Fisheries and Oceans Canada
Pêches et Océans Canada

Canadian Fisheries Statistics 2004


ECONOMIC ANALYSIS AND STATISTICS

POLICY SECTOR

OTTAWA

Canada

Published by:

Statistical Services
Economic Analysis and Statistics
Policy Sector
Fisheries and Oceans Canada
Ottawa, Ontario
K1A 0E6

Catalogue number: Fs1-9/2003

ISBN 978-0-662-49792-9

DFO/2007-1164

La version française de cette publication est disponible sur demande.

This publication should be quoted as follows: DFO, 2007, Canadian Fisheries Statistics 2004. Ottawa: Fisheries and Oceans Canada.

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. The format of the 2004 edition, which covers 2002 to 2004, differs from previous years: detailed tables now appear on a CD-ROM and the printed document accompanying the CD-ROM provides summary and highlights of Canadian fisheries and fishing industry.

The Canadian fisheries covered in this report include marine and freshwater commercial fisheries as well as aquaculture. For information on recreational fisheries in Canada, please refer to the Statistical Services web-site at http://www.dfo-mpo.gc.ca/communic/statistics/recreational/index_e.htm.

Acknowledgments

This report was prepared by Thomas Larouche in cooperation with Yves Gagnon and Lewis Sonsini under the supervision of Rowena Orok, Chief, Statistical Services, Economic Analysis and Statistics, Policy Sector.

We would like to thank the following regional and headquarters staff for their excellent collaboration in the preparation of this publication:

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Methodology and data sources

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

This publication follows FAO's ISSCAAP[1], the "International Standard Statistical Classification of Aquatic Ani-mals and Plants" as the classification framework to present detailed tables by species and species sub-groups. ISSCAAP divides commercial species in 50 groups based on their characteristics related to taxonomy, ecology and economics.

In terms of Canadian domestic imports and exports, the species are grouped according to the Harmonized System (HS) of classification and the data come 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
NAFO	Northwest Atlantic Fisheries Organization
FAO	Food and Agriculture Organization of the United Nations
Atl.	Atlantic
Pac.	Pacific
#	number
IQ	individual quota
..	not available (n/a)
…	not applicable
x	confidential data

[1] 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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1 Fisheries and the Canadian economy

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

1.1 Commercial fisheries, aquaculture and processing

In 2004, the total value of sea port landings by commercial fishers reached $2.26 billion (1.11 million tonnes) in Canada, slightly higher when compared to 2002 (by $76 million or 3%). The higher price of snow crab and Greenland halibut in 2004 and the 45,000-tonne increase in the total volume of landings (4%) contributed to the rise in the value of all landings.

Commercial freshwater fisheries and aquaculture did not fare as well as marine fisheries during the year. In 2004, the value of landings in freshwater ports reached $64 million, a $21 million drop (25%) over 2002. The value of aquaculture production was also lower, from $628 million in 2002 to $527 million in 2004. The 16% decrease ($101 million) was attributable in large part to the substantial decrease in aquaculture salmon production of almost 30,000 tonnes (23%) in 2004.

Production by the fish and seafood processing industry reached a value of $4.37 billion in 2004, almost $300 million lower than in 2002 (6%). The marked depreciation of the American dollar vis-à-vis the Canadian dollar between 2002 and 2004 (from $1.60 CAN to $1.22 CAN for every US dollar) has largely contributed to this decrease, especially given that the majority of this industry's production is destined for export to the American market (more than 65%, on average, of Canadian fish and seafood products exports between 2002 and 2004).

Table 1.1: Value of the commercial fisheries, aquaculture and processing in Canada

Industry	Value of production ($m)			
	2002	2003	2004	Change 2002-04 (%)
Marine fisheries	2,185	2,272	2,261	3%
Freshwater fisheries	85	72	64	-25%
Aquaculture	628	591	527	-16%
Processing[1]	4,664	4,699	4,374	-6%
Total	**7,563**	**7,633**	**7,225**	**-4%**

[1]Seafood product preparation and packaging.
Sources: Statistics Canada and DFO, Economic Analysis and Statistics.

1.2 Contribution to the economy

Canada's employment numbers in the three fishing-related industries decreased in 2004. The commercial fishing harvesting industry employed 50,867 fishers and crew members, 1,396 less than the 2002 figure (-3%). The aquaculture industry employed 3,985 workers, 265 fewer than in 2002 (-6%).

The fish and seafood processing industry accounted for 32,204 workers in 2004 or 2,059 workers less than in 2002 (-6 %).

Table 1.2: Employment by industry

Industry	Employment estimates (number of persons)			
	2002	2003	2004	Change 2002-04 (%)
Fishing (Harvesting)	52,263	51,982	50,867	-3%
Processing[1]	34,236	35,185	32,204	-6%
Aquaculture	4,250	4,005	3,985	-6%
Total	**90,749**	**91,172**	**87,056**	**-4%**

[1]Seafood product preparation and packaging.
Sources: Statistics Canada and DFO, Economic Analysis and Statistics.

These three industries combined account for less than 1% of the Canadian gross domestic product (GDP), but their contribution is relatively more important at the regional and community levels across the country, particularly in the coastal communities of Nova Scotia, Prince Edward Island, Newfoundland and Labrador, New Brunswick, Quebec and British Columbia.

1.3 International trade

Despite the relatively modest position occupied by the fishing industry in the Canadian economy, Canada is one of the world's leading exporters of fish and seafood (ranked sixth worldwide in terms of the value of exports in 2004). However, as with most Canadian primary industries, the United States remains the principal export market, which, in the short-run, makes the fishing industry highly vulnerable to fluctuations in the exchange rate between the Canadian and the American dollar.

2 Canada's position among the world's fisheries

CD - Section 2: 2.1.1 - 2.1.5

2.1 Capture

According to the Food and Agriculture Organization of the United Nations (FAO), Canada ranked 18th worldwide in terms of the total volume of marine catches in 2004 (the total volume of catches from Canadian waters represented 1% of the world total). The top three rankings in 2004 were occupied by China, Peru and Chile, respectively. Collectively, they accounted for more than one-third of the world's marine catches.

Canada occupies an important position in terms of the volume of landings for certain species groups: in 2004, Canada made up 20% of the total world harvest of the 'lobsters, spiny rock lobster' species group and about 10% of world harvest for scallops, sea urchins and crabs.

