
Marine fisheries <sup>1</sup>	2,316	2,120	1,922	-9%
Freshwater fisheries <sup>1</sup>	64	66	68	3%
Aquaculture <sup>2</sup>	541	715	913	28%
Processing <sup>3</sup>	4,560	4,300	4,197	-2%

<sup>1</sup>Landed value. Source: DFO, Economic Analysis and Statistics.

<sup>2</sup>Production value. Source: Statistics Canada, 2008, Aquaculture Statistics 2007, Catalogue no. 23-222-XIE.

<sup>3</sup>Source: Statistics Canada, ASML, Table 301-0006, "Seafood product preparation and packaging" category. Total revenues of this sector include costs of purchasing the raw material from fish harvesters, a total cost figure close to the landed value of sea fisheries. Note that the added value from the processing sector in 2005 was estimated at \$1,189m by Statistics Canada.

<sup>4</sup>To avoid double-counting, one should not add gross revenues of the four sectors shown in this table.

<sup>2</sup>Source: AAFC, "Canada's Fish and Seafood Industry", 2006.

## 1.2 Employment and GDP by industry

In 2006, employment in the commercial fishing and aquaculture industries declined slightly as compared to 2005. The harvesting sector of the commercial fishing industry employed 51,462 fish harvesters and crew members, 1,360 less than in 2005 (-3%). The aquaculture industry itself employed 3,970 people, approximately 1% more than in 2005.

In 2006, the fish processing industry employed 28,587 workers, 755 less than in 2005. This represents a decrease of 3%, which is on par with the decrease in the number of workers employed in the harvesting sectors between 2005 and 2006.

**Table 1.2: Employment by industry, Canada, 2004-2006**

Industry	Employment estimates (number of persons)			
	2004	2005	2006	% change 2005-06
Marine and freshwater fisheries <sup>1</sup>	53,783	52,822	51,462	-3%
Aquaculture <sup>2</sup>	3,985	3,920	3,970	1%
Processing <sup>3</sup>	32,204	29,342	28,587	-3%
<b>Total</b>	<b>89,972</b>	<b>86,084</b>	<b>84,019</b>	<b>-2%</b>

<sup>1</sup>Number of fish harvesters and crew. Source: DFO, Regional Statistical Units.

<sup>2</sup>Source: Statistics Canada, Aquaculture Value Added Statistics.

<sup>3</sup>Source: Statistics Canada, ASML, Table 301-0006, "Seafood product preparation and packaging" category, Total number of employees, direct and indirect labour (persons).

By way of comparison, the gross domestic product (GDP) in the Canadian agriculture industry has decreased by 2% in 2006. However, the fish harvesting and processing sectors have shown a reverse trend with positive growth rates of 2% and 1% respectively. Meanwhile, the performance of the Canadian economy as a whole increased by 3%.

**Table 1.3: Gross Domestic Product (GDP) at basic prices, by industry<sup>1</sup>, 2004-2006**

Industry	GDP, millions of Chained 2002 dollars <sup>2</sup>			
	2004	2005	2006	% change 2005-06
Agriculture, forestry, fishing and hunting	27,669	28,214	27,648	-2%
Fishing, hunting and trapping <sup>3</sup>	1,175	1,052	1,069	2%
Processing <sup>4</sup>	1,020	988	996	1%
<b>All industries</b>	<b>1,124,998</b>	<b>1,155,681</b>	<b>1,189,661</b>	<b>3%</b>

<sup>1</sup>NAICS for the industries shown in this table are 11, 114 and 3117.

Source: Statistics Canada, Table 399-0025.

<sup>2</sup>Note that chained dollars allow to calculate growth rates, but not the contribution of each industry to the total Canadian GDP, as aggregates are not equal to the sum of their components.

<sup>3</sup>The contribution of fishing to the GDP of this category is estimated at 90% by Statistics Canada.

<sup>4</sup>Category "Seafood product preparation and packaging" (NAICS 3117).

## 2 Canada's position among the world's fisheries

CD - Section 2: 2.1.1, 2.2.1 - 2.2.2, 2.3.1 - 2.3.4

### 2.1 Harvesting

The Food and Agriculture Organization (FAO) of the United Nations ranks Canada in 20<sup>th</sup> place in terms of the global volume of fish landings in 2006; this represents 1% of the world total. This is a drop of one position from 2005, when Canada was ranked 19<sup>th</sup>. The top three countries with respect to total fish landings were China, Peru and the U.S. respectively. Collectively, they accounted for 31% of worldwide catches in 2006.

While global aquaculture production has continued to increase, fish landings have effectively decreased by 2% in 2006 as compared to the previous year.

**Table 2.1: Total landings by country, marine and freshwater fisheries, ranked by volume in 2006 (,000 t)**

Rank	Country	Volume of Landings (,000 t)			
		2004	2005	2006	% change 2005-06
1	China <sup>1</sup>	17,440	17,525	17,572	0%
2	Peru	9,612	9,394	7,021	-25%
3	United States	4,995	4,961	4,866	-2%
4	Indonesia	4,653	4,704	4,769	1%
5	Chile	5,312	4,738	4,474	-6%
6	Japan	4,428	4,196	4,302	3%
7	India	3,391	3,691	3,855	4%
8	Russia	3,000	3,248	3,350	3%
9	Thailand	2,840	2,814	2,776	-1%
10	Norway	2,673	2,547	2,401	-6%
...					
20	Canada <sup>2</sup>	1,193	1,124	1,074	-4%
-	Other countries	36,419	36,561	36,689	0%
	<b>Total</b>	<b>95,955</b>	<b>95,504</b>	<b>93,150</b>	<b>-2%</b>

<sup>1</sup>Includes Hong Kong and Macao.

<sup>2</sup>Canadian figures may not match exactly those found in Section 3 due to different data sources.

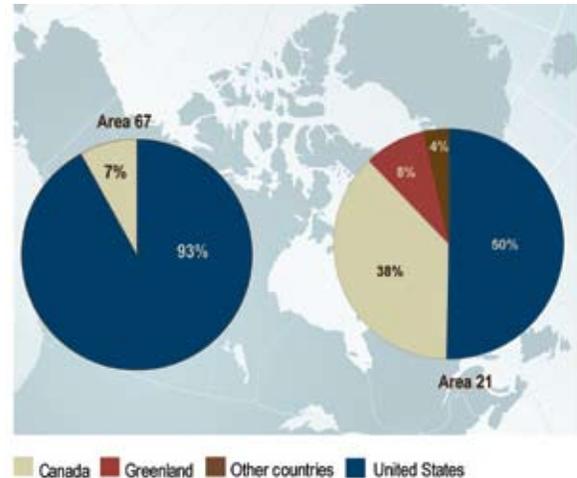
Source: FAO, FishStat Plus, Capture Production.

Canadian fish harvesters operate in FAO<sup>3</sup> fishing areas 21 and 67. Area 21 covers the northwest portion of the Atlantic Ocean, while area 67 includes the northeast part of the Pacific; i.e., both oceans that border Canada to the east and to the west.

<sup>3</sup>A map of the different fishing areas is available on the FAO Web Site at [www.fao.org/fi/](http://www.fao.org/fi/).

In 2006, 5,283 thousand tons of global fish landings were from these two areas, including 1,042 thousand tonnes in Canada (20% of total). Most landings were in the U.S., for a total of 3,973 thousand tons, which represents 75% of the overall landings in these two areas. Total catches in the northeast Pacific and northeast Atlantic represented close to 6% of worldwide catches in 2006.

**Figure 2.1: Total catches on the Atlantic and Pacific coasts of Canada and the United States (FAO areas 21 and 67), by country, 2006**



Source: FAO, FishStat Plus, Capture Production.

Canada has a more significant position in the Atlantic Northwest than in the Pacific Northeast. In 2006, Canadian fisheries accounted for 38% of catches reported in the Atlantic Northwest (area 21), and 7% of catches in the Pacific North east (area 67).

On average, the United States had close to half of total catches in the northeast Atlantic between 2004 and 2006, compared to 38% for Canada. In terms of volume, Canada ranked first at the beginning of the 1990's: catches by Canadian fish harvesters at that time represented 42% of total catches (average for 1988-1990), as compared to 40% for American fish harvesters. It should be noted that following the collapse of Atlantic cod stocks at the beginning of the 1990's, the total landings in the Atlantic have decreased by nearly 30%.

### 2.2 Aquaculture

With aquaculture production amounting to about 171 thousands of tonnes in 2006, Canada ranked 23<sup>rd</sup> in the world in terms of volume and 16<sup>th</sup> in terms of value. China ranked first in aquaculture production, as it did with respect to marine fisheries. In 2006, the total volume of commercial aquaculture in China reached 45,301 thousand tonnes, valued at \$49.5 billion,

exceeding two thirds of the aquaculture production worldwide.

As opposed to marine fisheries, the worldwide aquaculture production experienced significant growth of 11.5% in terms of volume from 2004 to 2006. Several countries, including Pakistan, Mexico, Indonesia, Italy, Myanmar, Vietnam, Turkey and South Korea had growth rates exceeding 30% during that period. In comparison, Canadian aquaculture production increased by 18% between 2004 and 2006.

**Table 2.2: Major world aquaculture producers, ranked by volume of aquaculture production in 2006 (,000t)**

Rank	Country	Aquaculture Production, (,000 t)			% change 2005-06
		2004	2005	2006	
1	China <sup>1</sup>	41,334	43,275	45,301	5%
2	India	2,799	2,967	3,128	5%
3	Indonesia	1,469	2,124	2,220	5%
4	Philippines	1,717	1,896	2,092	10%
5	Viet Nam	1,229	1,467	1,688	15%
6	Thailand	1,260	1,304	1,386	6%
7	South Korea	953	1,058	1,279	21%
8	Japan	1,261	1,254	1,224	-2%
9	Bangladesh	915	882	892	1%
10	Chile	685	714	836	17%
...					
<b>23</b>	<b>Canada<sup>2</sup></b>	<b>145</b>	<b>155</b>	<b>171</b>	<b>11%</b>
-	Other countries	6,101	6,204	6,530	5%
<b>Total</b>		<b>59,867</b>	<b>63,299</b>	<b>66,747</b>	<b>5%</b>

<sup>1</sup>Includes Hong Kong and Macao.

