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Canadian Research Report (Newfoundland and Labrador Region) for 2024

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A. STATUS OF FISHERIES

This report is on fisheries and fish stocks within and surrounding the Newfoundland and Labrador Region of Canada. Nominal landings from 2019 to 2024 are listed in Table 1. Commercial length sampling information, where available, is presented in all other tables. Where available, information from the last stock assessment and information on the stock in relation to the Fisheries and Oceans Canada (DFO) Precautionary Approach (PA) Framework is provided. Additional information on the status of the fisheries:

A.1 SUBAREA 2

American plaice-Subarea 2 + Division 3K

The Div. 2+3K American plaice stock was closed to directed commercial fishing in 1994. A Limit Reference Point (LRP) was established in 2012, and the status of the stock was last updated in 2020. The stock remains below the LRP, in the critical zone of the Canadian PA framework. Preliminary Canadian landings of this species were 0 t in 2024 and averaged 6 t during the period 2020 to 2023.

Tables 2 - 3 show the total catch length distributions for Divs. 2+3K were available from 19 samples with a total of 337 measured individuals. Lengths varied from 8 cm to 38 cm with a mean of 19.44 cm.

Atlantic cod-Divisions 2GH, Divisions 2J3KL

The Atlantic cod stock in Div. 2GH has been under a moratorium on directed fishing since 1996 and there has been no reported catch since 1993. Bycatch of cod occurs in shrimp fisheries in 2GH and from 2004-2009 estimates of bycatch had ranged between 250 kg to 5,200 kg annually (Orr et al. 2010). More recent bycatch data have not been published, however preliminary analyses indicates that bycatch levels have changed little.

The Div. 2J3KL Atlantic cod stock was closed to directed commercial fishing from 1992 to 2023. There were ongoing fisheries (stewardship and commercial) throughout and the commercial fishery reopened in 2024. Preliminary Canadian landings of this species were 15,517 t in 2024 and averaged 11,592 t during the period 2020 to 2023.

An updated LRP was established for this stock in 2023 following model revisions and extension of the time series. This stock was last assessed in 2025 and, while stock size has changed little since 2017, is well above above its established LRP. Cautious and healthy zones for the stock have not been determined yet.

Tables 5 - 7 show the total catches. Length distributions for Divs 2J3KL cod were available from 86 samples with a total of 18,690 measured individuals. Lengths varied from 42 cm to 132 cm with a mean of 66.59 cm.

There are no direct estimates of recreational landings for the majority of the past 17 years; therefore reported landings are less than total catch in those years. Estimates from tagging data have shown that,

although removals by the recreational fishery have been substantial in some years since 1997, they had been about 2,500 t for the past three years.

Atlantic salmon - Subarea 2 - Labrador

The commercial fishery for Atlantic salmon in Subarea 2 has remained closed since 1998. Estimates of recreational catches for Newfoundland and Labrador have been highly variable since 2005 (total catch range of 25,566 to 68,663 salmon). Preliminary estimates or recreational Atlantic salmon catch for Subarea 2 in 2024 are 433 retained and 5,011 released salmon, 46% and 16% below the previous generation average (2017-2023), respectively. Estimated Labrador Indigenous and Subsistence fisheries harvest was inferred from logbook returns (60% return rate) at 12,899 salmon in 2024 (7,893 small and 5,006 large), which was 4% above the previous generation average (2017-2023) of 13,361 salmon. Of the four rivers assessed in Subarea 2 in 2024, one was above the upper stock reference point (healthy zone), one was between the upper stock reference point and limit reference point (crutical zone).

Greenland halibut-Subarea 2 + Divisions 3KLMNO

Preliminary landings for the Subarea 2 + Divisions 3KLMNO Greenland halibut stock were 5,627 t in 2024 and averaged 5,102 t during the period 2020 to 2023.

Tables 10 - 14 show the total catches. Length distributions for Divs. Subarea 2 + Divisions 3KLMNO Greenland halibut were available from 80 samples with a total of 17,564 measured individuals. Lengths varied from 10 cm to 104 cm with a mean of 45.61 cm.

Iceland scallop-Divisions 2HJ

Preliminary Canadian landings for the Divs. 2HJ Iceland scallop stock were 1 t in 2024 and averaged 19 t during the period 2020 to 2023.