Table 2.1: Volume of landings by ISSCAAP groups, Canada and the World, 2004[1]

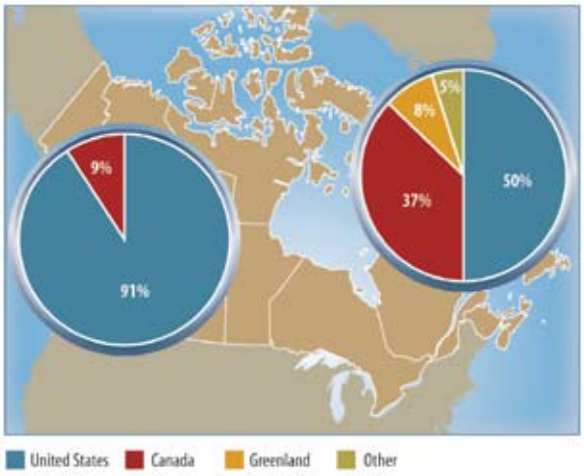
ISSCAAP Group[1]	Volume of landings 2004 (t)		
	Canada	World	% Can.
Lobsters, spiny-rock lobster	47,479	232,922	20%
Scallops	82,606	800,542	10%
Sea urchins and other echinoderms	10,247	111,183	9%
Crabs, sea spiders	123,283	1,360,953	9%
Flounders, halibuts, soles	54,003	874,929	6%
Shrimp	178,768	3,602,942	5%
Clams, cockles, arkshells	39,370	846,914	5%
Kelp	33,328	767,274	4%
American eel	329	10,118	3%
Salmons, trouts, smelts	26,629	878,609	3%
Others	521,497	76,937,026	1%
Total	**1,117,539**	**86,423,412**	**1%**

[1]ISSCAAP: International Standard Statistical Classification of Aquatic Animals and Plants.
Sources: DFO, Economic Analysis and Statistics and FAO, Fishstat.

In the two FAO fishing zones[2] where almost all Canadian fisheries are located, the Pacific Northeast (zone 67) and the Atlantic Northwest (zone 21), Canada ranks second and has accounted for 21% of the volume of catches in both zones since 2002. The United States is ranked first with 73% of the catches. The total catches in the Pacific Northeast and the Atlantic Northwest represented approximately 5% of world marine catches in 2004.

[2] A map of the different fishing zones is available on the FAO website at www.fao.org/fi/

Figure 2.1: Total catches on the Atlantic and Pacific coasts of Canada and the United States (FAO zones 21 and 67), by country, 2004



Source: FAO, Fishstat.

Canada has a more significant position in the Atlantic Northwest than in the Pacific Northeast. In 2004, Canadian fishers accounted for 37% of catches (871,000 metric tonnes) reported in zone 21, the Atlantic Northwest, versus only 9% of catches in zone 67, the Pacific Northeast.

On average, the United States was responsible for almost half of total catches in the Atlantic Northwest, between 2002 and 2004, just ahead of Canada's 37%. Canada's ranking was more important in the early 1990s in terms of volume: catches by Canadian fishers represented 42% of the total catches (the average between 1988 and 1990) compared to the 40% share for their American counterparts. Note that the volume of catches plummeted almost 30% in this fishing zone after the cod collapse of the early 1990s.

2.2 International trade

In 2004, Canada ranked 6th among the world's fish and seafood exporters (in terms of total export value) behind the United States and Denmark. This ranking was lower than in 2002 and 2003, when Canada ranked fifth, ahead of Denmark. China remained the leading world exporter of fish and seafood between 2002 and 2004.

The situation changed considerably during the last decade: in 1990, Canada and the United States were ranked 2nd and 1st, respectively, in terms of the value of exports of fish and seafood. Beginning 1991, the gradual decline in groundfish landings until the collapse of Atlantic cod in 1992, as well as the increase in aquaculture production in Asian countries prompted Canada's world export ranking to slip from 2nd to 7th place by 1993. Since then, increases in the price of crustaceans have allowed the country to regain some of its ranking.

China has been the most improved country: in 1990, it only ranked 6th among the world's fish and seafood exporters but beginning 2001, it climbed up to 1st place and has, since then, kept its position. China's significant aquaculture production and its processing sector activities explain this high value of fish and seafood exports in the country.

Table 2.2: Major world exporters of marine products, by value of exports, 2004

Rank	Country	Value of exports ($m)			
		2002	2003	2004	% of total (2004)
1	China	7,900	8,111	9,383	10 %
2	Norway	5,655	5,138	5,427	6 %
3	Thailand	5,797	5,489	5,274	6 %
4	United States	5,211	4,843	5,088	5 %
5	Denmark	4,528	4,520	4,654	5 %
6	**Canada[1]**	**4,807**	**4,646**	**4,563**	**5 %**
7	Spain	2,989	3,139	3,359	4 %
8	Chile	3,022	3,073	3,314	4 %
9	Netherlands	2,846	3,076	3,212	3 %
10	Vietnam	3,196	3,088	3,134	3 %
-	Other countries	46,829	45,185	46,778	50 %
Total		**92,780**	**90,309**	**94,185**	**100 %**

Note:
1. These totals may not match exactly those found in Section 4 due to the difference in data sources.
Sources: FAO, FishStat and Bank of Canada.

Canada imports far less fish and seafood than it exports and for that reason only ranked 13th on the world list of seafood importers in 2004. Japan and the United States were the two largest importers of fish and seafood products that year.

Table 2.3: Major world importers of marine products, by value of imports, 2004

Rank	Country	Value of imports ($m)			
		2002	2003	2004	% of total (2004)
1	Japan	21,767	17,679	19,295	19 %
2	United States	15,938	16,466	15,716	16 %
3	Spain	6,073	6,889	6,816	7 %
4	France	5,083	5,326	5,486	6 %
5	Italy	4,581	5,001	5,099	5 %
6	China	3,496	3,398	4,121	4 %
7	United Kingdom	3,699	3,551	3,699	4 %
8	Germany	3,832	3,723	3,683	4 %
9	Denmark	2,951	3,060	3,082	3 %
10	South Korea	2,956	2,743	2,939	3 %
11	Hongkong	2,806	2,484	2,509	3 %
12	Netherlands	2,110	2,399	2,407	2 %
13	**Canada[1]**	**2,160**	**2,030**	**2,040**	**2 %**
14	Belgium	1,679	1,956	1,992	2 %
-	Other countries	18,996	19,013	20,414	21 %
Total		**98,127**	**95,717**	**99,299**	**100 %**

Note:
1. These totals may not match exactly those found in Section 4 due to the difference in data sources.
Sources: FAO, FishStat and Bank of Canada.

2.3 Demand

According to FAO data, per capita consumption of fish and seafood in Canada was 23 kg in 2004. This was not very high in comparison with that of countries where most Canadian marine products were exported to, such as China, Japan, Iceland, Norway and France. Canadian fish and seafood consumption, however, did slightly exceed that of its main trading partner, the United States, where per capita consumption was 21 kg in 2004.