<sup>2</sup>Canadian figures may not match exactly those found in Section 3 due to different data sources.

Source: FAO, FishStat Plus, Aquaculture Production dataset.

## 2.3 International trade

Since 2004, Canada has ranked 6<sup>th</sup> worldwide among seafood exporting countries in terms of total export value, behind the United States and Denmark, among others. This represents a drop in rank, as in 2003, Canada was 5<sup>th</sup>, just ahead of Denmark. China has remained the top seafood exporting country between 2004 and 2006, with an export share of 11% in 2006, 7% higher than Canada's share. However, the Chinese share of world exports is considerably less than its share of the global aquaculture production value (68%) and of its percentage of global fishing volume (19%), which can be explained by the fact that a major part of the Chinese aquaculture production goes to the domestic market.

In comparison, Canada exports a larger share of its catches and its aquaculture production, estimated at 85%<sup>4</sup> (by value). This partly explains that while Canada's wild fisheries and aquaculture production represent about 1% of the worldwide total, Canadian exports amount to 4% of the total value of worldwide exports of fish and seafood.

International trade in seafood has evolved considerably during the last decade. In 1990, the United States and Canada were respectively 1<sup>st</sup> and 2<sup>nd</sup> in terms of seafood export value. Beginning in 1991, the gradual decrease in groundfish catches coupled with increased aquaculture production in Asian countries caused Canada to slip from 2<sup>nd</sup> to 7<sup>th</sup> place in total export value in 1993. Since 1993, Canada has not been among the top four major seafood exporters.

**Table 2.3: Major world seafood exporters, ranked by total value of exports in 2006 (millions of CDN\$)**

Rank	Country	Exports Value <sup>1</sup> (\$m)			% change 2005-06
		2004	2005	2006	
1	China <sup>2</sup>	9,401	9,796	10,828	11%
2	Norway	5,429	5,963	6,287	5%
3	Thailand	5,276	5,421	5,948	10%
4	United States	5,090	5,194	4,752	-9%
5	Denmark	4,656	4,477	4,535	1%
<b>6</b>	<b>Canada<sup>3</sup></b>	<b>4,564</b>	<b>4,380</b>	<b>4,177</b>	<b>-5%</b>
7	Chile	3,315	3,687	4,127	12%
8	Viet Nam	3,189	3,351	3,814	14%
9	Spain	3,360	3,154	3,257	3%
10	Netherlands	3,213	3,438	3,206	-7%
-	Other countries	47,492	48,861	50,932	4%
<b>Total</b>		<b>94,384</b>	<b>96,085</b>	<b>98,571</b>	<b>3%</b>

<sup>1</sup>Includes re-exports.

<sup>2</sup>Includes Hong Kong and Macao.

<sup>3</sup>Canadian figures may not match exactly those found in Section 4 due to different data sources.

Source: FAO, FishStat Plus, Fisheries Commodities Production and Trade dataset.

Table 2.4 on the following page shows the main Canadian fish and seafood exports by volume by product group in 2006. Canada has a significant share of worldwide exports of some products, such as smoked herring (66% of worldwide exports of this product are Canadian products), lobster (52%), frozen crab (37%), fish livers and roes (29%), Greenland, Atlantic and Pacific halibut (17%) and fresh haddock (14%).

<sup>4</sup>Source: AAFC, "Canada's Fish and Seafood Industry", 2006.

**Table 2.4: Canada's share of world seafood exports, by product exported in 2006 (millions of CDN\$)**

Product <sup>1</sup>	Exports Value <sup>2</sup> (\$m)		
	Canada <sup>3</sup> 2006 <sup>3</sup>	% of Canadian exports	% of World exports
<b>Lobster</b> , live, frozen or preserved	590	14%	52%
<b>Crabs</b> , whether in shell or not, frozen	463	11%	37%
<b>Salmon</b> , fresh, frozen or preserved	629	15%	9%
<b>Shrimp</b> , frozen or preserved	465	11%	3%
<b>Fish fillets</b> , fresh or frozen	144	3%	1%
<b>Sea urchins and other molluscs</b> , fresh or frozen	161	4%	10%
<b>Scallop</b> , fresh or frozen	104	3%	10%
<b>Greenland, Atlantic and Pacific halibut</b> , fresh or frozen	110	3%	17%
<b>Fish livers and roes</b> , dried, smoked, salted or in brine	50	1%	29%
<b>Mackerel</b> (Scomber spp.), frozen	59	1%	6%
<b>Hake</b> , frozen	54	1%	9%
<b>Haddock</b> , fresh or chilled	23	1%	14%
<b>Herring</b> , including fillets, smoked	25	1%	66%
Other	1,299	31%	2%
<b>Total</b>	<b>4,177</b>	<b>100%</b>	<b>4%</b>

<sup>1</sup>Products grouped according to Harmonized System (HS) categories.

<sup>2</sup>Includes re-exports.

<sup>3</sup>Canadian figures may not match exactly those found in Section 4 due to different data sources.

Source: FAO, FishStat Plus, Fisheries Commodities Production and Trade dataset.

Canada imports far less fish and seafood than it exports, and ranked 14<sup>th</sup> on the 2006 world list of seafood importers. Canada's rank has dropped two positions since 2005 when it ranked 12<sup>th</sup> worldwide. Japan and the United States were the top two major fish and seafood importers during 2006 and they accounted for 31% of the worldwide import value for that year.

**Table 2.5: Major world seafood importers, ranked by value of imports in 2006 (millions of CDN\$)**

Rank	Country	Imports Value (\$m)			% change 2005-06
		2004	2005	2006	
1	Japan	19,302	17,846	16,171	-9%
2	United States	15,721	14,648	15,197	4%
3	Spain	6,818	6,844	7,233	6%
4	China <sup>1</sup>	6,671	7,229	7,126	-1%
5	France	5,488	5,579	5,794	4%
6	Italy	5,113	5,150	5,382	5%
7	Germany	3,684	3,953	4,285	8%
8	United Kingdom	3,700	3,889	4,255	9%
9	Denmark	3,083	3,183	3,333	5%
10	Korea, Republic	2,940	2,887	3,139	9%
...					
<b>14</b>	<b>Canada<sup>2</sup></b>	<b>2,040</b>	<b>2,048</b>	<b>2,089</b>	<b>2%</b>
-	Other countries	25,135	26,875	29,020	8%
<b>Total</b>		<b>99,694</b>	<b>100,130</b>	<b>103,023</b>	<b>3%</b>

<sup>1</sup>Includes Hong Kong and Macao.

<sup>2</sup>Canadian figures may not match exactly those found in Section 4 due to different data sources.

Source: FAO, FishStat Plus, Fisheries Commodities Production and Trade dataset.

## 2.4 Demand

As the annual seafood consumption data for 2006 were unavailable at the time of this report, 2005 values are presented here.

**Table 2.6: Per capita annual consumption of seafood and meat, Canada and selected countries, 2005**

Country	Annual consumption per capita (kg), 2005				
	Seafood <sup>1</sup>	Bovine meat	Pork	Chicken, Turkey	Total
Iceland	91.4	11.7	18.7	20.0	<b>141.8</b>
Japan	64.9	6.5	13.0	14.8	<b>99.2</b>
Norway	47.4	18.5	30.3	12.5	<b>108.7</b>
France	33.5	16.6	29.6	20.2	<b>99.9</b>
China	25.9	6.6	38.1	8.0	<b>78.6</b>
United States	23.8	22.6	17.4	52.4	<b>116.3</b>
<b>Canada</b>	<b>23.1</b>	<b>15.9</b>	<b>27.3</b>	<b>36.4</b>	<b>102.8</b>
United Kingdom	20.0	17.2	20.3	29.8	<b>87.4</b>
Russian Fed.	17.3	16.0	7.9	17.3	<b>58.6</b>
Germany	14.3	12.6	47.5	13.4	<b>87.8</b>

<sup>1</sup>Sum of "fish" and "aquatic products, other" categories.

Source: FAOSTAT, Statistics division, FAO. Data copied: November 14, 2007, <http://faostat.fao.org>.

### 3 Commercial fisheries and aquaculture<sup>5</sup>

CD - Section 3: 3.1.1 - 3.1.16, 3.2.1, 3.3.1

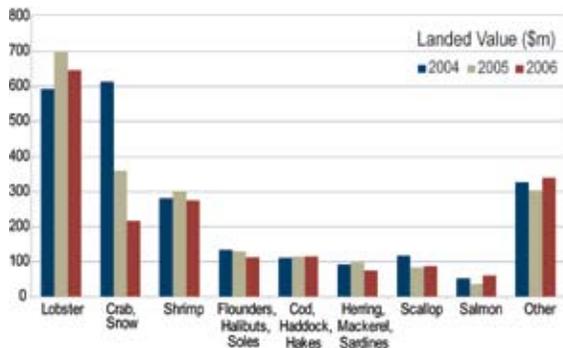
#### 3.1 Commercial marine fisheries

CD - Section 3: 3.1.1 - 3.1.16

The commercial fishing industry underwent a period of transformation after the decline of Atlantic cod stocks in 1992. In the early 1990's, groundfish played a major role in the fish harvesting and processing sectors, but over time the dominance of groundfish decreased. In 2006, groundfish as a whole represented less than 17% of the total landed value of marine commercial fishing in Canada.

