



Coastal Fishing

In Newfoundland & Labrador

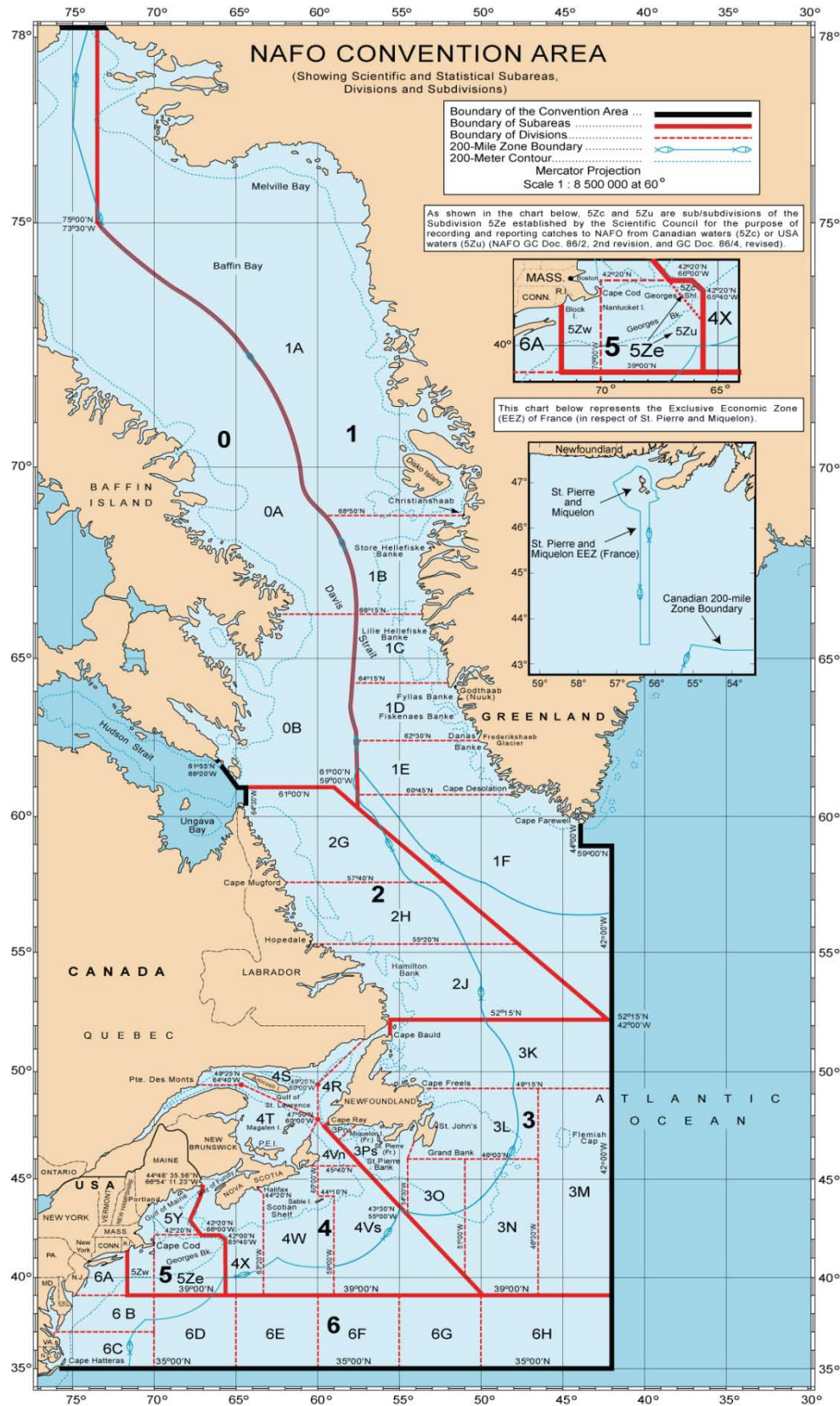
Prepared by

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Abbreviations

CCG	Canadian Coast Guard
CFER	Centre for Fisheries Ecosystems Research
DFA	Department of Fisheries and Aquaculture
DFO	Department of Fisheries and Oceans; Fisheries and Oceans Canada
FFAW	Fish, Food & Allied Workers Union
GRP	Glass Reinforced Plastic
KGM	Kilogram
KGS	Kilograms
NAFO	Northwest Atlantic Fisheries Organization
NORA	Nordisk Atlantsamarbejde (Nordic Atlantic Cooperation)
MT	Metric Tonnes (1000 Kgs)
RT	Registered Tonnage
TC	Transport Canada



Map 1. Northwest Atlantic Fisheries Organization Convention Area (NAFO 2013).

Introduction

The purpose of this report is to inventory the Newfoundland & Labrador coastal fisheries, and to provide the Nordisk Atlantsamarbejde (Nordic Atlantic Cooperation, NORA) unbiased and uniform data for decision-making. In pursuit of these goals, this report summarizes available data representative of the small commercial fishing fleet <15 meter (50 feet) in Newfoundland & Labrador (hereafter the Coastal Fleet). Data summarized include fisheries landings and value, vessel registration data, and data on personnel employed in the fisheries.

Motivation for this report is value chain improvement in the small vessel sector and international networking among stakeholders across the North Atlantic. Subsequent analyses of small vessel fisheries in the North Atlantic will build on inventory data provided by the Marine Institute in Canada and research organizations in other NORA member countries. These countries include Norway, Faroe Islands, Iceland, Greenland, and Canada.

Data for all of Atlantic Canada are within the scope of this project (Map 1); however the accumulation of these data from different Canadian fishing provinces would require substantially more research. Focusing on Newfoundland & Labrador is necessary to meet the project’s budget and timeline.

Objectives

Research objectives are as follows. This report represents progress toward the objectives.

- a) To inventory the small commercial fishing fleet <15 meter (50 feet) in Newfoundland & Labrador, or Coastal Fleet, as discretely as data will allow, including;
 - o Total vessels,
 - o Length,
 - o Building material,
 - o Engine size,
 - o Regional distribution,
 - o Gear types.
- b) To identify and summarize small vessel fisheries landings and value.
- c) To summarize persons employed in small vessel fish capture and processing.
- d) To describe handling, processing, and marketing in the small vessel fisheries.
- e) To examine alternative uses for coastal vessels such as leisure, tourism, or other uses.

As an inventory and data summary, no conclusions or recommendations come from this report.

Data and Information Quality

This report relies on data and information collected from various sources, both published and unpublished. Where possible, we provide the most recent three years of data to represent current trends.

Assembling the inventory from multiple federal and provincial databases proved a challenge. Budgetary and organizational challenges at both levels of government prevented their release of detailed data reports otherwise beneficial to this inventory. Data are available online and in periodic reports, however since most available data lacks a length category we can only use that data in a broadly-summarizing way for the entire fishing fleet in Newfoundland & Labrador.

Despite this challenge, we did receive some length-specific data from two sources and summary information from other sources (Table 1). The Department of Fisheries and Oceans (DFO) provided landings and value information, working with the researcher to clarify the best database query given constraints on time and industry privacy. Transport Canada (TC), which manages all Canadian vessel registrations, graciously provided a full data dump of their Atlantic Canada database, including vessels with inactive registrations for the last decade. The TC data, however informative, can provide only a limited representation of the Coastal Fleet, which is explained below. The provincial Department of Fisheries and Aquaculture (DFA) provided a table identifying all licensed fish plants in the province and the species which these plants are permitted to process.