Table 2.4: Per capita annual consumption of marine and meat products, Canada and selected countries, 2004

Country	Per capita annual consumption (kg)				
	Fish and Seafood	Bovine meat	Pork	Chicken, Turkey	**Total**
Iceland	67	13	22	19	**120**
Japan	67	5	11	15	**97**
Norway	48	20	30	12	**111**
China	31	6	36	8	**81**
France	31	19	30	17	**97**
Canada[1]	**23**	**18**	**27**	**36**	**105**
United Kingdom	22	16	18	30	**85**
United States	21	24	17	51	**114**
Russia	19	16	9	16	**60**

Source: FAO, FAOSTAT.

3 Commercial fisheries and aquaculture

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

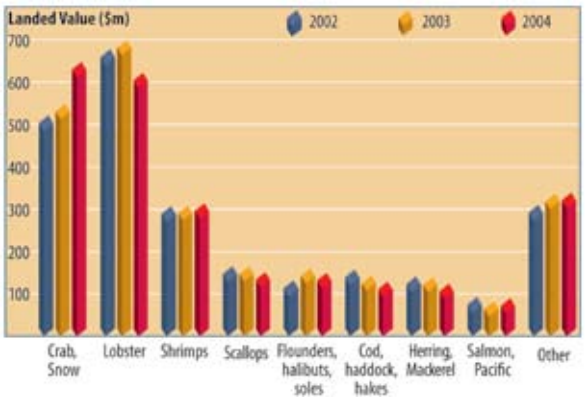
3.1 Commercial marine fisheries

CD - Section 3: 3.1.1 - 3.1.16

After the Atlantic cod collapse of 1992 and the subsequent moratorium on the species in several zones in Atlantic Canada, commercial fishing has been significantly transformed in Canada. During the early 1990s, groundfish (cod in particular) were very prominent in both the harvesting and processing sectors. After the cod collapse, and over time, their importance has substantially declined: in 2004, groundfish accounted for less than 10% of the total value of commercial marine fisheries landings in Canada.

Crustaceans have largely replaced groundfish as the major species, and given their relatively higher price, have also driven up the total value generated by the fish harvesting industry. In 2004, the value of landings for crustaceans represented close to 70% of the total commercial marine fisheries landings in Canada. However, in terms of volume, marine fisheries ranked far ahead of crustaceans. The latter, in spite of the fact that they made up two-thirds of the value of Canadian fisheries, only represented slightly more than 30% of the total volume of commercial marine fisheries landings in 2004.

Figure 3.1: Total value of landings, major commercial marine species, Canada, 2002-2004



Source: DFO, Economic Analysis and Statistics.

The most important crustaceans are lobster, snow crab and shrimp. These three alone represented, on average, more than 65% of the total value of landings of commercial marine species in Canada between 2002 and 2004. Between 2002 and 2004, the value of snow crab landings rose by $126 million (26%) reaching a total of $613 million. This in crease is attributable to an exceptionally high price of $5.93 per kilogram in 2004, despite a slight 3% decrease in the volume of landings.

The price of lobster and shrimp dipped in 2004 by 5% and 20%, respectively. The 3% drop in the volume of lobster landings combined with a lower price brought about an overall 8% drop in the value of lobster landings in 2004.

The value of shrimp landings, however, rose slightly (3%) in spite of the lower price, due to the abundance of this species which has led to an increase in quotas of close to 30% between 2002 and 2004.

Among the other commercial marine species in Canada, there were significant increases in the value of landings between 2002 and 2004 for Greenland halibut (+ $23m), Pacific Dungeness crab (+ $19m), Stimpson's surf clam, (+ $12m), capelin (+ $7m) and Pacific hake (+ $4m). The most significant declines in 2004 were in the value of landings for Pacific herring (- $15m), Atlantic cod (- $14m), scallop (- $12m), haddock (- $8m) and sablefish (-$6m).

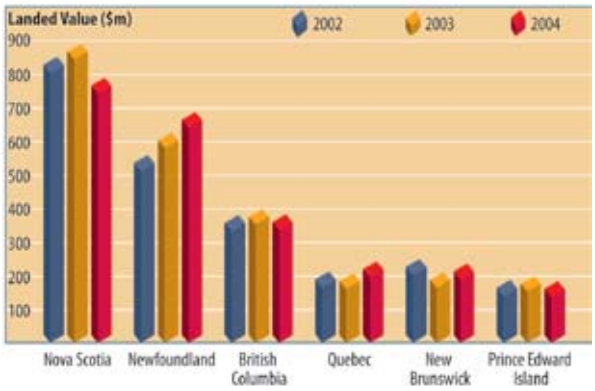
The detailed evolution of the volume, value and price of landings of major commercial marine species in Canada between 2002 and 2004 is presented in Annex II, tables 6.1 to 6.3. In addition, an overview of the main fishing fleets in Atlantic Canada is presented in Annex I, tables 5.1 to 5.5.

3.1.1 Provinces

Of the six provinces that have a marine fishing industry, Nova Scotia and Newfoundland and Labrador were the two provinces where fisheries posted their highest values.

In 2004, 30% (332,000 metric tonnes) of the total volume of commercial marine fisheries in Canada was landed in Nova Scotia, representing a total of $744 million, or 33% of the value of all landed catches in the country. This represents a decrease of about 10% over 2002, when landings in Nova Scotia accounted for 368,000 metric tonnes valued at $809 million or 37% of the total value of commercial marine fisheries in Canada.

Figure 3.2: Total value of landings, commercial marine species, by province, Canada, 2002-2004



Source: DFO, Economic Analysis and Statistics.

The province of Newfoundland and Labrador (NL) has, in contrast, realized an increase of almost 30% in the volume and value of landings between 2002 and 2004, from a total of $514 million (275,000 metric tonnes) in 2002 to $645 million (358,000 metric tonnes) in 2004. Its share of total commercial marine fisheries landings in Canada increased by 5% during the same period, rising from 24% to 29% of the total value of sea port landings in the country.

British Columbia ranked third in commercial marine fisheries landings in Canada and contributed 15% of the total value of fisheries in the country in 2004; a total of $339 million (187, 000 metric tonnes). The volume and the value of landings in this province remained at virtually the same levels between 2002 and 2004.

Quebec and New Brunswick have fishing industries of comparable size and ranked fourth and fifth, respectively. The value of landings in New Brunswick was $193 million in 2004 compared to $200 million in Quebec. Both provinces accounted for 17% of the total value of landings in Canada. The value of landings in New Brunswick, however, decreased by 5% between 2002 and 2004, whereas Quebec's landings increased by 13% during the same period.

Prince Edward Island placed sixth in terms of volume and value of fisheries in Canada. In 2004, 6% of total value of commercial marine fisheries landings in Canadian waters was landed in Prince Edward Island ($140 million).