Crustaceans have replaced groundfish as the main species harvested in Atlantic Canada and due to their relatively high value, Canada's total landed value has increased despite declining overall landings. In 2006, crustaceans represented close to 61% of the total landed value in Canada. However, in terms of volume landed, crustaceans only represented 31% of the total volume of landings in 2006.

**Figure 3.1: Total landed value, main commercial marine species, Canada, 2004-2006**



Source: DFO, Economic Analysis and Statistics.

The most significant crustaceans harvested in Canada are shrimp, snow crab and lobster. Together, these species represented about 64% of the total landed value for marine species in Canada between 2004 and 2006.

In 2006, the landed value of snow crab saw a sharp decrease of 65% from 2004, down to a total of \$215 million. This represents a loss of \$398 million compared to the record value of \$613 million reached in 2004. The primary factor of this decline was decreasing snow

crab prices that began at the end of the 2004 fishing season, a result of a substitution effect in the American market in response to the peak prices of the 2004 season. This price decrease has been significant, as in 2004 the average price of snow crab was \$5.93/kg, while in 2006 it decreased by 59% to \$2.40/kg.

In 2006, lobster harvests continued to outperform snow crab despite the decrease in the average landed price for lobster by 12% to \$11.88/kg that year. The total volume of lobster landings increased slightly (+5%) and the total value of this species amounted to nearly \$647 million in 2006, about \$51 million less than in 2005.

The landed volume of scallop rebounded in 2006 by 11% to reach over 63,000 tonnes. In 2004, the total Canadian landings of scallop reached 82,000 tonnes before decreasing by almost 30% to 57,000 tonnes in 2005. As scallop prices have remained relatively unchanged between 2004 and 2006, the total landed value of scallops has increased to \$88 million in 2006, a gain of \$5 million compared to 2005.

Between 2005 and 2006, other commercial marine species in Canada have seen major increases in landed value. This includes sablefish (+\$32 million), sockeye salmon (+\$28 million), sea scallop (+\$9 million) as well as Stimpson surf clams (+\$7 million). In 2006, noticeable reductions in landed value took place in some fisheries such as northern shrimp (-\$24 million), Pacific herring (-\$14 million) and yellowtail flounder (-\$10 million).

Details of the landed volume, value and price evolution for the main marine species landed in Canada between 2004 and 2006 are presented in Appendix II, Tables 6.1 to 6.3. An overview of the main fishing fleets in Canada is also presented in Appendix I, Tables 5.1 to 5.6.

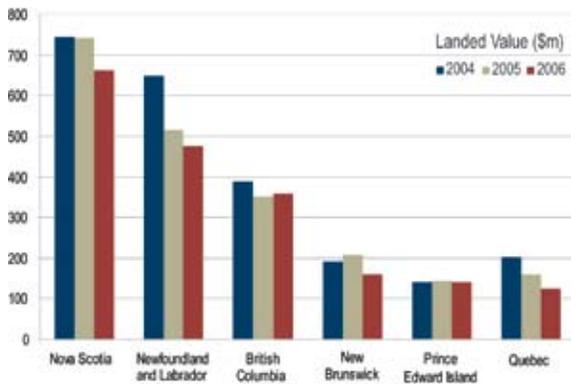
#### 3.1.1 Provinces

Marine commercial fishing is concentrated in six of the ten Canadian provinces and three territories. Nova Scotia, Newfoundland and Labrador and British Columbia are the three provinces where fishing has the greatest value, followed by New Brunswick, Prince Edward Island and Quebec. British Columbia and New Brunswick also enjoy a major aquaculture production.

In 2006, 26% (284,000 tonnes) of the total volume of commercial marine fisheries in Canada was landed in Nova Scotia, for a total of \$661 million, or 34% of the total Canadian landed value. The key species were lobster (57%), scallops (12%), cod, hake and haddock (8%) as well as shrimp (7%). This level is similar to that of 2005, when total landings in Nova Scotia were 291,000 tonnes for a value of \$742 million or 35% of the total landed value in Canada.

<sup>5</sup> All values and prices in this section are in Canadian dollars.

**Figure 3.2: Total landed value, commercial marine fisheries, by province, Canada, 2004-2006**



Source: DFO, Economic Analysis and Statistics.

The total landed volume in Newfoundland and Labrador has remained fairly consistent with that of the previous year. The total landed volume in this province reached 374,000 tonnes in 2006, increasing 5% from 2005. However, given the decline in the price of snow crab, the total value has fallen to \$474 million, which represents an 8% decrease compared to 2005. Newfoundland and Labrador's share of the total landings in Canada have remained constant with a slight drop of 1% over the previous year, from 25% of the total landed value in Canada in 2005 to 24% in 2006. Key species in 2006 were shrimp (34%) and crab (21%).

British Columbia ranked third in terms of landings, as it contributed 19% of the total fishing value in Canada in 2006, for a total of \$360 million. The total landed volume in British Columbia decreased by 13% to 219,000 tonnes. The key species harvested were salmon, trout and smelt (17%), flounder, halibut and sole (15%), and shrimp and prawn at (11%).

New Brunswick and Prince Edward Island are in fourth and fifth places respectively. In 2006, the landed value in New Brunswick was \$160 million, with Prince Edward Island at \$141 million. Landings in these two provinces represent 16% of the total landed value in Canada. However, New Brunswick has suffered a sharp decrease of 23% in the value of its landings between 2005 and 2006, largely due to a 40% decline in the average price of snow crab. Landed values remained steady in Prince Edward Island, decreasing slightly by 2%.

Quebec is in sixth place with respect to the value of commercial fishing in Canada. In 2006, 7% or \$126 million of the total value of catches in Canadian waters was landed in Quebec.

### 3.1.2 NAFO areas, Atlantic Canada

Between 2004 and 2006, the southern part of the Gulf of St. Lawrence was the most lucrative NAFO fishing area in terms of landed value in Canada. The presence of large stocks of lobster and snow crab partly explains the high value of fishing in this area. The northeastern part of Newfoundland and the southern Scotian shelf have also been highly productive areas during this period, contributing over half of the total landed value of marine species on the Canadian Atlantic coast. In 2006, these three areas combined represented 64% of the total landed volume and 70% of the total landed value in Atlantic Canada.

**Table 3.1: Total landed value by NAFO<sup>6</sup> areas, commercial marine fisheries, Atlantic Canada, 2004-2006**

Groups	NAFO Areas	Landed Value (\$m)			% of total (2006)
		2004	2005	2006	
Southern Gulf of St. Lawrence	4T, 4VN	547	513	416	27%
Southern Scotian Shelf	4X, 5Y, 6D, 6E	440	469	411	26%
North-Eastern Newfoundland	2J, 3K, 3L	408	314	273	17%
Northern Scotian Shelf	4W, 4VS	123	106	109	7%
Northern Gulf of St. Lawrence	4R, 4S, 3PN	109	100	97	6%
Northern Labrador and Baffin Island	2G, 2H, 0A, 0B, 1B	96	92	90	6%
Southern Newfoundland	3PS, 3MNO	130	107	84	5%
Georges Bank	5Ze	62	59	73	5%
Other	-	13	10	10	1%
<b>Total</b>		<b>1,928</b>	<b>1,769</b>	<b>1,563</b>	<b>100%</b>

Source: DFO, Economic Analysis and Statistics.

### 3.1.3 Months of activity in Atlantic Canada

On the Atlantic coast of Canada, most fish landings took place between May and October, representing 78% of all landings in 2006. However, it is in May and June that landings had the greatest value principally due to lobster, shrimp and scallop catches. In 2006, landings during these two months had a value of approximately \$598 million, which is almost 40% of the total landed value of that year on the Canadian Atlantic coast.

In general, the volume of fish landed between October and March is relatively lower in New Brunswick, Prince Edward Island and Quebec. In Newfoundland and

<sup>6</sup>NAFO stands for "Northwest Atlantic Fisheries Organization". A map of NAFO areas is available in Appendix III, showing the groupings of Table 3.1.

Labrador, fish landings are spread over the whole year, with a higher value during the months of April to July. The volume of landings are consistent throughout the year in Nova Scotia, while landed value is higher between the months of May and July and in December.

**Table 3.2: Total landed value by month, commercial marine fisheries, Atlantic Canada, 2006**

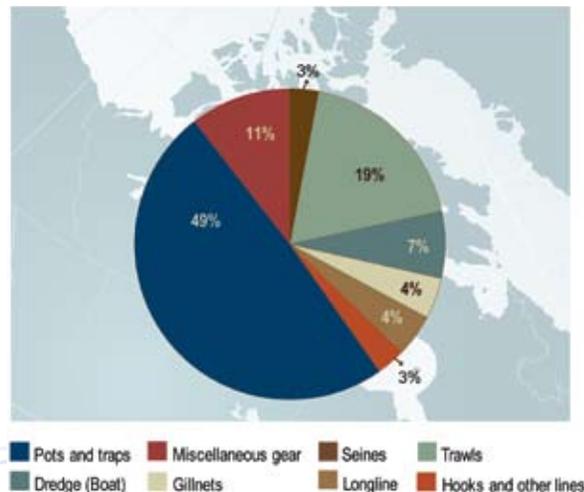
Months	Landed Value (\$m)					Total
	NS	NB	PEI	Que	NL	
January	43	3	0	5	15	65
February	25	2	0	0	19	46
March	29	2	0	0	19	50
April	43	12	4	17	73	148
May	121	54	72	45	86	379
June	64	27	35	26	66	219
July	52	5	2	13	64	137
August	44	17	12	7	42	123
September	37	13	10	6	29	95
October	34	5	4	3	25	70
November	52	13	1	1	21	88
December	117	6	0	0	15	139
<b>Total</b>	<b>661</b>	<b>160</b>	<b>141</b>	<b>123</b>	<b>474</b>	<b>1,559</b>

Source: DFO, Economic Analysis and Statistics.