Data Type	Source
Technical Specifications	TC Registration Database
Length	
Landings & Value	DFO Statistics Database
Regionally-Specific	DFA Processing Location Query

Table 1. Relevant <15 Meter (50 feet) Data Sources

We make every effort within the constraints of time and data availability to present a complete picture of Newfoundland & Labrador’s Coastal Fleet. Any omission of relevant data may be remedied in later stages of the NORA project on Coastal Fisheries if new or existing data sources become available.

Data Summary

Securing data on current fishing enterprises was not possible through government channels. We relied on personal communication with informed industry members and their own contacts in government. A “fishing enterprise” is Newfoundland & Labrador terminology for an authorized fishing business under which multiple fishing licenses or vessels up to 27 meters (90 feet) operate. Each enterprise is controlled by one owner who directs fishing effort among that owner’s vessels and licenses (DFO 2013a).

Early 2013 DFO databases contain 4,425 enterprises, of which 4,009 include vessels <15m (50 feet). The first figure includes enterprises operating vessels up to 27 meters (90 feet). Excluding vessels 15-27 meters (50- 90 feet) is necessary for an accurate count of enterprises relevant to this inventory. Using the TC database we can isolate the vessels >15 meters (50 feet). Subtracting the total number of federally registered fishing vessels from 15-27 meters (50-90 feet) in Newfoundland & Labrador, the total enterprises remaining are 4,009. This figure represents enterprises, not vessels, because an enterprise may include multiple vessels both over and under our target length category (TC 2013, Mark Dolomont Personal Communication February 6, 2013).

Data used to assemble Figures 1-20 are available for review in this report’s appendix.

TC Database on Newfoundland & Labrador <15 Meter (50 feet) Fishing Vessels

Registration information on Newfoundland & Labrador vessels is comprehensive; however the direct relationship of these data to the current <15 Meter (50 feet) fleet for the NORA Coastal Fisheries project must be called into question. The concern is discussed following a description of these data.

Transport Canada separates vessels into two broad categories based on length at 13.7 meters (45 feet), storing vessel information in separate databases. The information Transport Canada provided includes full queries from both databases. The total count of <15m (50 feet) fishing vessels with valid Federal registrations on December 31, 2012 in Newfoundland & Labrador is 1,198.

The construction of these vessels varies predominantly between wood and glass-reinforced-plastic (GRP). The variation in hull materials appears in Figure 1.

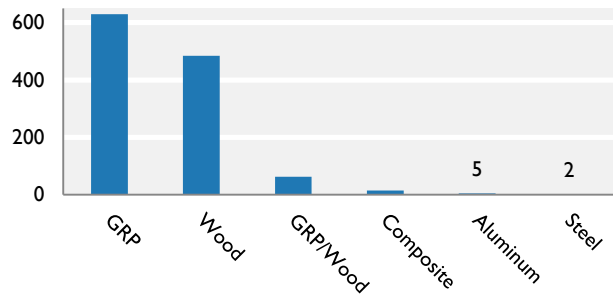


Figure 1. Hull Materials, NL Coastal Vessels <15m (50’).

The registered tonnages (RT) represented in these same vessels varied from <1 to >87 RT. Distribution was generally >25RT, with the most vessels between 11-15RT. Figure 2 breaks down the reported RT for these vessels.

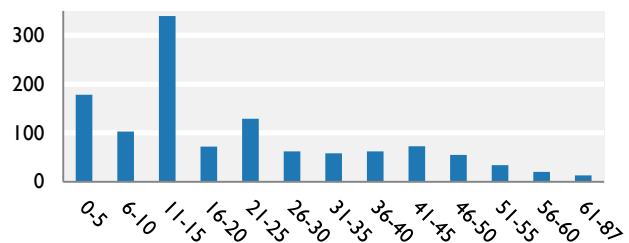


Figure 2. Registered Tonnage, NL Coastal Vessels <15m (50’).

These data represent approximately 25% of the active Coastal Fleet. Current regulation requires Federal registration of “all small non-pleasure vessels powered by an engine of 10 horsepower (7.5kw) or more...” (TC, 2013). This is a relatively recent change in regulation. Prior to 2008, Canada required registration of vessels exceeding 15RT. Registration of vessels under 15RT was voluntary. Canadian fleets are responding to this new registration, however the current data under-represents the actual fishing effort in the Coastal Fleet. Note that all Canadian fishing vessels were and are required to register with DFO Licensing to receive their Vessel Registration Number, a number unique to fishing vessels and different from the vessel’s Official Number provided through Federal registration. The DFO Query Report, discussed next, provides more precise data on the size of the Coastal Fleet.

DFO Query Report on Newfoundland & Labrador <15 Meter (50 feet) Fishing Vessels for YE 2010-2012

DFO Statistics generously provided four database query reports from their Newfoundland & Labrador statistics division relevant to this project. Landings and value are in round-weight kilograms (Kgm/Kgs) and Canadian Dollars. The fourth report provides Landings in total number of animals in place of Kgm. The four reports are necessary to capture various elements of the Coastal Fleet which, due to privacy legislation, DFO Statistics could not provide in one report.

Vessel data in the following reports include vessels which produced landings during the year. Latent effort is not represented. DFO Licensing could provide more detail on the true number of licensed vessels in the Coastal Fleet, but DFO Licensing could not provide data in the timeframe requested.

The top ten species landed in 2012 and their relative price per Kgm is displayed in Figure 3. The data summary to follow includes a graphical breakout of the top five species on this list; Crab, Capelin, Herring, Cod, and Whelks.

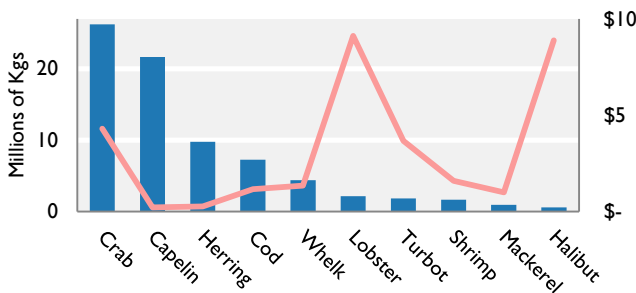


Figure 3. Top Ten Landed Species, 2012 Coastal Fleet (Columns, L. Axis). Price per Kgm of each species (Line, R. Axis).

The first report provides a regional breakdown of landings and value in the Coastal Fleet by Northwest Atlantic Fisheries Organization (NAFO) areas, vessel length ranges, directed species, and gear type for the last three years, 2010-2012. This report excludes bycatch, which appears in the second report. The inclusion of bycatch data, due to other data provided, risks violating privacy legislation. Vessel length ranges in this report are in feet and include five groups by 10 foot (3 meter) increments up to 50 feet (15 meters) and an unknown group.

Other data included in this report are a count of vessels, fishers, and buyers involved in the capture and landing of each directed species. These counts are informative for the given species, region, length range, and gear type. Subgroupings of these counts are valid, but duplication is abundant across species, gear types, and regions. For example, if a vessel landed cod and crab, that vessel and crew would be

counted twice, once for each species. That vessel may be counted again if the vessel's owner used multiple gear types for the same species or landed fish in different regions. The crew of that vessel and the buyer may be the same from fishery to fishery as well. Lastly, the buyer count is not specific to the NAFO region listed. Buyers commonly transport landings from one region to another for processing.

Examining Cod provides a sample of the data available in the first report. Figure 4 shows a general decline in directed Coastal Vessel cod landings over the last three years by Vessel Length Range. Regional landings in Figure 5 provide a general distribution of the Cod fishery.