3.1.2 NAFO Areas, Atlantic Canada

Among the fishing zones of the Northwest Atlantic Fisheries Organisation (NAFO), the Southern Gulf of Saint Lawrence was the most lucrative fishing zone in Canada between 2002 and 2004. Significant lobster and snow crab stocks help to explain the importance of fisheries in this zone. Northeastern Newfoundland and Southern Scotian shelf were also lucrative zones throughout these years, contributing more than half of the total value of commercial marine fisheries landings in the Atlantic coast. In 2004, these three zones combined accounted for 70% of the total quantity of commercial marine fisheries landings and 76% of the value of landings in Atlantic Canada.

Table 3.1: Total value of landings, commercial marine species, by NAFO zones, Atlantic Canada, 2002-2004

NAFO Zones	Value of landings ($m)			
	2002	2003	2004	% of total (2004)
Southern Gulf of St. Lawrence	513	509	548	29%
Northeastern Newfoundland	390	429	466	24%
Southern Scotian Shelf	478	489	440	23%
Northern Scotian Shelf	103	128	120	6%
Northern Gulf of St. Lawrence	113	98	109	6%
Northern Labrador and Baffin Island	78	96	96	5%
Southern Newfoundland	65	68	70	4%
Georges Bank	98	94	62	3%
Others	9	11	11	1%
Total	**1,846**	**1,921**	**1,922**	**100%**

Source: DFO, Economic Analysis and Statistics.

3.1.3 Active fishing months in Atlantic Canada

Most of the landings on the Atlantic coast of Canada take place between May and October (75% of landings in 2004). The value of landings, however, reaches its peak between May and June. In 2004, landings during these two months reached a value of close to $892 million or almost half of the total value of landings for the year along the Atlantic coast of Canada.

During the months from October to March, there are few, if any, landings in New Brunswick, Prince Edward Island and Quebec. In Newfoundland and Labrador, landings are distributed throughout the entire year, reaching their highest values between May and July. Landed catches are higher during the 12 months of the year in Nova Scotia where values peak between May and July and again in December.

Table 3.2: Total value of landings, commercial marine species, by month, Atlantic Canada, 2004

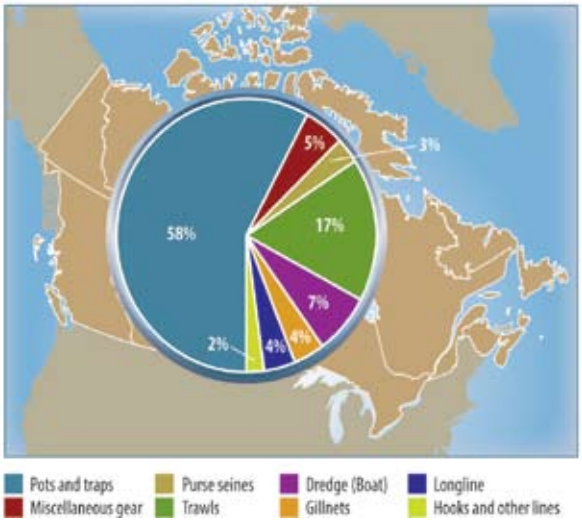
Month	Value of landings ($m)					
	NS	NB	PEI	Que	NL	**Total**
January	40	2	0	9	15	66
February	31	2	0	0	16	49
March	31	2	0	0	19	52
April	42	2	0	26	33	103
May	134	79	71	82	154	520
June	88	47	39	49	148	372
July	88	8	3	17	114	230
August	64	14	11	8	55	151
September	37	14	10	6	32	99
October	33	6	4	2	29	73
November	20	12	1	0	16	50
December	136	5	0	0	15	156
Total	**744**	**193**	**140**	**199**	**645**	**1,922**

Source: DFO, Economic Analysis and Statistics.

3.1.4 Fishing gear

Close to 60% of the value of marine fisheries in Canada in 2004 came from species caught with traps and pots such as snow crab and lobster. Trawling accounted for 17% of the Canadian total in terms of value and 32% in volume, since the prices of trawled species such as groundfish and shrimp are typically lower than those of species caught using pots and traps such as crab and lobster.

Figure 3.3: Total value of landings, commercial marine species, by fishing gear type, Canada, 2004



Source: DFO, Economic Analysis and Statistics.

3.1.5 Vessels

In 2004, there were more than 16,596 'active' vessels in Canada; i.e. vessels which had one or more marine species landings registered during the year. This number dropped slightly compared to 2002 when active vessels added up to 16,750.

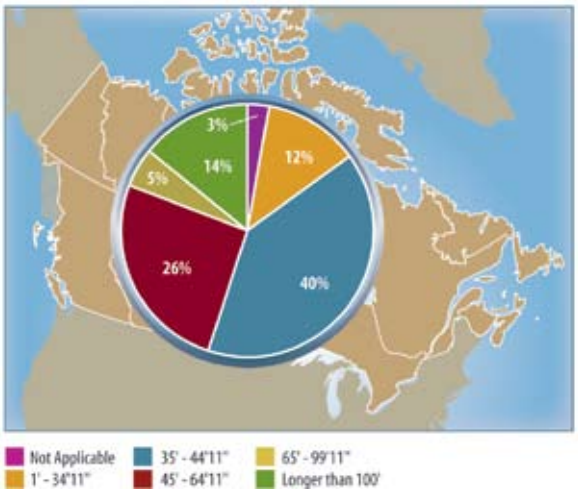
The majority (90%) of these vessels are inshore vessels, i.e., with a vessel length of less than 45'. However, mid-shore and offshore vessels (> 45') that accounted for less than 10% of the total active fishing vessels in Canada in 2004, represented more than 45% of the total value of commercial fisheries landings in the country.

Table 3.3: Number of active vessels, by vessel length, Canada, 2002-2004

Vessel length	Number of active vessels[1]			
	2002	2003	2004	% of total (2004)
1' - 34'11"	8,370	7,730	8,048	48%
35' - 44'11"	7,020	6,856	7,064	42%
45' - 64'11"	1,186	1,482	1,324	8%
65' - 99'11"	211	210	215	1%
More than 100'	94	92	83	0%
Total	**16,750**	**16,248**	**16,596**	**100%**

Note:
1. Vessels which had one or more marine species landings during the year.
Source: DFO, Economic Analysis and Statistics.

Figure 3.4 : Total value of landings, commercial marine species, by boat length, Canada, 2004



Source: DFO, Economic Analysis and Statistics.

In 2004, the average value of landings by fishing vessels in Canada was $136,200. Of the major commercial marine species in 2004, the average landings by vessel for Northern shrimp (pandalus borealis) and Pacific herring posted a higher value, with an average of more than $330,000 per vessel. The average value of landings by vessel for lobster and cod was considerably lower but nevertheless

involved a significant number of vessels (more than 12,000 vessels).