### 3.1.4 Fishing gear

In 2006, nearly 49% of the marine fishing value in Canada came from species that were caught using pots and traps, such as crab and lobster. In terms of value, trawling contributed to 19% of total catches in Canada, but 25% in terms of volume, since the market price of trawled species, such as groundfish and shrimp, are typically less than that of species caught using a trap.

**Figure 3.3: Total landed value by fishing gear type, commercial marine fisheries, Canada, 2006**



Source: DFO, Economic Analysis and Statistics.

### 3.1.5 Vessels

In 2006, there were 16,550 “active” vessels in Canada. A fishing vessel is considered active if at least one instance of fish landings is recorded during the year. This number has decreased slightly compared to 2005, when the number of active vessels amounted to 16,722 (-1%).

The majority (91%) of these vessels are inshore fishing vessels less than 45’ in length. While midshore and offshore fishing vessels (more than 45’ in length) represented less than 10% of all active fishing vessels in Canada, they registered more than 43% of the total Canadian landed value in 2006.

**Table 3.3: Number of active fishing vessels by length group, 2004-2006**

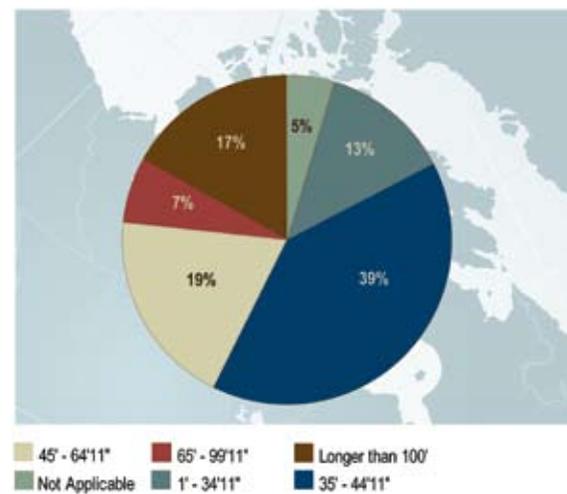
Vessel length	Number of Active Vessels <sup>1</sup>			% of total (2006)
	2004	2005	2006	
Unknown	11	139	205	1%
1' - 34'11"	7,984	8,025	8,055	49%
35' - 44'11"	7,125	6,996	6,871	42%
45' - 64'11"	1,437	1,417	1,256	8%
65' - 99'11"	260	242	228	1%
More than 100'	87	81	72	0%
<b>Total<sup>2</sup></b>	<b>16,754</b>	<b>16,722</b>	<b>16,550</b>	<b>100%</b>

<sup>1</sup>Vessel that reported landings in a given year.

<sup>2</sup>Due to some vessel length changes, total may not round up.

Source: DFO, Economic Analysis and Statistics.

**Figure 3.4: Total landed value by vessel length, commercial marine fisheries, Canada, 2006**



Source: DFO, Economic Analysis and Statistics.

The average landed value per active fishing vessel was \$112,068 in Canada in 2006, which is a 8% increase over the average landed value in 2005. Among the main commercial species, landings of northern shrimp (*Pandalus borealis*) and Pacific Halibut had the highest value in 2006, reaching on average \$473,000 and \$178,000 respectively per vessel. The average landed value of lobster (\$75,361) and Atlantic cod (\$7,615) per vessel was significantly lower, while these two fleets combined represent about 80% of all vessels (13,000 vessels).

**Table 3.4: Number of active vessels and average landed of selected marine species by vessel, Canada, 2006**

Major species	Number of active vessels and average value of landings per vessel <sup>1</sup>		
	# active vessels <sup>2</sup>	# active vessels as % of total vessels	Average value of landings by vessel (\$)
Snow crab	3,017	18%	71,380
Lobster	8,584	52%	75,361
Shrimp, p. borealis	483	3%	473,443
Scallops	636	4%	133,399
Dungeness crab	215	1%	99,083
Pacific halibut	252	2%	178,136
Greenland halibut	898	5%	40,588
Herring	1,569	9%	25,291
Atlantic cod	4,879	29%	7,161
<b>Total</b>	<b>16,550</b>	<b>100%</b>	<b>112,068</b>

<sup>1</sup>There is no direct link between the value of landings and the net income by vessel since operating costs vary from one fishery to another.

<sup>2</sup>Vessels may land more than one species (categories not mutually exclusive)  
Source: DFO, Economic Analysis and Statistics.

In 2006, 39% of the total active fishing vessels in Canada landed fish in Newfoundland and Labrador (6,404 vessels). Nova Scotia was second with 3,800 vessels, about 23% of the Canadian total. Since 2005, the number of active vessels in Nova Scotia, New Brunswick and Prince Edward Island has decreased, while it increased in the three other fishing provinces.

**Table 3.5: Number of active fishing vessels by province of landing, Canada, 2004-2006**

Province	Number of Active Vessels <sup>1</sup>			% of total (2006)
	2004	2005	2006	
Nova Scotia	3,929	3,982	3,800	23%
New Brunswick	1,952	1,934	1,898	11%
Prince Edward Island	1,413	1,418	1,386	8%
Quebec	1,232	1,252	1,259	8%
Newfoundland and Labrador	6,149	6,380	6,404	39%
British Columbia <sup>2</sup>	2,627	2,339	2,350	14%
<b>Total<sup>3</sup></b>	<b>16,754</b>	<b>16,722</b>	<b>16,550</b>	<b>100%</b>

<sup>1</sup>Vessel that reported landings, by province, in a given year.

<sup>2</sup>This report also includes offshore tuna and joint venture landings which adds 220, 166 and 124 vessels in 2004, 2005 and 2006 respectively.

<sup>3</sup>Due to some vessels landing in more than one province, total may not round up.  
Source: DFO, Economic Analysis and Statistics.

## 3.2 Commercial freshwater fisheries

### CD - Section 3: 3.2.1

In Canada, freshwater commercial fishing primarily takes place in Lakes Winnipeg, Cedar, Manitoba and Winnipegosis in the province of Manitoba as well as in the Northwest Territories Great Slave Lake. This fishing activity is relatively modest when compared to the commercial fishing of marine species. In 2006, it amounted to 4% of the commercial fishing value and 3% of total volume in Canada.

The landed volume of freshwater species has remained steady when compared to 2005, increasing by 194 tonnes for a total of 32,029 tonnes in 2006. The increased price of some species has resulted in a total landed value of \$68 million, \$1.8 million (+3%) more than in 2005.

The main freshwater species fished commercially in Canada are pickerel, perch and whitefish. Landings of these three species represented close to 88% of total landings of freshwater species in Canada in 2006.

**Table 3.6: Total landed value by species, commercial freshwater fisheries, Canada, 2004-2006**

Species	Landed value (\$,000)			% change 2005-2006
	2004	2005	2006	
Pickerel	26,130	31,521	32,534	3%
Perch	13,429	14,973	18,308	22%
Whitefish	10,790	8,786	9,145	4%
White bass	2,562	2,316	1,687	-27%
Smelt	3,121	1,657	467	-72%
Sauger	1,866	1,018	491	-52%
Pike	1,203	855	965	13%
Sucker (mullet)	756	793	764	-4%
Lake trout	586	486	447	-8%
Other	3,355	3,735	3,167	-15%
<b>Total</b>	<b>63,799</b>	<b>66,140</b>	<b>67,977</b>	<b>3%</b>

Source: DFO, Central and Arctic, Policy Sector.

Freshwater commercial fishing is the most important in Ontario and Manitoba, with respective landed values of \$36 million and \$24 million in 2006. Fish landings in these two provinces represented 89% of the overall landed value of freshwater commercial species in Canada.

**Table 3.7: Total landed value by province, commercial freshwater species, Canada, 2004-2006**

Provinces	Landed value (\$,000)			% change 2005-2006
	2004	2005	2006	
Ontario	29,513	35,133	36,430	4%
Manitoba	24,655	22,683	23,818	5%
Saskatchewan	2,985	2,830	2,843	0%
Quebec	2,977	2,217	2,030	-8%
Alberta	2,249	2,032	1,748	-14%
Northwest Territories	1,009	817	610	-25%
New Brunswick	411	429	498	16%
<b>Total</b>	<b>63,799</b>	<b>66,140</b>	<b>67,977</b>	<b>3%</b>

Source: DFO, Central and Arctic, Policy Sector.

### 3.3 Aquaculture

#### CD - Section 3: 3.3.1

Overall aquaculture production has reached a total value of \$913 million in Canada in 2006, close to \$198 million more than in 2005 (+28%). This high value can be attributed to a marked increase in the price of salmon, which rose from \$5.53/kg in 2004 to \$6.33/kg in 2006.

The aquaculture production value of mussels and oysters increased by 7% and 15% respectively, while trout production decreased by 8%. Meanwhile, the value of salmon production has increased by nearly 38% in 2006, due to a higher production volume and higher price. In 2006, the production value of salmon exceeded 81% of the total aquaculture production value in Canada.

**Table 3.8: Value of aquaculture production by major species, Canada, 2004-2006**

Major species	Value of aquaculture production (\$,000)			% change 2005-2006
	2004	2005	2006	
Salmon	400,180	543,343	748,246	38%
Mussels	32,807	33,582	35,817	7%
Trout	22,086	21,363	19,743	-8%
Oysters	16,740	16,521	19,042	15%
Clams	7,371	8,463	8,904	5%
Other	62,166	92,048	81,167	-12%
<b>Total<sup>1,2</sup></b>	<b>541,350</b>	<b>715,320</b>	<b>912,919</b>	<b>28%</b>

<sup>1</sup>Totals include re-stocking.

<sup>2</sup>Totals exclude confidential data.

Source: Statistics Canada, 2008, Aquaculture Statistics 2007, Catalogue no. 23-222-XIE.