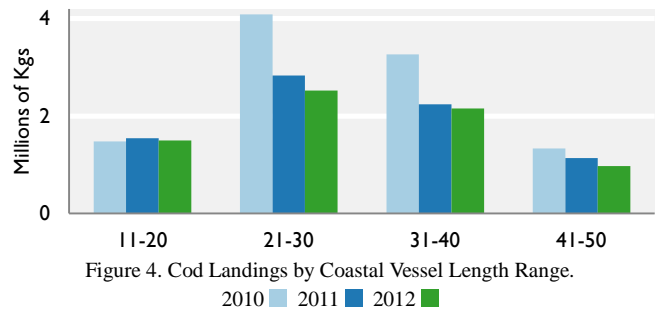


Figure 4. Cod Landings by Coastal Vessel Length Range.

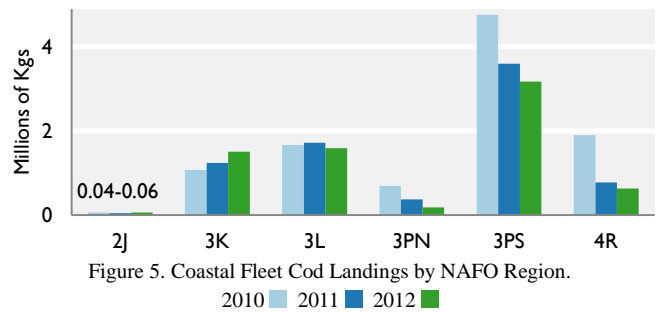


Figure 5. Coastal Fleet Cod Landings by NAFO Region.

Closer examination is possible within a region among gear types in Figure 6 or vessel lengths in Figure 7. Cod landings in NAFO Area 3Ps are relevant to isolate because 3Ps includes the only true directed commercial fishery for Cod in the province. Landings in other areas typically come from Sentinel Surveys, a long-term cooperative research effort between Canada and industry.

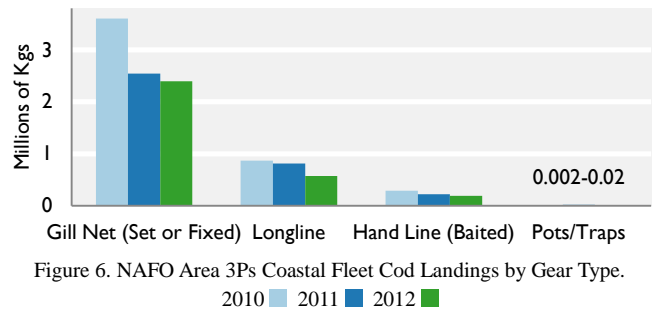


Figure 6. NAFO Area 3Ps Coastal Fleet Cod Landings by Gear Type.

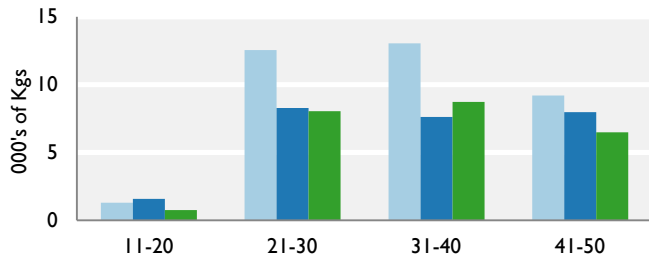


Figure 7. NAFO Area 3Ps Coastal Fleet Gill Net Cod Landings by Vessel Length Range. 2010 2011 2012 2013

Total active vessel counts are relevant at this most discrete level. Figure 8 displays the change and distribution of vessel length ranges for a specific NAFO area, gear type, and species. Catch-per-vessel data at this level are also relevant (Figure 9), though any further combination with total buyers or fishers presents invalid comparisons, such as total crew per vessel.

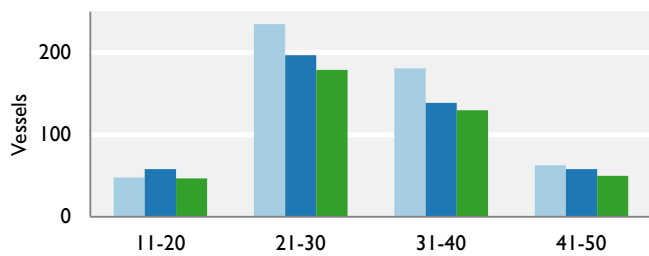


Figure 8. Active Coastal Vessels, NAFO Area 3Ps Gill Net Cod. 2010 2011 2012 2013

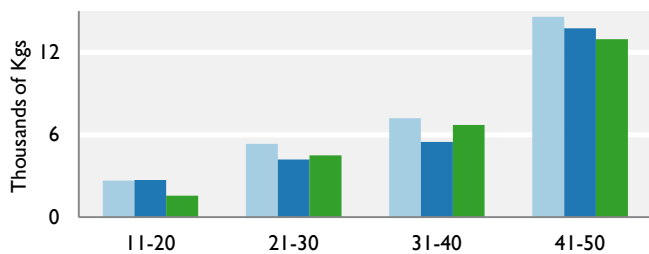


Figure 9. Catch-Per-Vessel, NAFO Area 3Ps Gill Net Cod. 2010 2011 2012 2013

The second report is similar to the first, including a regional breakdown of landings and value in the Coastal Fleet by North Atlantic Fisheries Organization (NAFO) areas, directed species, and gear type for the last three years, 2010-2012. The second report includes bycatch landings and value to fully represent total landings and value in the Coastal fleet. Length ranges are excluded in this report due to privacy legislation. The count of vessels, fishers, and buyers is included in this report with the same uses and limitations as in the first report. This report does provide bycatch amounts and values, thus the true total landings of each fishery are available as displayed in Figure 3 on the previous page.

The following charts display the total landings for the remaining top five species by NAFO area, vessel length range,

and gear type. Unlike Figure 6, all NAFO areas are represented in the following gear type charts. Pots are the sole technology reported for all directed crab and whelk landings, thus we exclude a gear type chart for crab and whelk. Due to significant differences in whelk landings, Figure 18 and Figure 19 include a second axis for the largest Vessel Length Range and NAFO area 3ps.