Northern shrimp-Subarea 2 + Division 3K

The Northern shrimp (*Pandalus borealis*) fishery in Subarea 2 and the northern portion of Subarea 3 is divided into three management areas, each referred to as a shrimp fishing area (SFA): 2G (SFA 4), Hopedale and Cartwright Channels in 2HJ (SFA 5), and Hawke Channel in 2J3K (SFA 6).

SFA 4 (NAFO Division 2G)

Preliminary Canadian landings for the SFA 4 shrimp stock were 12,736 t in 2024 and averaged 11,820 t during the period 2020 to 2023.

SFA 5 (Hopedale and Cartwright Channels)

Preliminary Canadian landings for the SFA 5 shrimp stock were 13,067 t in 2024 and averaged 13,932 t during the period 2020 to 2023.

SFA 6 (Hawke Channel + NAFO Division 3K)

Preliminary Canadian landings for the SFA 6 shrimp stock were 8,159 t in 2024 and averaged 8,064 t during the period 2020 to 2023.

Redfish-Subarea 2 + Division 3K

The Div. 2+3K redfish stock remains under moratorium. Preliminary Canadian landings of this species were 3 t in 2024 and averaged 4 t during the period 2019 to 2023.

At the last assessment (2021), in the absence of a LRP, it was not possible to determine the zone within the Canadian PA framework that this stock was in.

Tables 15 & 16 show the total catches. Length distributions for Divs. 2+3K redfish were available from 43 samples with a total of 9,703 measured individuals. Lengths varied from 5 cm to 22 cm with a mean of 9.14 cm.

Snow crab-Divisions 2HJ

Preliminary Canadian landings for the Divs. 2HJ snow crab stock were 961 t in 2024 and averaged 1,081 t during the period 2020 to 2023. With status quo removals in 2025, 2HJ is projected to remain in the Cautious zone of the PA Framework

Squid-Subarea 2+3

Preliminary Canadian landings for the Subarea 2+3 squid stock were 4 t in 2024 and averaged 3,630 t during the period 2020 to 2023.

Witch flounder-Divisions 2J3KL

The Div. 2J3KL witch flounder stock has been under moratorium since 1994. When it was last assessed in 2022, the stock was below its established LRP and considered to be within the Critical Zone of the Canadian PA framework. Preliminary Canadian landings of this species were 48 t in 2024 and averaged 108 t during the period 2020 to 2023.

Tables 17 show the total catches. Length distributions for Division 2J Witch flounder were available from 12 samples with a total of 2,627 measured individuals. Lengths varied from 34 cm to 66 cm with a mean of 44.57 cm.

A.2 SUBAREA 3

American plaice-Divisions 3LNO

The Div. 3LNO American plaice stock remains under moratorium, with the stock remaining below B_{lim} . Preliminary Canadian landings of this species were 42 t in 2024 and averaged 393 t during the period 2020 to 2023.

Table 4 show the total catches. Length distributions for Divs. 3LNO American plaice were available from 4 samples with a total of 1,025 measured individuals. Lengths varied from 28 cm to 70 cm with a mean of 39.56 cm.

American plaice-Subdivision 3Ps

Preliminary Canadian landings for the Subdiv. 3Ps American plaice stock were 9 t in 2024 and averaged 24 t during the period 2020 to 2023.

The assessment of this stock in 2019 indicated it remained in the Critical Zone of the Canadian PA Framework.

Length frequencies were not available for this stock.

Atlantic cod-Divisions 3NO

The Div. 3NO Atlantic cod stock remains under moratorium. Preliminary Canadian landings of this species were 40 t in 2024 and averaged 89 t during the period 2020 to 2023, taken primarily in the yellowtail flounder fishery.

Table 8 show the total catches. Length distributions for Divs. 3NO cod were available from 1 samples with a total of 207 measured individuals. Lengths varied from 48 cm to 108 cm with a mean of 68.28 cm.

Atlantic cod-Subdivision 3Ps

Preliminary Canadian landings for the Subdiv. 3Ps Atlantic cod stock were 543 t in 2024 and averaged 1,098 t during the period 2020 to 2023.

The stock was last assessed in 2024 and it was determined that this stock was below the LRP, and therefore within the Critical Zone of the Canadian PA Framework.

Table 9 shows the total catches. Length distributions for Subdiv. 3Ps cod were available from 13 samples with a total of 2,594 measured individuals. Lengths varied from 24 cm to 111 cm with a mean of 64.3 cm.