British Columbia continues to dominate Canadian aquaculture production, accounting for almost half of Canada's total. In 2006, Newfoundland and Labrador reported the second highest production, primarily from

finfish. Specific data for New Brunswick and Nova Scotia, which ranked second and third respectively in 2005, were unavailable for 2006.

**Table 3.9: Value of aquaculture production by provinces and species, Canada, 2006**

Provinces	Value of aquaculture production in 2006 (\$,000)				
	Salmon	Mussels	Trout	Other	Total
British Columbia	407,405	1,128	1,043	17,890	427,466
New Brunswick	x	x	x	x	x
Prince Edward Island	x	22,800	x	9,100	31,900
Newfoundland and Labrador	x	7,772	0	44,517	52,289
Nova Scotia	x	x	0	x	x
Ontario	0	0	15,700	0	15,700
Quebec <sup>1</sup>	0	430	..	11,335	11,765
Other	340,841	3,687	3,000	26,271	373,799
<b>Total Canada<sup>2</sup></b>	<b>748,246</b>	<b>35,817</b>	<b>19,743</b>	<b>109,113</b>	<b>912,919</b>

<sup>1</sup>Quebec totals include restocking.

<sup>2</sup>Totals exclude confidential data.

Source: Statistics Canada, 2008, Aquaculture Statistics 2007, Catalogue no. 23-222-XIE.

## 4 International trade

### CD - Section 4: 4.1.1 - 4.1.10

### 4.1 Exports

Canadian exports of marine, freshwater and aquaculture fish and seafood products reached a total value of \$4.09 billion in 2006, which is \$219 million less than in 2005. This is mainly attributable to decreases in the price of snow crab, shrimp and herring. The most valuable Canadian exports in 2006 were lobster, farmed salmon, shrimp and snow crab, which combined represented almost 60% of the total value of Canadian seafood exports during the year.

**Table 4.1: Total value of Canadian exports, fish and seafood products, by species, 2004-2006**

Species	Export Value (\$m)			% change 05-06
	2004	2005	2006	
<b>Groundfish</b>	<b>481</b>	<b>476</b>	<b>442</b>	<b>-7%</b>
Cod, Haddock	154	126	111	-12%
Halibut, Flounders	115	98	76	-22%
Hake	59	69	85	24%
Greenland Turbot	39	61	55	-10%
Other	114	122	115	-6%
<b>Pelagic fish</b>	<b>912</b>	<b>1,014</b>	<b>992</b>	<b>-2%</b>
Herring, Mackerel, Sardines	241	280	209	-25%
Salmon, farmed	404	492	540	10%
Salmon, wild	170	150	145	-3%
Tuna	39	31	29	-7%
Other	59	62	69	12%
<b>Shellfish</b>	<b>2,653</b>	<b>2,423</b>	<b>2,278</b>	<b>-6%</b>
Lobster	952	992	1,004	1%
Crab, snow	659	488	426	-13%
Crab, other	266	159	94	-41%
Shrimp	438	478	456	-4%
Scallop	131	108	100	-8%
Clams	109	99	101	2%
Other	97	99	97	-2%
<b>Other marine species</b>	<b>277</b>	<b>275</b>	<b>263</b>	<b>-5%</b>
<b>Freshwater fish</b>	<b>132</b>	<b>124</b>	<b>118</b>	<b>-5%</b>
Perch	26	25	23	-8%
Pickeral	37	37	39	6%
Other	68	62	56	-10%
<b>Total</b>	<b>4,455</b>	<b>4,313</b>	<b>4,094</b>	<b>-5%</b>

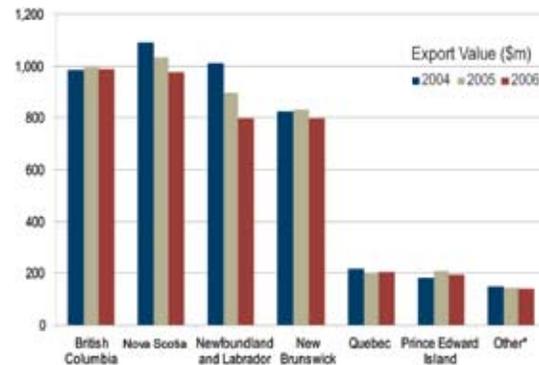
Source: Statistics Canada, International Trade Division.

In 2006, most species experienced only minor fluctuations in terms of export values. However, farmed salmon exports increased by \$48 million (+10%) from 2005 due to a higher price in 2006. Hake exports also experienced a good year with an increase of \$16 million (+24%).

On the other hand, the value from sardine exports decreased by \$71 million (-25%). Rock crab and Pacific Dungeness crab exports decreased by \$65 million (-41%). Snow crab have followed a similar trend with a \$62 million (-13%) decrease compared to 2005. Halibut and other flounders also showed a decrease of \$22 million (-22%). Finally, cod and haddock also had weaker export performance, decreasing by \$15 million (-12%).

In 2006, the provinces of British Columbia, Nova Scotia, Newfoundland and Labrador and New Brunswick were the main exporters of Canadian seafood. Individually, the seafood export value of each of the provinces exceeded \$750 million, and together they amounted to 87% of the total value of Canadian seafood exports in 2006.

**Figure 4.1: Total value of Canadian seafood exports by province, 2004-2006**



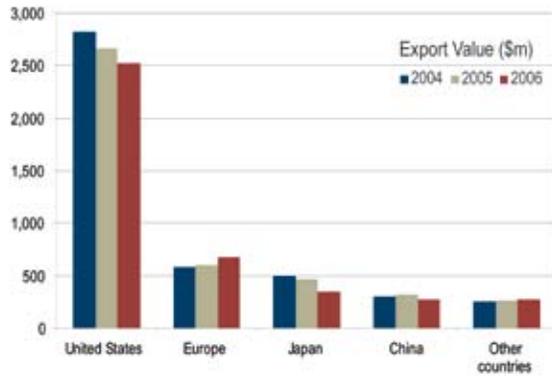
\*Ontario, Manitoba, Saskatchewan, Alberta, Northwest Territories, Yukon, Nunavut. Source: Statistics Canada, International Trade Division.

The main markets for Canadian fish and seafood are the United States, Japan and European countries. The United States remains the largest among these markets. Between 2004 and 2006, the US market has absorbed on average two-thirds of Canadian seafood product exports (in terms of value). The European market (mainly the United Kingdom and Denmark) came second with 14% of the export value, followed by Japan with 8%. Finally, 7% of Canadian exports of fish and seafood went to China in 2006.

Several countries showed growth in terms of an important export market for Canadian seafood products. Russia, ranked 11<sup>th</sup> in 2006, had a 107% increase in Canadian imports since 2004, from \$21 million to almost \$44 million. The Netherlands, ranked 13<sup>th</sup>, imported over \$31 million of Canadian seafood exports, up from \$17 million in 2004 (+84%). The Ukraine showed

a sharp increase of 477% since 2004, from \$4 million (ranked 29th) to nearly \$25 million, now ranked 15<sup>th</sup>.

**Figure 4.2: Value of Canadian seafood exports by major markets, 2004-2006**

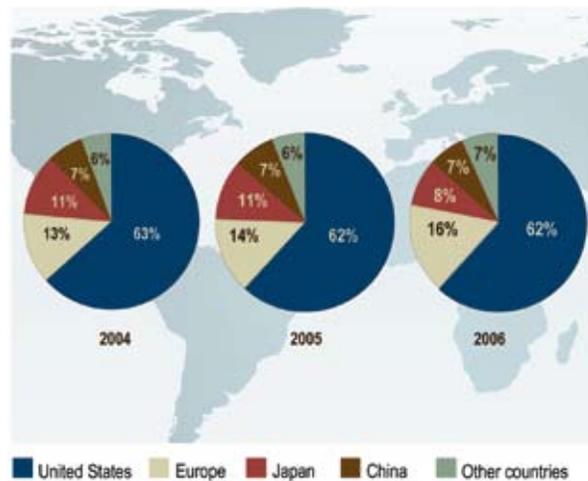


Source: Statistics Canada, International Trade Division.

Sockeye, Pink and Chum salmon exports from British Columbia and northern shrimp, spiny dogfish and mackerel exports from the Atlantic Provinces mainly went to the European market in 2006. As for the American market, it absorbed most Canadian exports of lobster, aquaculture salmon, Chinook, Coho and sockeye salmon, scallop, snow crab and most groundfish, except for hake. Finally, Japan was the main destination for herring, sea urchin, albacore tuna, Pacific Dungeness crab, Greenland turbot and sablefish.

Between 2004 and 2006, the share of the total export value of Canadian fish and seafood destined for the United States decreased from 63.4% to 61.7%, while that of Canadian exports to Europe rose from 13% in 2004 to 16.5% in 2006.

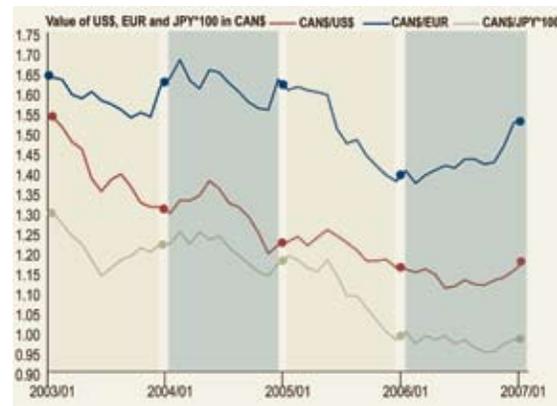
**Figure 4.3: Share (%) of the value of Canadian exports, by major markets, 2004-2006.**



Source: Statistics Canada, International Trade Division.