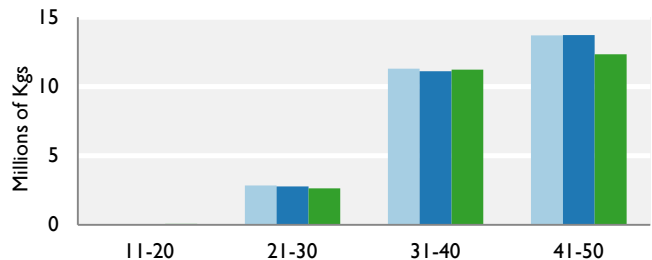


Figure 10. Crab Landings by Coastal Vessel Length Range. 2010 2011 2012 2013

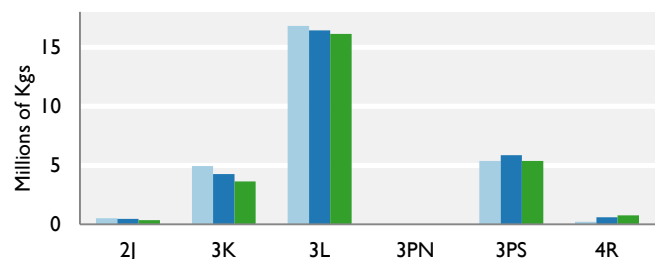


Figure 11. Coastal Fleet Crab Landings by NAFO Region. 2010 2011 2012 2013

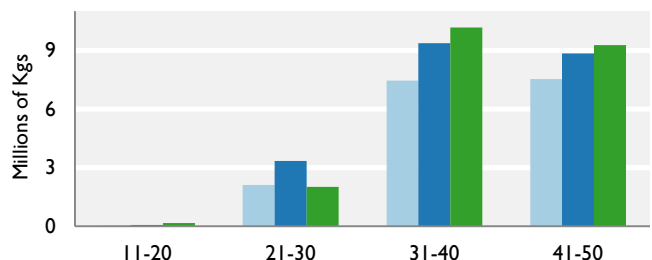


Figure 12. Capelin Landings by Coastal Vessel Length Range. 2010 2011 2012 2013

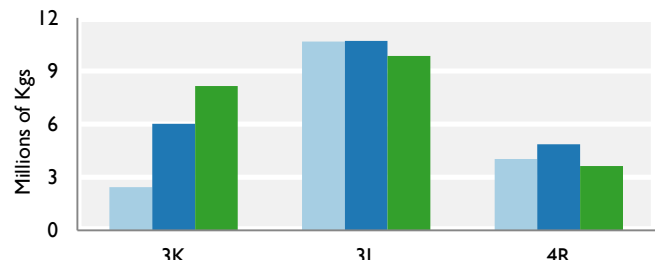


Figure 13. Coastal Fleet Capelin Landings by NAFO Region. 2010 2011 2012 2013

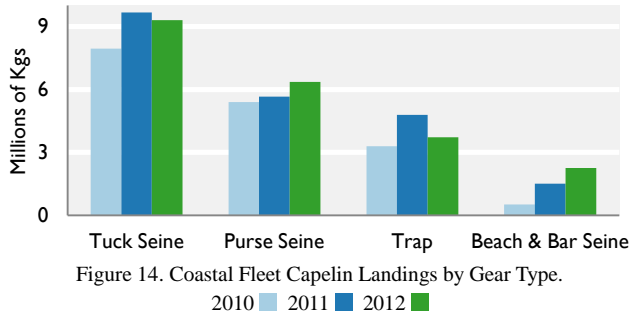


Figure 14. Coastal Fleet Capelin Landings by Gear Type. 2010 2011 2012

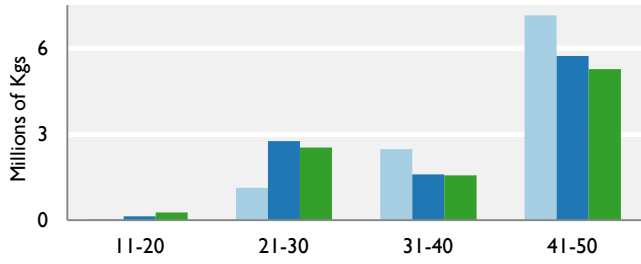


Figure 15. Herring Landings by Coastal Vessel Length Range. 2010 2011 2012

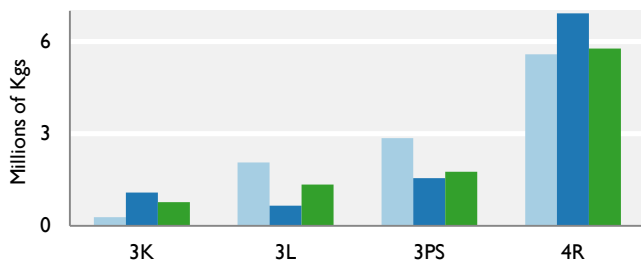


Figure 16. Coastal Fleet Herring Landings by NAFO Region. 2010 2011 2012

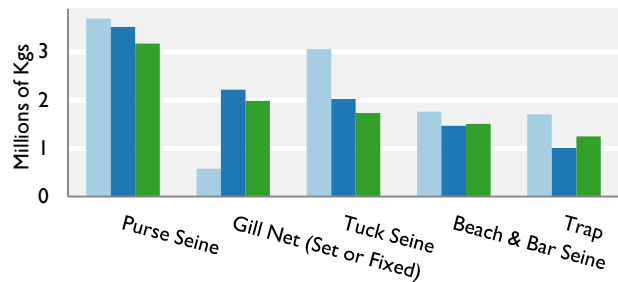


Figure 17. Coastal Fleet Herring Landings by Gear Type. 2010 2011 2012

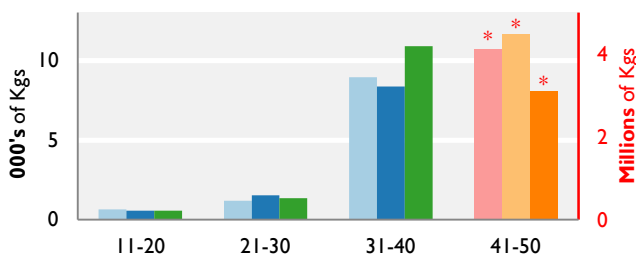


Figure 18. Whelk Landings by Coastal Vessel Length Range. * Vessel Length Range 41-50 on Right Axis. L. Axis 2010 2011 2012 // R. Axis 2010 2011 2012

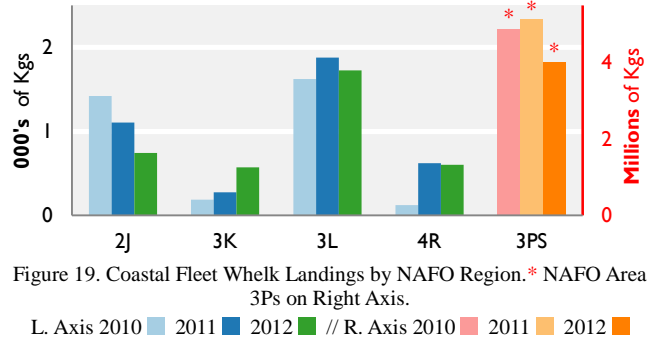


Figure 19. Coastal Fleet Whelk Landings by NAFO Region. * NAFO Area 3Ps on Right Axis. L. Axis 2010 2011 2012 // R. Axis 2010 2011 2012

The third report represents the best count of active vessels in the Coastal Fleet. This report includes a sum total of vessels producing landings, divided by length ranges and homeport NAFO regions, for 2010-2012. Vessel length ranges in this report are in feet and include ten groups by 5 foot (1.5 meter) increments up to 50 feet (15 meters), and an unknown group. Note that this report specifies *homeport* NAFO regions compared to *landing* NAFO regions. Specifying the homeport region is the best means through DFO Statistics to count the distribution of vessels and vessel lengths in the Coastal Fleet. In total, 4,674 Coastal Vessels produced landings in the 2012 fishing year. This distribution is shown in Figure 20.

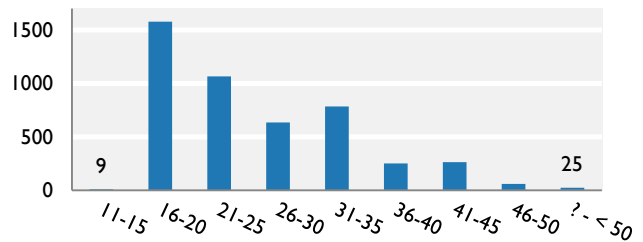


Figure 20. Coastal Fleet Distribution by Vessel Length Range, 2012.