Atlantic salmon - Subarea 3 - SFA 3-12

The commercial fishery for Atlantic salmon in Subarea 3 has remained closed since 1992. Estimates of recreational catches for Newfoundland and Labrador have been highly variable since 2005 (total catch range of 25,566 to 68,663 salmon). Estimates of recreational Atlantic salmon catch in Subarea 3 in 2024 are 4,760 retained and 8,751 released salmon, 45% and 49% below the previous generation average (2018-2023), respectively. Of the nine rivers assessed in Subarea 3 in 2024, three were above the limit reference point but below the upper stock reference point (cautious zone) and six rivers were below the limit reference point (critical zone).

Capelin-2+3KL

Capelin landings in Subarea 2 + Div. 3KL were 14,136 t in 2024. Capelin were landed using both mobile and fixed gears. The stock is currently above its LRP (the cautious znd healthy zones are not defined yet).

Capelin has had a LRP since 2023 and the stock was above its LRP in 2024 (the cautious znd healthy zones are not determined yet).

Iceland scallop-Divisions 3LNO and Subdivision 3Ps

Preliminary Canadian landings for the Divs. 3LNO Iceland scallop stock were 0 t in 2024 and averaged 0 t during the period 2020 to 2023.

Preliminary Canadian landings for the Divs. 3Ps Iceland scallop stock were 0 t in 2024 and averaged 5 t during the period 2020 to 2023.

Redfish - Divisions 3LN

Preliminary Canadian landings for the Divs. 3LN redfish stock were 289 t in 2024 and averaged 1,362 t during the period 2020 to 2023.

Length frequencies were not available for this stock.

Redfish - Division 30

Preliminary Canadian landings for the Divs. 30 redfish stock were 925 t in 2024 and averaged 520 t during the period 2020 to 2023.

Length frequencies were not available for this stock.

Redfish-Unit 2 (3Ps4Vs, 3Pn4Vn, 4Wfgi)

Preliminary Canadian landings for the Unit 2 redfish stock were 5,035 t in 2024 and averaged 5,786 t during the period 2020 to 2023.

Length frequencies were not available for this stock.

Sea scallop-Division 3KLNO

Preliminary Canadian landings for the Divs. 3KLNO sea scallop stock were 1 t in 2024 and averaged 3 t during the period 2020 to 2023.

Sea scallop-Subdivision 3Ps

Preliminary Canadian landings for the Divs. 3Ps sea scallop stock were 1,131 t in 2024 and averaged 983 t during the period 2020 to 2023.

The abundance in the inshore (north bed) is currently dominated by a modal group of scallop 75 mm while in the offshore (south and middle beds) the modal group is 120mm and 130mm.

Northern shrimp-Divisions 3LNO

There has been no directed fishing for Northern Shrimp in Divs. 3LNO since 2015. Preliminary Canadian landings for the Divs. 3LNO Northern shrimp stock were 0 t in 2024 and averaged 0 t during the period 2020 to 2023.

Snow crab-Divisions 3KLNO and Subdivision 3Ps

Preliminary Canadian landings for the Divs. 3KLNO snow crab stock were 45,896 t in 2024 and averaged 17,341 t during the period 2020 to 2023. With status quo removals in 2025, 3K is projected to be in the Cautious Zone and 3LNO is projected to remain in the Healthy zone of the Canadian PA Framework

Preliminary Canadian landings for the Divs. 3Ps snow crab stock were 8,637 t in 2024 and averaged 6,048 t during the period 2020 to 2023. With status quo removals in 2025, 3Ps is projected to remain in the Healthy zone of the Canadian PA Framework

Thorny skate-Divisions 3LNO and Subdivision 3Ps

Commercial catches of skates comprise a mix of skate species, however Thorny skate dominates the catch. Preliminary Canadian landings for the Divs. 3LNO thorny skate stock were 0 t in 2024 and averaged 3 t during the period 2020 to 2023.

Preliminary Canadian landings for the Subdiv. 3Ps thorny skate stock were 456 t in 2024 and averaged 315 t during the period 2020 to 2023.

Length frequencies were not available for these stocks.

White hake-Divisions 3NO and Subdivision 3Ps

Preliminary Canadian landings for the Divs. 3NO white hake stock were 111 t in 2024 and averaged 141 t during the period 2020 to 2023.

Preliminary Canadian landings for the Subdiv. 3Ps white hake stock were 99 t in 2024 and averaged 98 t during the period 2020 to 2023.