Table 3.4: Number of active vessels and average value of landings, by vessel, major marine species, Canada, 2004

Major species	Number of active vessels and average value of landings[1]		
	# active vessels	# active vessels as % of total vessels	Average value of landings by vessel ($)
Snow crab	3,480	21%	176,153
Lobster	8,654	52%	68,194
Shrimp, p. borealis[2]	565	3%	433,450
Scallops	719	4%	166,102
Dungeness crab	223	1%	209,887
Pacific halibut	260	2%	145,869
Greenland halibut	812	5%	45,927
Herring, Pacific	106	1%	339,961
Herring	1,570	9%	22,809
Atlantic cod	4,088	25%	8,663
Total	**16,596**	**100%**	**136,211**

Notes:
1. 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.
2. This species represented more than 90% of the total value of shrimp landings in Canada in 2004.
Source: DFO, Economic Analysis and Statistics.

In 2004, more than one-third (37%) of active fishing vessels in Canada had landings in the province of Newfoundland and Labrador (6,226 vessels). Nova Scotia came in second, with 3,911 vessels or 23% of the Canadian total. Since 2002, the number of active vessels has declined in all provinces except Prince Edward Island.

Table 3.5: Number of active vessels, by province, Canada, 2002-2004

Province	Number of active vessels[1]			
	2002	2003	2004	% of total (2004)
Nova Scotia	3,918	3,911	3,911	23%
New Brunswick	1,994	1,943	1,958	12%
Prince Edward Island	1,400	1,358	1,416	8%
Quebec	1,257	1,182	1,236	7%
Newfoundland and Labrador	6,268	5,949	6,226	37%
British Columbia	2,483	2,442	2,403	14%
Total[2]	**16,750**	**16,248**	**16,596**	**100%**

Notes:
1. Vessels which had one or more marine species landings during the year.
2. The sum may not add up to the totals given that some vessels may have landings in more than one province.
Source: DFO, Economic Analysis and Statistics.

3.2 Commercial freshwater fisheries

CD - Section 3: 3.2.1

In Canada, commercial fishing of freshwater species is relatively small compared to commercial marine fishing. With a total value of landings of $64 million in 2004, commercial freshwater fisheries represented less than 3% of the total value of commercial fishing in Canada. The major water bodies where these fisheries mainly take place are Lake Winnipeg, Cedar Lake, Lake Manitoba, Lake Winnipegosis and Great Slave Lake.

Between 2002 and 2004, the total value landings of commercial freshwater species fell by $25 million (- 25%). The volume of landings only decreased by 11% during this period, but the prices of freshwater species were 20% lower overall, which explains the substantial drop in the total value of landings.

Table 3.6: Total value of landings, commercial freshwater species, by species, Canada, 2002-2004

Species	Value of landings ($'000)			
	2002	2003	2004	Share of total in 2004 (%)
Pickerel	33,131	29,059	26,130	41%
Perch	16,475	14,265	12,694	20%
Whitefish	15,014	12,877	10,790	17%
Smelt	2,235	1,787	3,121	5%
White bass	3,009	2,666	2,562	4%
Sauger	3,528	2,580	1,866	3%
Pike	2,072	1,589	1,203	2%
Sucker (Mullet)	1,544	1,207	756	1%
Lake trout	506	620	586	1%
Others	7,587	4,639	4,086	6%
Total	**85,101**	**71,289**	**63,794**	100%

Source: DFO, Central and Arctic, Policy Sector.

The main freshwater species that are commercially fished in Canada are pickerel, perch and whitefish. The landings of these three species represented close to 80% of the total landed catches of freshwater fish in Canada in 2004.

Ontario and Manitoba led the way in commercial freshwater fishing with landed values of $30 million and $25 million, respectively, in 2004. Both provinces accounted for 85% of the value of all commercial freshwater fisheries landings in Canada that year.

Table 3.7: Total value of landings, commercial freshwater species, by province, Canada, 2002-2004

Provinces	Value of landings ($'000)			
	2002	2003	2004	% of total (2004)
Ontario	38,702	31,782	29,513	46%
Manitoba	33,228	27,245	24,655	39%
Saskatchewan	5,836	4,346	2,985	5%
Quebec	2,864	2,715	2,977	5%
Alberta	2,300	3,034	2,249	4%
Northwest Territories	1,475	1,231	1,009	2%
New Brunswick	697	936	406	1%
Total	**85,101**	**71,289**	**63,794**	100%

Source: DFO, Central and Arctic, Policy Sector.

3.3 Aquaculture

CD - Section 3: 3.3.1

The total value of aquaculture production rose to $527 million in Canada in 2004. Close to 75% of this value came from farmed salmon in British Columbia and in New Brunswick. Since the production of Canadian farmed salmon fell in 2004, so did the overall value of all aquaculture production (-16%), despite an increase in the value of other species such as farmed mussels in Prince Edward Island.

Table 3.8: Value of Canadian aquaculture production, selected species, 2002-2004

Species	Value of Canadian aquaculture production ($'000)			
	2002	2003	2004	Variation 2002-04 (%)
Salmon	502,036	441,471	387,038	-23%
Mussels	31,281	30,929	32,761	5%
Trout	32,643	25,714	22,086	-32%
Oysters	15,176	19,208	16,207	7%
Clams	7,100	7,903	7,052	-1%
Total aquaculture	**628,318**	**590,984**	**526,562**	**-16%**

Source: Statistics Canada, Agriculture Division.

British Columbia and New Brunswick dominate Canadian aquaculture production, particularly in the case of salmon. Farmed salmon production was concentrated in these two provinces in 2004. Prince Edward Island, which boasts valuable farmed mussel production, ranked third in Canada in terms of the value of its aquaculture production that year.

Table 3.9: Total value of Canadian aquaculture production, by selected provinces and species, 2004

Selected Provinces	Value of Canadian aquaculture production ($'000)			
	Salmon	Mussels	Trout	Total
British Columbia	212,038	278	714	227,788
New Brunswick	175,000	500	4,000	181,005
Prince Edward Island	x	23,249	x	33,175
Newfoundland and Labrador	x	5,055	0	22,055
Nova Scotia	x	3,198	0	19,127
Ontario	0	0	15,500	15,500
Quebec	0	481	1,831	11,439
Canada	**387,038**	**32,761**	**22,086**	**526,562**

Source: Statistics Canada, Agriculture Division.

4 International trade

CD - Section 4: 4.1.1 - 4.1.10

4.1 Exports

Canadian exports of commercial marine, freshwater and aquaculture products reached a total value of $4.45 billion in 2004, down almost $300 million (6%) from 2002. The notable decrease in farmed Atlantic salmon production and the depreciation of the US dollar vis-à-vis the Canadian dollar between 2002 and 2004 are factors that partially explain the overall decrease in the value of Canadian exports of fish and seafood products in 2004.