The fourth report is specific to the Coastal Fleet seal hunt for 2010-2012. The species and gear in this report are the same throughout. Similar to the second report, this report also excludes vessel length ranges. Data is divided by NAFO region, year, and includes a count of active vessels, fishers, and buyers. Duplication of vessel, fisher, and buyer counts is possible across NAFO regions. Due to the current market environment for Newfoundland seal products, landings and income from the seal hunt are substantially depressed. The data in this report are primarily useful to complete the diversity of the Coastal Fleet.

DFA Query Report on Newfoundland & Labrador Fish Processing Plants

DFA, the Provincial administrator of regional fisheries, manages fish processing activity. We could not secure any data on fish processing specific to the Coastal Fleet, but we did receive a full list of fish processing companies, the loc-



Map 2. Licensed Fish Processing Plants, 2011. (NL Finance, 2013)

ations of their plants, and the species each plant is permitted to process. The list is current to November, 2012 and summarized in the following Table 2. We also secured Map 2, from the Newfoundland & Labrador Department of Finance, displaying the general distribution of fish plants in the province for 2011 (NL Finance, 2013).

The ‘Total Buyers’ count in Table 2 is an additional figure to the obtained DFA Query. This figure represents a different class of fish buyer in the province. A licensed ‘fish buyer’ “provided a service or exercised competition for raw material in certain regions. Their role in recent years is diminishing as processors provide many of the same services” (4-25, DFA, 2010). This figure is current to 2011 and came from DFA’s online resources (DFA, 2011). The total companies and total buyers noted here should be considered together when examining the DFO query reports ‘buyers’ column.

Total Companies	89
Total Plants	111
Total Buyers	27
Included Communities	99

Table 2. Newfoundland & Labrador Fish Processors.

DFA’s Seafood Industry, Year in Review 2012

DFA publishes an annual summary report on the seafood industry. The most current report available is 2012. Although we unsuccessfully secured unique data for Coastal Fleet employment or seafood processing, the DFA summary report contains similar data relevant to the entire fishery. The following are quotes, excerpts, and charts on *total* fishery employment and fishery exports from Newfoundland & Labrador (DFA 2013). Determining the true destination and processing of Coastal Fleet landings requires substantial research beyond the scope of this report.

Fishery Employment

“Employment in the seafood industry declined in 2012. This is the result of lower employment in the harvesting and fish processing sectors. Total industry employment was down 5.3 per cent, to 20,079 workers from 21,208 workers in 2011” (DFA 2013, 2).

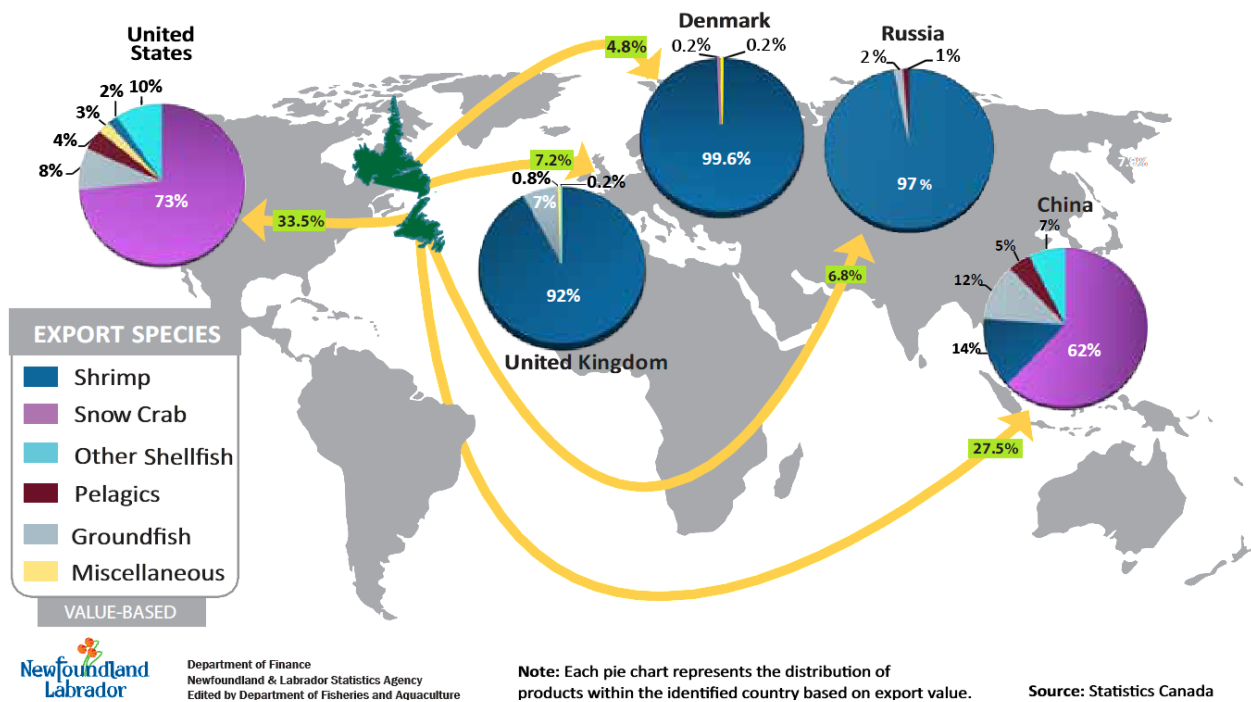


Figure 21. Newfoundland & Labrador Fishery Exports, Top Five Export Countries by Value, 2012 (DFA 2013, 15).

	2011	2012	% Change
Hatchery & Grow-out (Aquaculture)	471	467	-0.8
Harvesting (Capture Fisheries)	10,835	10,398	-4.0
Processing (Aquaculture & Capture Fisheries)	9,902	9,214	-6.9
Total	21,208	20,079	-5.3

Table 3. Seafood Industry Employment, Newfoundland & Labrador (DFA 2013, 2).

“In 2012, employment in aquaculture hatchery and grow-out operations saw a modest decline relative to 2011, and larger decreases were recorded in the harvesting and processing sectors. Hatchery and grow-out employment recorded a marginal decline of 0.8 per cent, to 467 workers in 2012. The number of fish harvesters decreased 4.0 per cent, to 10,398 workers. Plants process seafood from the wild fishery and from aquaculture operations. Employment in the processing sector decreased 6.9 per cent, to 9,214 workers in 2012 from 9,902 workers in 2011. There were seven processing plants designated as permanently closed in 2012. Employment growth in the seafood industry has been slowed by competing employment opportunities, out-migration and an aging workforce” (DFA 2013, 2).

Market Overview

“Newfoundland and Labrador continued to export significant volumes of seafood products globally in 2012. From January to November 2012, the province exported nearly \$740 million worth of seafood. This is down 10.7 per cent from the same period in 2011. The global economic environment, unfavourable exchange rates, and lower market prices for a number of seafood products contributed to this decline. Export volume for the first 11 months of 2012 was approximately 130,000 tonnes, which represented a decline of 15.2 per cent relative to the same period in 2011.”

“The United States continued to be the largest export market for Newfoundland and Labrador seafood in 2012, representing 33.5 per cent of total export value. China followed, representing 27.5 per cent of export value. Other key markets, based on export value, included the United Kingdom at 7.2 per cent, Russia at 6.8 per cent, and Denmark at 4.8 per cent. These top markets represented approximately 79.8 per cent of the province’s value of seafood exports” (DFA 2013, 15).