One likely cause of the decrease in Canadian seafood exports to the United States is the exchange rate. Between 2004 and 2006 the US dollar greatly depreciated in value against the Canadian dollar. In January 2004, for every Canadian dollar of imports, US importers were paying \$0.77 US. This is in stark contrast to May, 2006 when U.S. importers were paying \$0.90 US for each Canadian dollar of exports. In comparison, the value of the Euro has remained more stable against the Canadian dollar. This development made the European market more attractive to Canadian exporters, and partly explains the increase in exports to this market between 2004 and 2006.

**Figure 4.4: Movement of exchange rates between the Canadian dollar and the US dollar, the euro and the Japanese yen, 2003/01 – 2007/01**



Source: Bank of Canada.

## 4.2 Imports

Canadian imports of marine, freshwater and aquaculture products reached a total value of \$2.12 billion in 2006, which represents an increase of \$42 million (+2%) compared to 2005. The main imported species were shrimp, lobster, tuna, salmon, cod and haddock. Together, these species represented almost half the total value of Canadian fish imports in 2006.

**Table 4.2: Total value of Canadian imports, fish and seafood products, by species, 2004-2006**

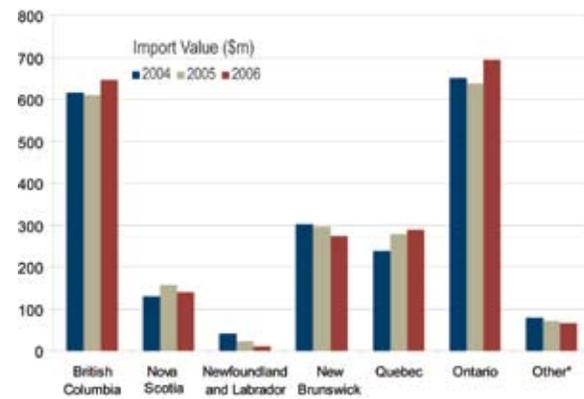
Species	Import Value (\$m)			% change 05-06
	2004	2005	2006	
<b>Groundfish</b>	<b>322</b>	<b>284</b>	<b>281</b>	<b>-1%</b>
Cod, Haddock	139	109	96	-12%
Halibut	83	84	96	14%
Other	100	92	89	-3%
<b>Pelagic fish</b>	<b>405</b>	<b>387</b>	<b>358</b>	<b>-8%</b>
Herring, Mackerel	32	31	29	-6%
Salmon, farmed	37	30	23	-23%
Salmon, wild	180	169	149	-12%
Tuna	140	139	141	1%
Other	16	18	16	-11%
<b>Shellfish</b>	<b>887</b>	<b>909</b>	<b>918</b>	<b>1%</b>
Lobster	206	215	208	-3%
Crab, snow	10	2	5	165%
Crab, other	51	72	79	11%
Shrimp	409	391	409	4%
Scallop	42	60	62	3%
Clams	44	38	36	-6%
Other	126	130	119	-9%
<b>Other marine species</b>	<b>370</b>	<b>409</b>	<b>464</b>	<b>13%</b>
<b>Freshwater fish</b>	<b>72</b>	<b>85</b>	<b>95</b>	<b>12%</b>
<b>Total</b>	<b>2,056</b>	<b>2,074</b>	<b>2,116</b>	<b>2%</b>

Source: Statistics Canada, International Trade Division.

The import value of shrimp, crab, halibut, yellowfin tuna and haddock has increased by \$46.8 million in 2006, while that of sockeye salmon, cod, lobster and sole has decreased by \$54 million.

The provinces of Ontario, British Columbia, Quebec and New Brunswick were the main importers of seafood in Canada in 2006. Together, they accounted for 90% of the total value of Canadian seafood imports in 2006.

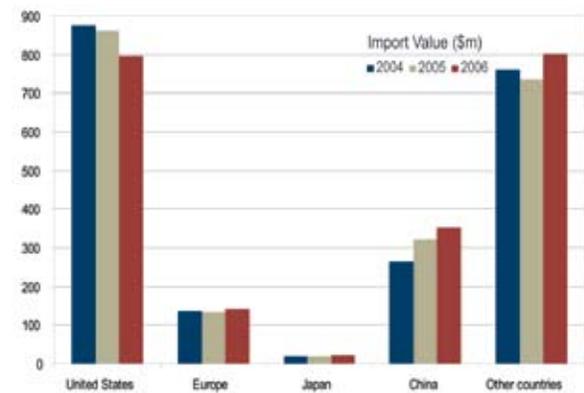
**Figure 4.5: Total value of Canadian seafood imports by province, 2004-2006**



\*Prince Edward Island, Manitoba, Saskatchewan, Alberta, Yukon.  
Source: Statistics Canada, International Trade Division.

In 2006, 37.7% of the total value of Canadian imports of fish and seafood came from the United States, for a total of \$797 million. China came second with 16.6% of the total import value, followed by Thailand with 12.7%, and then Chile and Vietnam with 4.6% and 4.3% respectively.

**Figure 4.6: Total value of Canadian seafood imports by major markets, 2004-2006**



Source: Statistics Canada, International Trade Division.

## 5 Appendix I: Overview of the main fishing fleets in Canada

### Notes regarding all tables:

1. The overview of marine commercial fishing fleets is presented for all six administrative regions of DFO. Figure 5.1 below presents a subdivision of Canada showing DFO administrative regions.
2. A “fish harvester” is defined here as the holder of one or more commercial fishing licenses that was active in 2006, i.e. that landed at least 1kg of marine or freshwater species during the year. Fleets are in general mutually exclusive; however it may happen that some fish harvesters are counted as part of more than one fleet. Hence, numbers for fish harvesters are approximations, and not directly comparable with numbers in the remainder of this statistical review.

**Figure 5.1: DFO administrative regions**



Source: DFO, Economic Analysis and Statistics.

**Table 5.1: Overview of main fleets, DFO Maritimes Region (Southern New Brunswick and Nova Scotia except Northumberland Strait)**

Fishing Fleet	Fishing Method	Management Method	Vessel Length	Number of Fish Harvesters	Main (directed) Species	Landed Value in 2006 (\$m)
Multispecies Non-Vessel	Rakes, Tongs	Competitive	Non-Vessel	277	Clams	\$2m
Multispecies Inshore	Drag, Trawl, Traps, Gillnet, Longline, Seine	Competitive, Trap Limits, IQ	< 65'	3,552	Lobster, Groundfish, Snowcrab, Scallop, Swordfish, Herring, Sea Urchins, Shrimp, Tuna, Mackerel	\$481m
Multispecies Midwater	Trawl, Gillnet	Competitive, IQ	65' - 100'	26	Groundfish	\$20m
Multispecies Offshore	Drag, Trawl, Traps	IQ, Trap Limits	> 100'	20	Scallop, Shrimp, Clams, Lobster, Groundfish	\$98m
Aboriginal Bands	Drag, Trawl, Traps, Gillnet, Longline, Seine	Competitive, Trap Limits, IQ	All	20	Snowcrab, Lobster, Groundfish, Scallop, Shrimp, Sea Urchins	\$21m
<i>Other</i>						\$28m
<b>Total</b>				<b>3,895</b>		<b>\$650m</b>

Source: DFO, Maritimes Region, Statistics and Licencing Units.

**Table 5.2: Overview of main fleets, DFO Gulf region (Eastern New-Brunswick, Prince Edward Island, Nova Scotia's Northumberland Strait)**

Fishing Fleet	Fishing Method	Management Method	Vessel Length	Number of Fish Harvesters	Main (directed) Species	Landed Value in 2006 (\$m)
Crabbers	Traps	IQ	< 45' and 50' - 100'	249	Snow Crab	<b>\$38m</b>
Shrimp fishers	Trawl	IQ	All	19	Shrimp	<b>\$6m</b>
Herring Seiners	Purse Seine	IQ	> 65'	5	Herring	<b>\$1m</b>
Lobster / Multi-species	Traps, Gillnet, Hook & Line	Trap Limits (75-375)	< 45'	2,975	Lobster (Directed), Herring, Tuna, Snow Crab, Groundfish	<b>\$219m</b> , inc. \$194m lobster and \$10m herring
Groundfish Specialists	Trawl, Seine, Longline, Gillnet	IQ and Competitive	< 65'	41	Groundfish (Directed), Shrimp, Snow crab	<b>\$3m</b> , inc. \$1m snow crab, \$1m shrimp and \$1m groundfish
Aboriginals	Traps	IQ, Trap Limits (75-375)	< 45'	188	Snow Crab, Lobster	<b>\$15m</b> , inc. \$8m lobster and \$7m snow crab
<i>Other</i>						<i>\$30m</i>
<b>Total</b>				<b>3,477</b>		<b>\$312m</b>

Source: DFO, Gulf Region, Statistics and Licencing Units.

**Table 5.3: Overview of main fleets, DFO Quebec Region (Quebec)**

Fishing Fleet	Fishing Method	Management Method	Vessel Length	Number of Fish Harvesters <sup>1</sup>	Main (directed) Species	Landed Value in 2006 (\$m)
Crabbers	Traps	IQ	< 100'	157	Crab	<b>\$29m</b>
Lobster fishers	Traps	Trap limits	< 65'	571	Lobster	<b>\$40m</b>
Shrimp fishers	Trawl	IQ	< 100'	32	Shrimp	<b>\$12m</b>
Groundfish / Multispecies	Gillnet, Trawl, Traps	IQ and Competitive	< 45'	286	Cod, Greenland Halibut, Atlantic Halibut, Temporary Snow crab and Shrimp allocations	<b>\$9m</b>
Midshore Groundfish / Multispecies	Longline, Traps, Trawl	IQ and Competitive	> 45'	97	Cod, Greenland Halibut, Atlantic Halibut, Temporary Snow crab and Shrimp allocations	<b>\$8m</b>
Aboriginals	Trawl, Gillnet, Traps	IQ and Competitive	< 100'	11	Groundfish, Lobster, Shrimp and Snow crab	<b>\$9m</b>
<i>Other</i>						<b>\$20m</b>
<b>Total</b>				<b>1,154</b>		<b>\$126m</b>

<sup>1</sup>Number of active Quebec fish harvesters in 2006, "core" and "s/o" designations only.  
Source: DFO, Quebec Region, Statistics and Licensing Unit and Policy & Economics Branch.