Table 4.1: Total value of Canadian exports, fish and seafood products, by species, 2002-2004

Species	Value of exports ($m)		
	2002	2003	2004
Groundfish	**527**	**513**	**481**
Cods, hakes, haddocks	236	216	215
Flounders, halibuts, soles	146	155	126
Other groundfish	145	141	140
Pelagics	**457**	**459**	**535**
Herring	206	186	174
Salmon (wild)	169	168	196
Tunas, swordfish	29	35	49
Other pelagics	53	70	116
Molluscs and crustaceans	**2,725**	**2,703**	**2,653**
Lobster	1,045	1,030	952
Snow crab	678	680	659
Crab, other	175	182	226
Shrimp	469	472	438
Scallop, clams	230	204	198
Other molluscs and crustaceans	128	136	139
Other marine species	**281**	**274**	**276**
Freshwater species	**161**	**139**	**132**
Farmed salmon	**595**	**444**	**378**
Total	**4,746**	**4,532**	**4,455**

Source: Statistics Canada, International Trade Division.

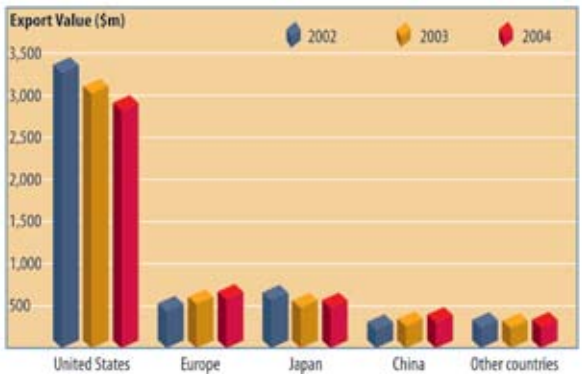
4.1.1 Exports by species

Molluscs and crustaceans account for the largest share (60%) of the value of Canadian exports of fish and seafood products in 2004 followed by groundfish and pelagic fishes (23%). Farmed Atlantic salmon, freshwater fish and various other marine products made up the remaining 17%.

4.1.2 Major markets

The United States (US) is undoubtedly the main market for Canadian fish and seafood products, particularly lobster, snow crab, groundfish and salmon. Between 2002 and 2004, the US market absorbed, on average, two-thirds of Canadian exports of marine products (based on value). However, some species such as shrimp are exported mainly to Europe and Asia.

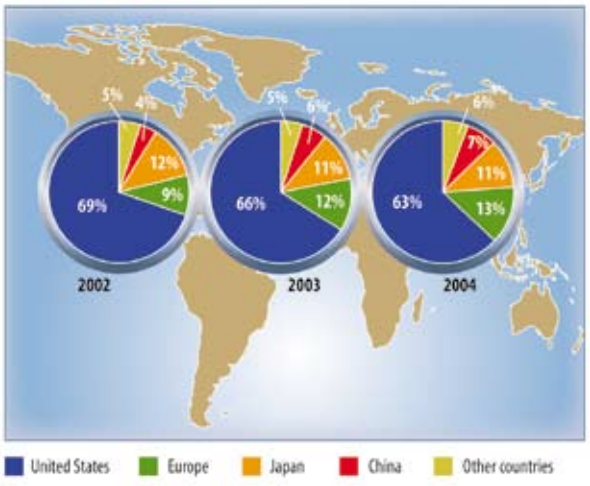
Figure 4.1: Evolution of the value of Canadian exports, fish and seafood products, by major markets, 2002-2004



Source: Statistics Canada, International Trade Division.

Between 2002 and 2004, the share of total exports of fish and seafood products from Canada to the United States dipped from 69% to 63%. This is explained primarily by movements in the exchange rate (Figure 4.3), as the Canadian dollar has appreciated considerably versus its US counterpart since 2002. This was not favourable to Canadian exporters and thus, explains to a large degree the drop in the value of exports in 2004, despite the fact that the overall fishing season was good.

Figure 4.2: Share (%) of the value of Canadian exports, by major markets, 2002-2004



Source: Statistics Canada, International Trade Division.

Figure 4.3: Movement of exchange rates between the Canadian dollar and the US dollar, the euro and the japanese yen, 2001-2005

Source: Bank of Canada.

4.2 Imports

The total value of Canadian imports of fish and seafood products was $2.06 billion in 2004, down $124 million (-6%) from 2002. Imports of lobster and shrimp, each falling by $50 million between 2002 and 2004, contributed to this overall decrease.

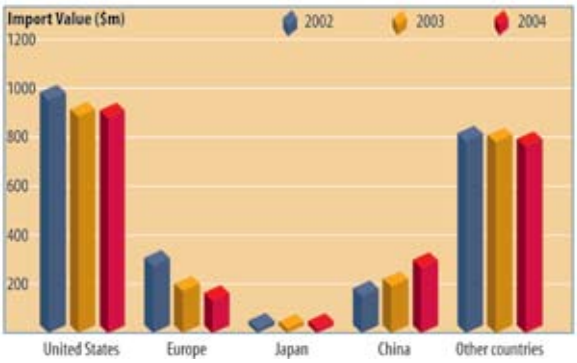
Table 4.2 : Total Canadian imports, fish and seafood products, by species, 2002-2004

Species	Value of imports ($m)		
	2002	2003	2004
Groundfish	**356**	**359**	**322**
Cods, hakes, haddocks	154	164	140
Halibuts, flounders, sole	125	124	116
Other groundfish	77	71	66
Pelagics	**334**	**341**	**368**
Herring	16	14	14
Salmon (wild)	134	166	180
Tunas, swordfish	144	123	140
Other pelagics	40	38	35
Molluscs and crustaceans	**974**	**871**	**887**
Lobster	259	225	206
Snow crab	4	2	10
Crab, other	51	48	51
Shrimp	457	390	409
Scallop, clams	50	66	61
Other molluscs and crustaceans	153	140	150
Other marine species	**433**	**372**	**370**
Freshwater species	**56**	**70**	**72**
Farmed salmon	**26**	**34**	**36**
Total	**2,179**	**2,047**	**2,055**

Source: Statistics Canada, International Trade Division.

Most Canadian imports of fish and seafood products originate from the United States. Canada imported $876 million (43%) of fish and seafood from its neighbour south of the border in 2004. Nonetheless, this was close to $80 million lower (-8%) than 2002.

Figure 4.4: Evolution of the value of Canadian imports, fish and seafood products, by major markets, 2002-2004



Source: Statistics Canada, International Trade Division.

1 Annex I: Overview of major fishing fleets, Central & Arctic and Atlantic Canada

Notes for all tables:

1. This overview is presented for five of the six DFO administrative regions. It was not possible to present an overview for DFO's Pacific Region at the time of printing of this report due to an absence of data. The diagram below presents the division of Canada in DFO administrative regions.

2. A "fisher" is defined here as a holder of one or more fishing licenses.

3. The category "Shrimp" includes the two species commercially harvested in Atlantic Canada, which are *Pandalus Borealis* and *Pandalus Montagui*, the former comprising 90% of all shrimp landings.