Regional Comparison

The following tables and figures display the Coastal Fleet's relative size by metric tonnes landed and landed value compared to the total landings and landed value for all Newfoundland & Labrador vessel lengths. Recall that the Coastal Fleet represents only those vessels <15 meters (50 feet). Data for these tables and figures comes from the reports discussed above and from preliminary 2012 regional landings data (DFO 2013b). For clarity, species with Coastal Fleet landings of 0 are excluded from the accompanying charts.

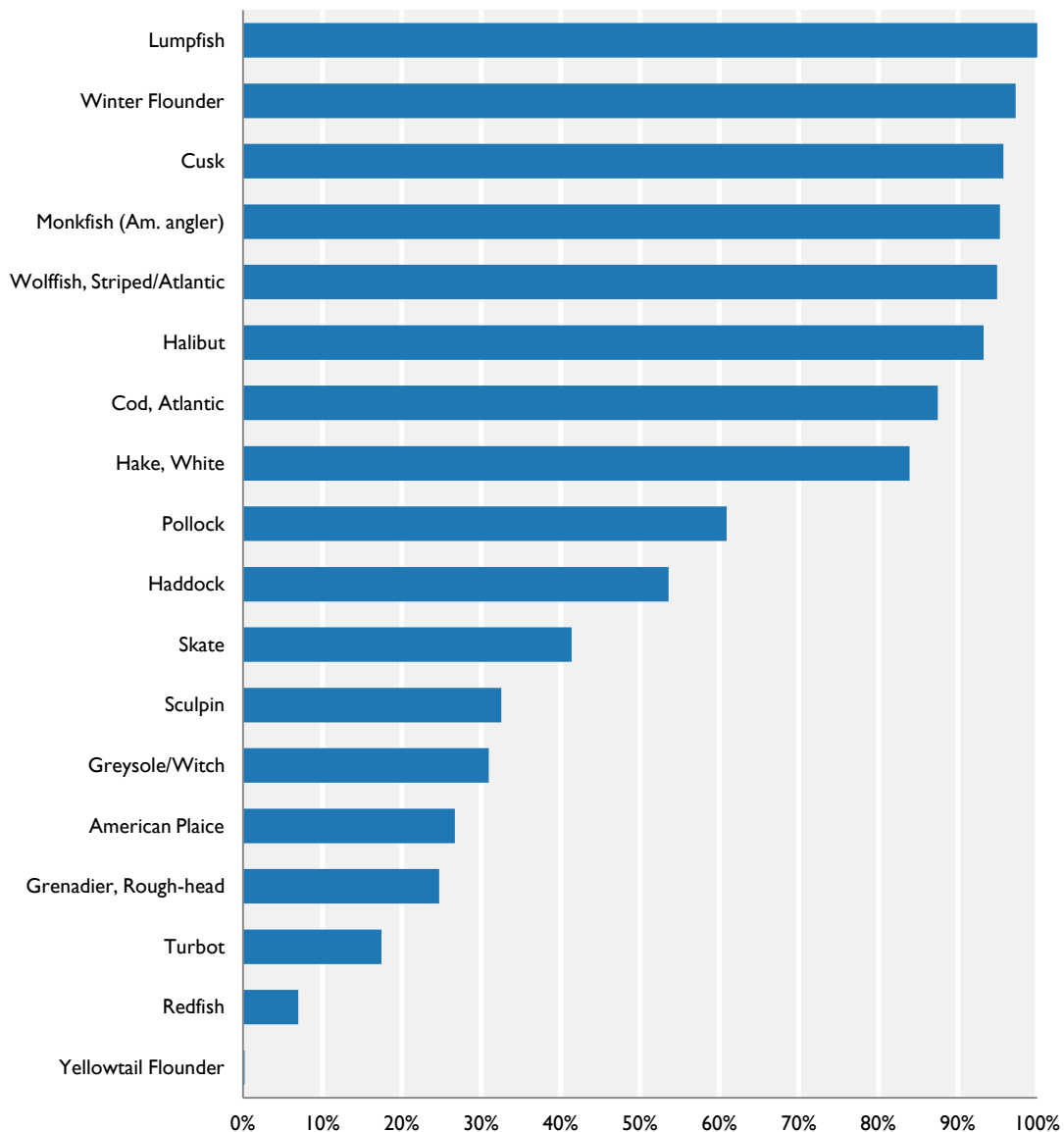


Figure 22. Groundfish, Coastal Fleet (<15 meter/50 feet) Percentage of Total Newfoundland & Labrador Landings, 2012.

Groundfish - 2012	Coastal Fleet				All NL Region	
	Tonnes		Value		Tonnes	Value
		%	\$ '000s	%		\$ '000s
Total Landings & Value	11,108	44	21,529	30	25,376	70,811
Cod, Atlantic	7,248	87	8,386	88	8,284	9,571
Haddock	56	54	55	54	105	102
Redfish	92	7	57	9	1,327	674
Halibut	586	93	5,213	93	629	5,600
American Plaice	126	27	88	29	473	299
Yellowtail Flounder	4	< 1	2	< 1	1,803	1,253
Greysole/Witch	171	31	151	31	554	488
Winter Flounder	125	97	63	97	129	65
Turbot	1,830	17	6,711	13	10,504	51,551
Skate	233	41	60	42	562	143
Pollock	206	61	190	60	339	316
Hake, White	212	84	185	84	253	221
Cusk	2	96	1	96	2	1
Lumpfish	24	100	14	93	24	15
Monkfish (Am angler)	177	95	347	95	185	364
Sculpin	1	33	<1	32	4	<1
Grenadier, Rough-Head	7	25	2	16	29	12
Wolffish, Striped/Atlantic	6	95	3	95	7	3
Hagfish	-	0	-	0	164	134

Table 4. Groundfish, Coastal Fleet (<15 meter/50 feet) Percentage of Total Newfoundland & Labrador Landings, 2012.

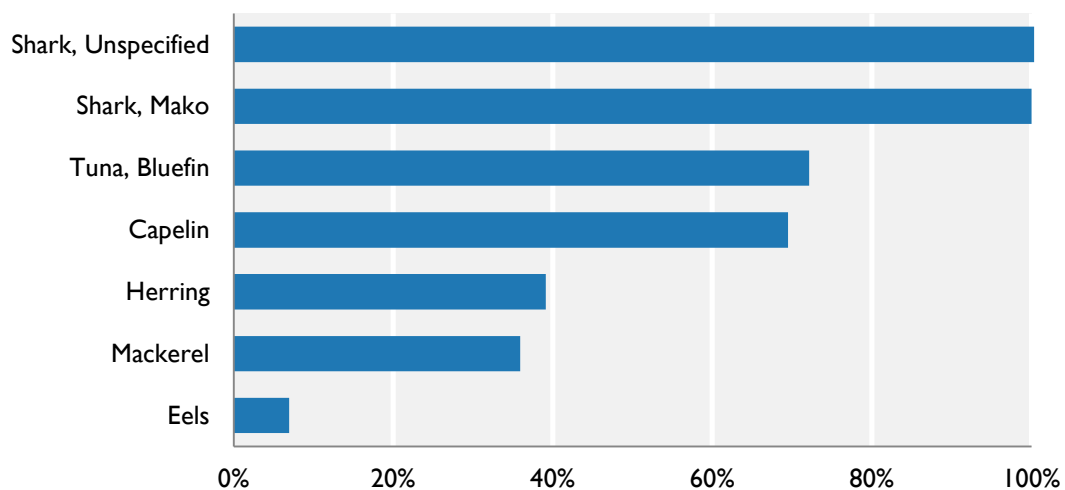


Figure 23. Pelagics, Coastal Fleet (<15 meter/50 feet) Percentage of Total Newfoundland & Labrador Landings, 2012.