**Table 5.4: Overview of main fleets, DFO Newfoundland and Labrador Region (Newfoundland and Labrador)**

Fishing Fleet	Fishing Method	Management Method	Vessel Length	Number of Fish Harvesters <sup>1</sup>	Main (directed) Species	Landed Value in 2006 (\$m)
Inshore	Pots, Gillnet, Traps, Rifles	IQ, Competitive	< 35'	3,994	Groundfish, Snow Crab, Lobster, Cod, Roe (lumpfish), Capelin, Seal	<b>\$91m</b> , inc. \$29m Lobster and \$20m Snow crab
Nearshore	Pots, Otter trawl, Gillnet, Purse seine, Rifles, Hakapik	IQ, Competitive	35' - 65'	920	Groundfish, Snow Crab, Shrimp (Pandalus Borealis), Seal skins, Mackerel, Greenland halibut	<b>\$202m</b> , inc. \$78m Snow crab and \$56m Shrimp
Midshore	Pots, Purse seine, Gillnet	IQ, Competitive	65' - 100'	10	Snow Crab, Mackerel, Greenland halibut, Shrimp, Herring, Capelin	<b>\$9m</b> , inc. \$4m Greenland halibut and \$1m Herring
Offshore	Otter Trawl, Pots	Enterprise allocations, IQ, Competitive	100' +	12	Shrimp (Pandalus Borealis), Clams (Stimpsons surf), Greenland halibut, Yellowtail flounder, Snow Crab, Cod	<b>\$172m</b> , inc. \$101m Shrimp (Pandalus Borealis), \$28m Stimpsons surf clams, and \$16m Greenland halibut
Aboriginal, Inshore	Pots, Gillnet, Traps, Rifles	IQ, Competitive	< 35'	4	Groundfish, Snow Crab, Lobster, Cod, Roe (lumpfish), Capelin, Herring, Mackerel	<b>n/a</b>
Aboriginal, Nearshore	Pots, Otter trawl, Gillnet, Purse seine, Rifle, Hakapik	IQ, Competitive	35' - 65'	9	Groundfish, Snow Crab, Seal skins, Mackerel, Greenland halibut, Bluefin Tuna, Swordfish, Tuna, Scallop	<b>n/a</b>
Aboriginal, Offshore	Gillnet, Otter Trawl	Enterprise allocations, Competitive	65' - 100'	1	Groundfish, Greenland halibut, Shrimp	<b>n/a</b>
<b>Total</b>				<b>4,950</b>		<b>\$474m</b>

<sup>1</sup>Active "core" fish harvesters in 2006 only.

Source: DFO, Newfoundland and Labrador Region, Statistics and Licencing Units.

Table 5.5: Overview of main fleets, DFO Pacific Region (British Columbia)

Fishing Fleet	Fishing Method	Management Method	Vessel Length	Number of Fish Harvesters <sup>1</sup>	Main (directed) Species	Landed Value in 2006 (\$m)
Shellfish	Dive, Dredge, Trawl, Traps, Hand picking or digging, Longline, Seine	IQ, Competitive, Trap Limits	12' - 150'	757	Prawn, Shrimp, Geoduck, Dungeness crab, Clam, Horse clam, Euphausiid, Sea urchins, Sea cucumber, Opal squid	<b>\$93m</b> , including \$37m Prawn and Shrimp and \$24m Geoduck
Groundfish - multispecies	Trawl, Longline	IQ, Competitive	9' - 187'	334	Groundfish (Rockfish, Longspine/Shortspine thornyheads, Greenlings, Lingcod, Perch, Cod, Sole, Flounder, Dogfish, Pollock, Hake, Tuna)	<b>\$62m</b>
Pacific Halibut	Longline	IQ	9' - 85'	433	Halibut	<b>\$45m</b>
Sablefish	Longline, Traps	IQ	23' - 116'	48	Sablefish	<b>\$63m</b>
Salmon	Gillnet, Purse seine, Troll	Competitive	17' - 100'	1,675	Sockeye, Coho, Pink, Chum, Chinook	<b>\$60m</b>
Herring	Purse seine, Gillnet, Seine, Dip net	IQ, Competitive	20' - 101'	134	Herring, Herring Roe, Herring spawn on kelp	<b>\$19m</b>
<i>Other</i>						<b>\$18m</b>
<b>Total</b>				<b>3,381</b>		<b>\$360m</b>

<sup>1</sup>Since data on the number of active fish harvesters is not available for Pacific region, the number of vessels in 2006 was used as a proxy.  
Source: DFO, Pacific Region, Statistics and Licensing Units.

**Table 5.6: Overview of main fleets, DFO Central & Arctic Region (Freshwater fisheries and Canadian Arctic)**

Fishing Fleet	Fishing Method	Management Method	Vessel Length	Number of Fish Harvesters	Main (directed) Species	Landed Value in 2006 (\$m)
Groundfish, North Atlantic (NAFO Sub-Area 0)	Trawl, Longline, Gillnet	IQ	> 65', under ice longlining	4	Greenland halibut	n/a
Shrimp, North Atlantic (NAFO Sub-Area 0)	Trawl	IQ	> 65'	4	Shrimp (Pandalus Borealis)	n/a
Freshwater Fisheries (MB, SK, AB, NWT and Northwestern Ontario)	Gillnet	Competitive	n/a	2,460	Whitefish, Pickerel, Pike, other	<b>\$29m</b>
Great Lakes Fisheries	Gillnet, Trap net, Trawl, Hoop net, Other	IQ	n/a	476	Yellow Perch, Walleye, Lake Whitefish, Bass, Smelt, other	<b>\$36m</b>
Aboriginals	Gillnet	Competitive	n/a	362	Arctic Char	<b>\$0m</b>
<b>Total</b>				<b>3,306</b>		<b>\$65m</b>

Source: DFO, Central and Arctic Region, Policy &amp; Economics Branch.

## 6 Appendix II: Landings tables, marine fisheries

Table 6.1: Landed volume of the main marine species fished in Canada, thousand tonnes, 2004-2006

Main species, by ISSCAAP division	Landed Weight (,000 t)			% of Total (2006)	% change 2005-2006
	2004	2005	2006		
<b>Diadromous fishes</b>	<b>32</b>	<b>34</b>	<b>30</b>	<b>3%</b>	<b>-12%</b>
Salmon	26	28	24	2%	-16%
Other diadromous fish	6	5	6	1%	7%
<b>Marine fishes</b>	<b>615</b>	<b>601</b>	<b>554</b>	<b>51%</b>	<b>-8%</b>
<b>Groundfish</b>	<b>295</b>	<b>293</b>	<b>258</b>	<b>24%</b>	<b>-12%</b>
Atlantic halibut	2	2	2	0%	3%
Greenland halibut	15	16	15	1%	-6%
Pacific halibut	7	7	8	1%	18%
Cod, Atlantic	25	26	27	3%	5%
Haddock	16	20	17	2%	-17%
Hake, North Pacific	125	104	97	9%	-7%
Rockfishes, Pacific	20	19	19	2%	2%
Sablefish	3	5	10	1%	102%
Other groundfish	83	95	64	6%	-33%
<b>Pelagic fish</b>	<b>319</b>	<b>307</b>	<b>296</b>	<b>27%</b>	<b>-4%</b>
Herring	183	163	160	15%	-2%
Herring, Pacific	25	30	23	2%	-23%
Swordfish	1	2	1	0%	-11%
Tuna	7	5	6	1%	23%
Mackerel	54	56	54	5%	-4%
Capelin	34	37	42	4%	14%
Other pelagic fish	16	14	9	1%	-34%
<b>Crustaceans</b>	<b>350</b>	<b>333</b>	<b>338</b>	<b>31%</b>	<b>1%</b>
Crab, Dungeness	9	5	4	0%	-29%
Crab, Snow (Queen)	103	95	90	8%	-6%
Lobster	48	52	54	5%	5%
Shrimp	179	170	181	17%	6%
Other crustaceans	11	11	9	1%	-15%
<b>Molluscs</b>	<b>130</b>	<b>101</b>	<b>117</b>	<b>11%</b>	<b>16%</b>
Scallop	82	57	63	6%	11%
Clams, Pacific geoduck	2	2	1	0%	-18%
Clams, Stimpson Surf	24	19	22	2%	14%
Other molluscs	22	23	30	3%	32%
<b>Other<sup>1</sup></b>	<b>56</b>	<b>56</b>	<b>50</b>	<b>5%</b>	<b>-10%</b>
<b>Total</b>	<b>1,182</b>	<b>1,124</b>	<b>1,089</b>	<b>100%</b>	<b>-3%</b>

<sup>1</sup>Other = "Whales, seals and other aquatic mammals", "Miscellaneous aquatic animals", "Miscellaneous aquatic products" and "Aquatic plants".  
Source: DFO, Economic Analysis and Statistics.