4. Totals may be lower than those from tables presented in the text as only main fleets are shown here.

Figure 5.1: DFO administrative regions

Source: DFO.

Table 5.1: Overview of major fleets, commercial marine fisheries, DFO Maritimes Region (Southern New Brunswick and Nova Scotia except Northumberland Strait)

Fishing Fleet	Fishing method	Management method	Vessel Length	Number of fishers	Main (directed) Species	Landed Value (2004) $M
Multispecies, Non-Vessel	Rakes, Tongs	Competitive	Non-Vessel	436	Clams	**$4M**
Multispecies Inshore	Drag, Trawl, Traps, Gillnet, Longline, Seine	Competitive, Trap Limits, IQ	< 65’	3,174	Lobster, Groundfish, Snow crab, Scallop, Swordfish, Herring, Sea Urchins, Shrimp, Tuna, Mackerel	**$508M**
Groundfish Midshore	Trawl, Gillnet	Competitive, IQ	65’ - 100’	4	Groundfish	**$3M**
Multispecies Offshore	Drag, Trawl, Traps	IQ, Trap Limits	> 100’	13	Scallop, Shrimp, Clams, Herring, Lobster, Groundfish	**$128M**
Aboriginals	Drag, Trawl, Traps, Gillnet, Longline, Seine	Competitive, Trap Limits, IQ	All	17	Snow crab, Lobster, Groundfish, Scallop, Shrimp, Sea Urchins	**$29M**
Total:				**3,644**		**$672M**

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

Table 5.2: Overview of major fleets, commercial marine fisheries, DFO Gulf Region (Eastern New Brunswick, Prince Edward Island and Nova Scotia's Northumberland Strait)

Fishing Fleet	Fishing method	Management method	Vessel Length	Number of fishers	Main (directed) Species	Landed Value (2004) $M
Traditional Crab fishers	n/a	IQ	45' - 100'	340	Snow crab	**$109M**
Traditional Shrimp fishers	n/a	IQ	Tous	20	Shrimp	**$7M**
Herring Seiners	n/a	IQ	> 65'	6	Herring	**$2M**
Lobster / Multi-species	n/a	Trap number limits (75-375)	< 45'	3,175	Lobster (Directed), Herring, Tuna, Snow crab, Groundfish	**$209M**, inc. $173M Lobster and $21M Snow crab
Groundfish	n/a	IQ, Competitive	< 65'	35	Groundfish (Directed), Shrimp, Snow crab	**$6M**, inc. $4M Snow crab, $1M Shrimp and $1M Groundfish
Aboriginals	n/a	IQ	45' - 100'	10	Snow crab	**$16M**
		Trap number limits (75-375)	< 45'	200	Lobster	**$6M**
Total:				**3,786**		**$355M**

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

Table 5.3: Overview of major fleets, commercial marine fisheries, DFO Quebec Region (Quebec)

Fishing Fleet	Fishing method	Management method	Vessel Length	Number of fishers*	Main (directed) Species	Landed Value (2004) $M
Crab fishers	Traps	IQ	< 100'	161	Snow crab	**$69M**
Lobster fishers	Traps	Trap number limits	< 65'	575	Lobster	**$44M**
Shrimp fishers	Trawl	IQ	< 100'	35	Shrimp	**$16M**
Inshore Groundfish / Multispecies	Gillnets, Trawl, Traps	IQ, Competitive	< 45'	273	Atlantic Cod, Greenland Halibut, Atlantic Halibut, Temporary Snow crab and Shrimp allocations	**$17M**
Midshore Groundfish / Multispecies	Longline, Gillnets, Trawl, Traps	IQ, Competitive	> 45 '	85	Atlantic Cod, Greenland Halibut, Atlantic Halibut, Temporary Snow crab and Shrimp allocations	**$11M**
Aboriginals	Gillnets, Trawl, Traps	IQ, Competitive	< 100'	12	Groundfish, Lobster, Shrimp and Snow crab	**$19M**
Total:				**1,141**		**$176M**

*Number of active Quebec fishers in 2004 (an "active" fisher is a fisher that reported at least one landing in a given year).
Source: DFO, Quebec Region, Statistics and Licensing Units.

Table 5.4: Overview of major fleets, commercial marine fisheries, DFO Newfoundland and Labrador Region (Newfoundland and Labrador)

Fishing Fleet	Fishing method	Management method	Vessel Length	Number of fishers	Main (directed) Species	Landed Value (2004) $M
Inshore	Pots, Gillnets	IQ, Competitive	< 35'	2,827	Snow crab, Lobster, Atlantic Cod, Roe (lumpfish), Capelin	**$110M**, inc. $60M Snow crab and $18M Lobster
Nearshore	Pots, Otter trawl, Gillnets, Purse seine, Rifle, Hakapik	IQ, Competitive	35' - 64'11"	1,125	Snow crab, Shrimp, Seal, Mackerel, Greenland halibut	**$319M**, inc. $217M Snow crab and $60M Shrimp
Midshore	Pots, Purse seine, Gillnets	IQ, Competitive	65' - 99'11"	7	Snow crab, Mackerel, Greenland halibut, Herring, Capelin	**$6M**, inc. $1M Snow crab
Offshore	Otter Trawl, Pots	IQ, Competitive	100' +	11	Shrimp, Stimpson's surf clam, Yellowtail flounder, Snow crab, Atlantic Cod	**$111M**, inc. $60M Shrimp, $10M Stimpson's surf clam and $10M Yellowtail flounder
Total:				**3,970**		**$546M**

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

Table 5.5: Overview of major fleets, commercial marine and freshwater fisheries, DFO Central & Arctic Region (Freshwater fisheries and Canadian Arctic)

Fishing Fleet	Fishing method	Management method	Vessel Length	Number of fishers	Main (directed) Species	Landed Value (2004) $M
Groundfish, North Atlantic (NAFO Sub-Area 0)	Trawl, Longline (under ice), Gillnets	IQ	> 65'	8	Greenland Halibut	n/a
Shrimp, North Atlantic (NAFO Sub-Area 0)	Trawl	IQ	> 65'	12	Shrimp	n/a
Freshwater Fisheries (MB, SK, AB, NWT and Northwestern Ontario)	Gillnets	Competitive	n/a	2,834	Whitefish, Pickerel, Pike, other	n/a
Aboriginals	Gillnets	Competitive	n/a	339	Arctic Char	n/a
Total:				**3,193**		

Source: DFO, Central & Arctic Region, Statistics and Licensing Units.