Pelagics - 2012	Coastal Fleet				All NL Region	
	Tonnes	Value		Tonnes	Value	
		%	\$ '000s	%	\$ '000s	
Total Landings & Value	32,335	55	8,475	51	58,690	16,500
Herring, Atlantic	9,756	39	2,559	39	24,926	6,539
Mackerel	917	36	909	36	2,551	2,528
Tuna, bluefin	19	72	219	72	26	303
Eels	3	7	22	8	40	270
Capelin	21,640	69	4,765	69	31,145	6,860
Shark, mako	< 1	100	< 1	100	< 1	< 1
Shark, unspecified	< 1	101	< 1	100	< 1	< 1

Table 5. Pelagics, Coastal Fleet (<15 meter/50 feet) Percentage of Total Newfoundland & Labrador Landings, 2012.

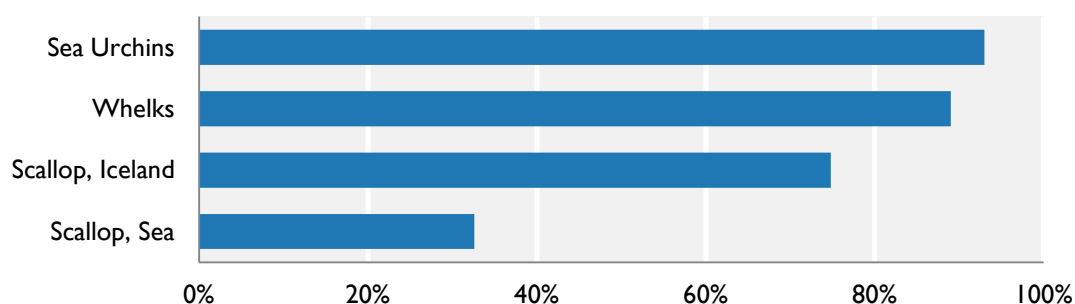


Figure 24. Molluscs, Coastal Fleet (<15 meter/50 feet) Percentage of Total Newfoundland & Labrador Landings, 2012.

Molluscs - 2012	Coastal Fleet				All NL Region	
	Tonnes	Value		Tonnes	Value	
		%	\$ '000s	%	\$ '000s	
Total Landings & Value	5,442	18	7,801	17	29,689	46,197
Clams, propellor	-	0	-	0	1,343	972
Clams, Stimpsons surf	-	0	-	0	21,228	34,629
Scallop, Sea	402	33	748	33	1,234	2,297
Whelks	4,386	89	5,857	88	4,928	6,668
Cockles	-	0	-	0	190	241
Scallop, Iceland	242	75	413	75	323	550
Sea Urchins	412	93	783	93	443	841

Table 6. Molluscs, Coastal Fleet (<15 meter/50 feet) Percentage of Total Newfoundland & Labrador Landings, 2012.

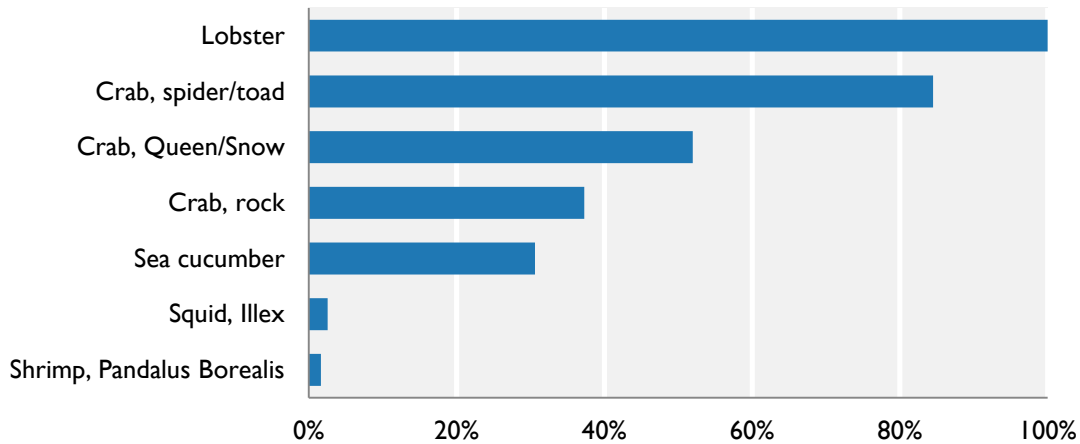


Figure 25. Crustaceans, Coastal Fleet (<15 meter/50 feet) Percentage of Total Newfoundland & Labrador Landings, 2012.

Crustaceans - 2012	Coastal Fleet				All NL Region	
	Tonnes		Value		Tonnes	Value
		%	\$ '000s	%		\$ '000s
Total Landings & Value	30,325	19	135,207	28	156,280	480,830
Squid, Illex	< 1	3	< 1	3	14	13
Sea cucumber	257	31	178	32	840	565
Lobster	2,149	100	19,584	100	2,149	19,590
Crab, spider/toad	7	84	5	84	9	7
Shrimp, Pandalus Borealis	1,638	2	2,600	1	99,924	234,341
Crab, rock	27	37	21	37	72	56
Crab, Queen/Snow	26,247	52	112,819	52	50,515	217,145
Shrimp, Pandalus Montagu	-	0	-	0	2,756	9,115

Table 7. Crustaceans, Coastal Fleet (<15 meter/50 feet) Percentage of Total Newfoundland & Labrador Landings, 2012.

Marine Mammals & Misc. - 2012	Coastal Fleet				All NL Region	
	Tonnes		Value		Tonnes	Value
		%	\$ '000s	%		\$ '000s
Total Value			1,841	15		12,531
Seal meat	4	39	3	39	10	7
Seal fat	140	68	77	68	205	113
Roe, lumpfish	105	96	633	98	109	647
Clams, Stimpsons surf, mantle	-	0	-	0	1,115	4,441
Groundfish Heads	3	< 1	5	< 1	1,470	5,796
	Count	%	\$ '000s	%	Count	\$ '000s
Marine Mammals - Seal Skins	50,189	74	1,091	73	67,567	1,490
Seal penis	1,073	91	21	91	1,178	24
Seal flippers	20,046	73	10	73	27,421	14

Table 8. Marine Mammals & Misc, Coastal Fleet (<15 meter/50 feet) Percentage of Total Newfoundland & Labrador Landings, 2012.

Present Status

The preceding summary is an overview of available data specific to the Coastal Fleet. Detailed analysis is expected in future portions of the NORA project. The data may be further refined over time if Canadian and Regional government departments gain the appropriate capacity. Despite room for greater precision, currently the data effectively represent a general inventory of the Newfoundland & Labrador Coastal Fleet.

Due to the unexpected difficulty in securing data for this report, we will have to wait for future evolutions of the NORA project to explore alternative uses for coastal vessels and a more detailed value-chain analysis.

If you would like to review the original DFA, DFO, and TC data reports, please contact the Centre for Fisheries Ecosystems Research (CFER) Administrative Director Tom Brown at (709) 778-0336, or by email at <tom.brown@mi.mun.ca>.

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Appendix

The following tables represent the various data used to assemble Figures 1-20. We summarized these data from larger tables, available on request from CFER. Please note that the totals listed may not sum due to rounding.

Figure 1. Hull Materials, NL Coastal Vessels <15m (50').

Hull Material	Vessels
GRP	630
Wood	484
GRP/Wood	62
Composite	15
Aluminum	5
Steel	2

Figure 2. Registered Tonnage, NL Coastal Vessels <15m (50').