Table 6.2: Landed value of the main marine species fished in Canada, million dollars, 2004-2006

Main species, by ISSCAAP division	Landed Value (\$m)				
	2004	2005	2006	% of Total (2006)	% change 2005-2006
<b>Diadromous fishes</b>	<b>58</b>	<b>42</b>	<b>66</b>	<b>3%</b>	<b>57%</b>
Salmon	53	36	60	3%	68%
Other diadromous fish	5	6	6	0%	-6%
<b>Marine fishes</b>	<b>453</b>	<b>471</b>	<b>461</b>	<b>24%</b>	<b>-2%</b>
<b>Groundfish</b>	<b>306</b>	<b>316</b>	<b>329</b>	<b>17%</b>	<b>4%</b>
Atlantic halibut	15	15	16	1%	11%
Greenland halibut	37	40	36	2%	-9%
Pacific halibut	57	48	45	2%	-7%
Cod, Atlantic	35	34	37	2%	9%
Haddock	20	27	27	1%	0%
Hake, North Pacific	29	28	26	1%	-7%
Rockfishes, Pacific	28	27	26	1%	-3%
Sablefish	22	31	63	3%	105%
Other groundfish	62	67	52	3%	-22%
<b>Pelagic fish</b>	<b>147</b>	<b>155</b>	<b>132</b>	<b>7%</b>	<b>-15%</b>
Herring	36	39	34	2%	-13%
Herring, Pacific	36	33	19	1%	-42%
Swordfish	10	13	12	1%	-11%
Tuna	32	26	28	1%	9%
Mackerel	17	25	20	1%	-19%
Capelin	9	11	12	1%	9%
Other pelagic fish	7	7	6	0%	-15%
<b>Crustaceans</b>	<b>1,541</b>	<b>1,394</b>	<b>1,165</b>	<b>61%</b>	<b>-16%</b>
Crab, Dungeness	47	28	21	1%	-24%
Crab, Snow (Queen)	613	359	215	11%	-40%
Lobster	593	698	647	34%	-7%
Shrimp	280	300	274	14%	-9%
Other crustaceans	8	8	7	0%	-10%
<b>Molluscs</b>	<b>212</b>	<b>168</b>	<b>176</b>	<b>9%</b>	<b>5%</b>
Scallop	117	82	88	5%	6%
Clams, Pacific geoduck	34	32	24	1%	-23%
Clams, Stimpson Surf	31	23	29	2%	30%
Other molluscs	30	31	35	2%	11%
<b>Other<sup>1</sup></b>	<b>52</b>	<b>45</b>	<b>55</b>	<b>3%</b>	<b>22%</b>
<b>Total</b>	<b>2,316</b>	<b>2,120</b>	<b>1,922</b>	<b>100%</b>	<b>-9%</b>

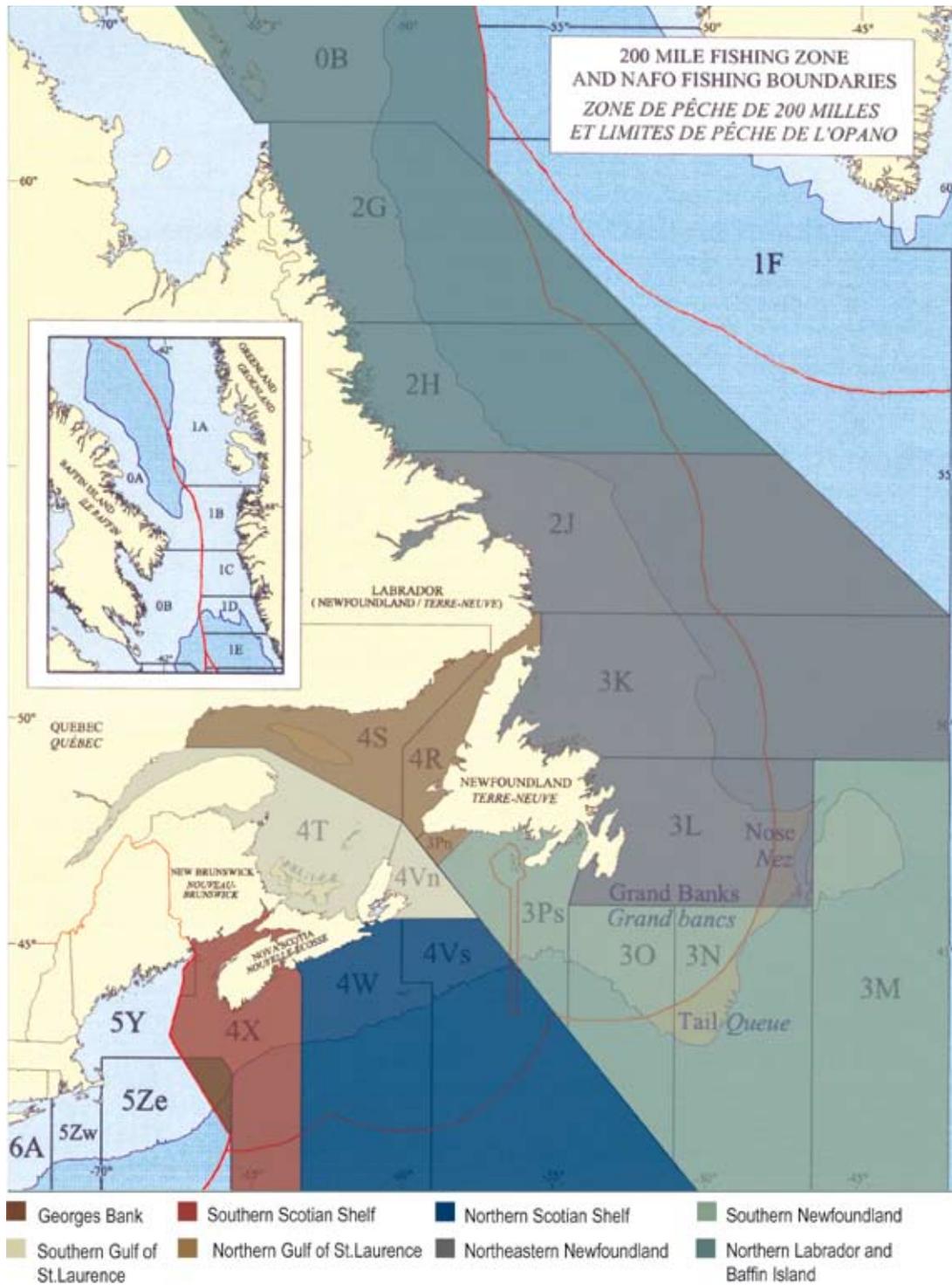
<sup>1</sup>Other = "Whales, seals and other aquatic mammals", "Miscellaneous aquatic animals", "Miscellaneous aquatic products" and "Aquatic plants".  
Source: DFO, Economic Analysis and Statistics.

Table 6.3: Landed price of the main marine species fished in Canada, \$/kg 2004-2006

Main species, by ISSCAAP division	Landed Price (\$/kg)				
	2004	2005	2006	% change 2005-2006	% change 2004-2006
<b>Diadromous fishes</b>	<b>1.84</b>	<b>1.25</b>	<b>2.23</b>	<b>79%</b>	<b>21%</b>
Salmon	2.04	1.26	2.52	99%	23%
Other diadromous fish	0.90	1.19	1.04	-12%	16%
<b>Marine fishes</b>	<b>0.74</b>	<b>0.78</b>	<b>0.83</b>	<b>6%</b>	<b>13%</b>
<b>Groundfish</b>	<b>1.04</b>	<b>1.08</b>	<b>1.28</b>	<b>18%</b>	<b>23%</b>
Atlantic halibut	8.21	8.28	8.91	8%	9%
Greenland halibut	2.55	2.57	2.49	-3%	-2%
Pacific halibut	8.72	7.31	5.73	-22%	-34%
Cod, Atlantic	1.42	1.30	1.35	4%	-5%
Haddock	1.24	1.31	1.58	20%	28%
Hake, North Pacific	0.24	0.27	0.27	0%	15%
Rockfishes, Pacific	1.37	1.43	1.36	-5%	-1%
Sablefish	7.32	6.50	6.59	1%	-10%
Other groundfish	0.74	0.70	0.82	17%	10%
<b>Pelagic fish</b>	<b>0.46</b>	<b>0.50</b>	<b>0.44</b>	<b>-12%</b>	<b>-3%</b>
Herring	0.20	0.24	0.21	-11%	9%
Herring, Pacific	1.44	1.09	0.83	-24%	-43%
Swordfish	8.40	8.40	8.47	1%	1%
Tuna	4.81	5.36	4.76	-11%	-1%
Mackerel	0.32	0.45	0.38	-16%	18%
Capelin	0.27	0.29	0.28	-4%	3%
Other pelagic fish	0.42	0.49	0.63	28%	48%
<b>Crustaceans</b>	<b>4.41</b>	<b>4.18</b>	<b>3.44</b>	<b>-18%</b>	<b>-22%</b>
Crab, Dungeness	4.97	5.18	5.51	6%	11%
Crab, Snow (Queen)	5.93	3.76	2.40	-36%	-59%
Lobster	12.45	13.52	11.88	-12%	-5%
Shrimp	1.57	1.76	1.51	-14%	-4%
Other crustaceans	0.79	0.76	0.80	5%	1%
<b>Molluscs</b>	<b>1.63</b>	<b>1.66</b>	<b>1.51</b>	<b>-9%</b>	<b>-8%</b>
Scallop	1.43	1.44	1.38	-4%	-3%
Clams, Pacific geoduck	19.13	20.29	19.03	-6%	-1%
Clams, Stimpson Surf	1.27	1.17	1.34	15%	5%
Other molluscs	1.35	1.37	1.15	-16%	-15%
<b>Other<sup>1</sup></b>	<b>0.93</b>	<b>0.81</b>	<b>1.10</b>	<b>36%</b>	<b>18%</b>
<b>Total</b>	<b>1.96</b>	<b>1.89</b>	<b>1.77</b>	<b>-6%</b>	<b>-10%</b>

<sup>1</sup>Other = "Whales, seals and other aquatic mammals", "Miscellaneous aquatic animals", "Miscellaneous aquatic products" and "Aquatic plants".  
Source: DFO, Economic Analysis and Statistics.

## 7 Appendix III: Map of NAFO fishing areas



Source: DFO, Communications Branch and Economic Analysis and Statistics.