6 Annex II: Landings tables

Table 6.1: Landed volume of major commercial marine species in Canada, thousand tonnes, 2002-2004

Main species, by ISSCAAP division	Landed Weight (thousand tonnes)				
	2002	2003	2004	% of Total (2004)	% change 2002-2004
Diadromous fishes	**41**	**46**	**31**	**3%**	**-24%**
Salmon	33	39	26	2%	-22%
Other diadromous fish	7	7	5	0%	-31%
Marine fishes	**530**	**558**	**549**	**49%**	**4%**
Groundfish	**244**	**244**	**236**	**21%**	**-3%**
Atlantic halibut	2	2	2	0%	12%
Greenland halibut	11	15	15	1%	29%
Pacific halibut	6	6	6	1%	1%
Cod, Atlantic	36	23	25	2%	-31%
Haddock	15	16	16	1%	11%
Hake, North Pacific	57	69	66	6%	17%
Rockfishes, Pacific	22	22	20	2%	-9%
Sablefish	3	3	3	0%	-2%
Other groundfish	93	89	83	7%	-11%
Pelagic fish	**286**	**314**	**313**	**28%**	**10%**
Herring	193	200	183	16%	-5%
Herring, Pacific	28	31	24	2%	-12%
Swordfish	1	1	1	0%	25%
Tuna	1	1	2	0%	18%
Mackerel	35	45	54	5%	54%
Capelin	14	22	34	3%	147%
Other pelagic fish	14	13	15	1%	9%
Crustaceans	**311**	**310**	**350**	**31%**	**12%**
Crab, Dungeness	4	7	9	1%	129%
Crab, Snow	107	97	103	9%	-3%
Lobster	49	50	47	4%	-3%
Shrimp	139	146	179	16%	29%
Other crustaceans	13	11	11	1%	-17%
Molluscs	**139**	**146**	**132**	**12%**	**-5%**
Scallops	96	94	83	7%	-14%
Clams, Pacific geoduck	2	2	2	0%	-1%
Clams, Stimpson Surf	20	27	24	2%	20%
Other molluscs	21	23	24	2%	15%
Other[1]	**52**	**59**	**56**	**5%**	**8%**
Total	**1,072**	**1,119**	**1,118**	**100%**	**4%**

Note:
1. 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 major commercial marine species in Canada, million dollars, 2002-2004

Main species, by ISSCAAP division	Landed Value ($m)				
	2002	2003	2004	% of Total (2004)	% change 2002-2004
Diadromous fishes	**62**	**54**	**57**	**3%**	**-8%**
Salmon	57	48	53	2%	-7%
Other diadromous fish	5	5	4	0%	-15%
Marine fishes	**423**	**439**	**401**	**18%**	**-5%**
Groundfish	**285**	**296**	**272**	**12%**	**-4%**
Atlantic halibut	12	15	15	1%	28%
Greenland halibut	15	37	37	2%	157%
Pacific halibut	40	47	38	2%	-6%
Cod, Atlantic	49	34	35	2%	-28%
Haddock	28	28	20	1%	-27%
Hake, North Pacific	12	16	16	1%	34%
Rockfishes, Pacific	26	26	27	1%	2%
Sablefish	26	23	20	1%	-22%
Other groundfish	76	70	63	3%	-17%
Pelagic fish	**138**	**143**	**128**	**6%**	**-7%**
Herring	40	43	36	2%	-11%
Herring, Pacific	51	48	36	2%	-29%
Swordfish	8	12	10	0%	34%
Tuna	16	16	15	1%	-8%
Mackerel	14	15	17	1%	25%
Capelin	2	4	9	0%	419%
Other pelagic fish	7	6	5	0%	-33%
Crustaceans	**1,439**	**1,501**	**1,538**	**68%**	**7%**
Crab, Dungeness	28	38	47	2%	68%
Crab, Snow	487	514	613	27%	26%
Lobster	642	665	590	26%	-8%
Shrimp	271	275	280	12%	3%
Other crustaceans	12	9	8	0%	-31%
Molluscs	**222**	**235**	**214**	**9%**	**-3%**
Scallops	131	131	119	5%	-9%
Clams, Pacific geoduck	38	33	34	2%	-11%
Clams, Stimpson Surf	16	36	28	1%	77%
Other molluscs	37	35	33	1%	-10%
Other[1]	**39**	**43**	**50**	**2%**	**29%**
Total	**2,185**	**2,272**	**2,261**	**100%**	**3%**

Note:
1. 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 major commercial marine species in Canada, $/kg, 2002-2004

Main species, by ISSCAAP division	Landed Price ($/kg)			
	2002	2003	2004	% change 2002-2004
Diadromous fishes	**1.52**	**1.18**	**1.84**	**21%**
Salmon	1.72	1.26	2.04	19%
Other diadromous fish	0.65	0.74	0.80	23%
Marine fishes	**0.80**	**0.79**	**0.73**	**-8%**
Groundfish	**1.16**	**1.21**	**1.15**	**-1%**
Atlantic halibut	7.21	7.94	8.21	14%
Greenland halibut	1.29	2.40	2.55	98%
Pacific halibut	6.36	7.48	5.93	-7%
Cod, Atlantic	1.38	1.47	1.43	3%
Haddock	1.88	1.79	1.24	-34%
Hake, North Pacific	0.21	0.24	0.24	15%
Rockfishes, Pacific	1.19	1.22	1.35	13%
Sablefish	8.46	8.98	6.73	-20%
Other groundfish	0.82	0.79	0.76	-7%
Pelagic fish	**0.48**	**0.46**	**0.41**	**-15%**
Herring	0.21	0.21	0.20	-6%
Herring, Pacific	1.84	1.57	1.47	-20%
Swordfish	7.88	9.12	8.40	7%
Tuna	10.94	10.69	8.49	-22%
Mackerel	0.40	0.34	0.32	-19%
Capelin	0.13	0.16	0.27	110%
Other pelagic fish	0.55	0.45	0.34	-39%
Crustaceans	**4.62**	**4.84**	**4.40**	**-5%**
Crab, Dungeness	6.79	5.41	4.96	-27%
Crab, Snow	4.56	5.30	5.93	30%
Lobster	13.11	13.35	12.43	-5%
Shrimp	1.95	1.88	1.57	-20%
Other crustaceans	0.95	0.83	0.79	-17%
Molluscs	**1.60**	**1.61**	**1.62**	**1%**
Scallops	1.37	1.40	1.45	6%
Clams, Pacific geoduck	21.14	19.03	19.03	-10%
Clams, Stimpson Surf	0.78	1.31	1.15	47%
Other molluscs	1.80	1.53	1.40	-22%
Other[1]	**0.76**	**0.73**	**0.91**	**20%**
Total	**2.04**	**2.03**	**2.02**	**-1%**

Note:
1. Other = “Whales, seals and other aquatic mammals”, “Miscellaneous aquatic animals”, “Miscellaneous aquatic products” and “Aquatic plants”
Source: DFO, Economic Analysis and Statistics.