Gross Tonnage	Vessels	Gross Tonnage	Vessels
0-5	178	36-40	62
6-10	103	41-45	73
11-15	339	46-50	55
16-20	72	51-55	34
21-25	129	56-60	20
26-30	62	61-87	13
31-35	58	Total	1,198

Figure 3. Top Ten Landed Species, 2012 Coastal Fleet and Price per Kgm of each species.

Species Landed	Total Kgs	\$ Landed	\$ per Kg
Crab	26,246,873	112,818,699	4.30
Capelin	21,639,789	4,764,708	0.22
Herring	9,755,925	2,559,324	0.26
Cod	7,247,607	8,386,081	1.16
Whelk	4,386,094	5,857,377	1.34
Lobster	2,148,725	19,583,726	9.11
Turbot	1,829,956	6,710,950	3.67
Shrimp	1,637,716	2,599,565	1.59
Mackerel	916,738	909,461	0.99
Halibut	586,439	5,213,163	8.89

Figure 4. Cod Landings by Coastal Vessel Length Range.

Length Range	2010	2011	2012
11-20	1,476,848	1,545,685	1,498,551
21-30	4,083,227	2,834,339	2,521,183
31-40	3,265,502	2,241,260	2,155,420
41-50	1,334,261	1,135,255	972,878
Total	10,159,838	7,756,539	7,148,032

Figure 5. Coastal Fleet Cod Landings by NAFO Region.

NAFO Region	2010	2011	2012
2J	59,348	46,424	58,020
3K	1,072,636	1,239,506	1,509,884
3L	1,668,281	1,718,353	1,590,215
3Pn	692,217	371,276	185,627
3Ps	4,767,764	3,601,702	3,170,779
4R	1,899,592	779,278	633,507
Total	10,159,838	7,756,539	7,148,032

Figure 6. NAFO Area 3Ps Coastal Fleet Cod Landings by Gear Type.

Gear	2010	2011	2012
Gill Net (Set or Fixed)	3,605,061	2,545,397	2,396,612
Longline	868,108	816,705	571,287
Hand Line (Baited)	292,782	220,929	193,148
Pots/Traps	1,813	18,671	9,732
Total	4,767,764	3,601,702	3,170,779

Figure 7. NAFO Area 3Ps Coastal Fleet Gill Net Cod Landings by Vessel Length Range.

Length Range	2010	2011	2012
11-20	127,911	157,441	73,724
21-30	1,254,425	828,491	803,481
31-40	1,303,396	762,418	871,103
41-50	919,329	797,047	648,304
Total	3,605,061	2,545,397	2,396,612

Figure 8. Active Coastal Vessels, NAFO Area 3Ps Gill Net Cod.

Length Range	2010	2011	2012
11-20	48	58	47
21-30	235	197	179
31-40	181	139	130
41-50	63	58	50
Total	527	452	406

Figure 9. Catch-Per-Vessel, NAFO Area 3Ps Gill Net Cod.

Length Range	2010	2011	2012
11-20	2,665	2,715	1,569
21-30	5,338	4,206	4,489
31-40	7,201	5,485	6,701
41-50	14,593	13,742	12,966

Figure 10. Crab Landings by Coastal Vessel Length Range.

Length Range	2010	2011	2012
11-20	12,857	40,679	61,523
21-30	2,833,174	2,769,032	2,633,554
31-40	11,288,617	11,102,761	11,219,974
41-50	13,691,846	13,717,775	12,326,772
Total	27,826,494	27,630,247	26,241,823

Figure 11. Coastal Fleet Crab Landings by NAFO Region.

NAFO Region	2010	2011	2012
2J	501,921	448,108	356,752
3K	4,924,681	4,262,388	3,624,117
3L	16,812,660	16,449,811	16,147,299
3Pn	1,311	1,933	2,044
3Ps	5,369,515	5,861,625	5,362,698
4R	216,406	606,382	748,914
Total	27,826,494	27,630,247	26,241,824

Figure 12. Capelin Landings by Coastal Vessel Length Range.

Length Range	2010	2011	2012
11-20	39,881	73,565	173,253
21-30	2,121,492	3,339,052	2,022,933
31-40	7,450,243	9,363,802	10,169,746
41-50	7,542,125	8,853,063	9,273,857
Total	17,153,741	21,629,482	21,639,789

Figure 13. Coastal Fleet Capelin Landings by NAFO Region.

NAFO Region	2010	2011	2012
3K	2,447,336	6,028,458	8,155,875
3L	10,668,770	10,706,324	9,848,686
4R	4,037,635	4,865,435	3,635,228
3Ps	0	29,265	0
Total	17,153,741	21,629,482	21,639,789

Figure 14. Coastal Fleet Capelin Landings by Gear Type.

Gear	2010	2011	2012
Tuck Seine	7,945,018	9,676,012	9,309,255
Purse Seine	5,395,111	5,661,378	6,360,234
Trap	3,294,483	4,789,019	3,721,800
Beach & Bar Seine	519,129	1,503,073	2,248,500
Total	17,153,741	21,629,482	21,639,789

Figure 15. Herring Landings by Coastal Vessel Length Range.

Length Range	2010	2011	2012
11-20	39,708	139,817	276,468
21-30	1,127,795	2,764,675	2,540,151
31-40	2,486,691	1,598,308	1,561,306
41-50	7,143,898	5,733,233	5,277,819
Total	10,798,092	10,236,033	9,655,744

Figure 16. Coastal Fleet Herring Landings by NAFO Region.

NAFO Region	2010	2011	2012
3K	280,789	1,088,902	777,393
3L	2,069,418	662,382	1,346,916
3Pn	2,855,965	1,553,722	1,759,599
3Ps	5,582,624	6,917,043	5,771,382
4R	9,296	13,984	0
3Pn	0	0	454
2j	10,798,092	10,236,033	9,655,744
Total	280,789	1,088,902	777,393

Figure 17. Coastal Fleet Herring Landings by Gear Type.

Gear	2010	2011	2012
Purse Seine	3,688,889	3,516,840	3,174,009
Gill Net (Set or Fixed)	578,990	2,216,981	1,985,904
Tuck Seine	3,062,949	2,023,833	1,735,531
Beach & Bar Seine	1,760,705	1,468,449	1,508,957
Trap	1,706,516	1,009,930	1,249,611
Hand Line (Baited)	43	0	0
Longline	0	0	1,732
Total	10,798,092	10,236,033	9,655,744

Figure 18. Whelk Landings by Coastal Vessel Length Range.

Length Range	2010	2011	2012
11-20	64,666	56,876	57,225
21-30	120,123	153,609	134,965
31-40	895,426	837,480	1,090,167
41-50	4,125,068	4,482,695	3,102,805
Total	5,205,283	5,530,660	4,385,162

Figure 19. Coastal Fleet Whelk Landings by NAFO Region.

NAFO Region	2010	2011	2012
2j	142,199	110,338	74,294
3K	18,611	27,247	57,091
3L	162,386	188,163	172,544
4R	11,916	62,205	60,265
3Ps	4,870,171	5,142,707	4,020,968
Total	5,205,283	5,530,660	4,385,162

Figure 20. Coastal Fleet Distribution by Vessel Length Range, 2012.

Length Range	Vessels	Length Range	Vessels
11-15	9	36-40	252
16-20	1,577	41-45	264
21-25	1,067	46-50	61
26-30	635	Unknown < 50'	25
31-35	784	Total	4,674