Length frequencies were not available for these stocks.

Witch flounder-Divisions 3NO

Preliminary Canadian landings for the Divs. 3NO witch flounder stock were 93 t in 2024 and averaged 326 t during the period 2020 to 2023.

Table 18 show the total catches. Length distributions for Divs. 3NO witch flounder were available from 2 samples with a total of 498 measured individuals. Lengths varied from 30 cm to 54 cm with a mean of 42.17 cm.

Witch flounder-Subdivision 3Ps

Preliminary Canadian landings for the Subdiv. 3Ps witch flounder stock were 14 t in 2024 and averaged 52 t during the period 2020 to 2023.

An interim LRP was adopted during the last stock assessment in 2017. At that time, the stock was considered to be above the LRP, as defined by the Canaidan PA Framework.

Length frequencies were not available for this stock.

Yellowtail flounder-Divisions 3LNO

Preliminary Canadian landings for the Divs. 3LNO yellowtail flounder stock were 2,841 t in 2024 and averaged 9,961 t during the period 2020 to 2023.

Tables 19 & 20 show the total catches. Length distributions for Divs. 3LNO yellowtail flounder were available from 46 samples with a total of 11,333 measured individuals. Lengths varied from 18 cm to 58 cm with a mean of 37.42 cm.

A.3 SUBAREA 4

Atlantic salmon - Subarea 4 - SFA 13 and 14A

The commercial fishery for Atlantic salmon in Subarea 4 has remained closed since 1992. Estimates of recreational catches for Newfoundland and Labrador have been highly variable since 2005 (total catch range of 25,566 to 68,663 salmon). Preliminary estimates of recreational Atlantic salmon catch in Subarea 4 (Division 4R) in 2024 are 2,298 retained and 4,789 released salmon, 49% and 58% below the previous generation average (2018-2023), respectively. Of the three Newfoundland rivers assessed in Subarea 4 in 2024, one was above the upper stock reference point (healthy zone), one fell between the two reference points (cautious zone), and one was below the limit reference point (critical zone).

Iceland scallop-Div. 4R

Preliminary Canadian landings for the Div. 4R Iceland scallop stock were 179 t in 2024 and averaged 54 t during the period 2020 to 2023.

Sea scallop-Div. 4R

Preliminary Canadian landings for the Div. 4R sea scallop stock were 5 t in 2024 and averaged 8 t during the period 2020 to 2023.

Snow crab-Div. 4R

Preliminary Canadian landings for the Div. 4R snow crab stock were 639 t in 2024 and averaged 368 t during the period 2020 to 2023. Recent and ongoing data deficiencies result in the exclusion of 4R3Pn from the Canadian PA Framework.

B. SPECIAL RESEARCH STUDIES

Environmental Studies

The Atlantic Zonal Monitoring Program (AZMP) initiated in 1998 continued during 2024. This program was established to include biological and chemical oceanographic sampling at a high-frequency coastal monitoring station (S27) and along cross-shelf oceanographic sections sampled at biweekly to seasonal time scales during ice-free period. The main objectives are to establish the seasonal, temporal, and spatial distribution and abundance of nutrients, phytoplankton pigments, and zooplankton in relation to the physical

environment. Monitored variables include temperature, salinity, dissolved oxygen, ocean currents, spring phytoplankton bloom metrics, nutrients concentration, chlorophyll biomass, and mesozooplankton abundance, biomass and community composition. Additional physical oceanographic observations are also routinely collected during marine resource assessments and research surveys. The oceanographic monitoring program currently conducted on the Newfoundland and Labrador Region aims at understanding the changes in the ecosystem structure and productivity over time. Data from this effort are used to produce annual reports on the physical and biogeochemical state of the ocean and other studies relating environmental conditions to marine resources. Summer and fall missions occurred in 2024 (spring trip was cancelled due to a refit delay). During the summer survey, 5 sections were completed (FC, BB, SI, MB, WB) and 1 section was partially completed (S27). During the fall survey, 5 sections were completed (SWSPB, SEGB, FC, BB and SI). In addition, the high-frequency monitoring station S27 was occupied 27 times between January and December, including 12 full AZMP physical biogeochemical occupations.

Physical Environment

The winter North Atlantic Oscillation (NAO) index, a key indicator of the direction and intensity of the winter wind field patterns over the Northwest Atlantic was positive in 2024 (+0.8). While the lowest winter NAO index value was reached in 2010, all years between 2012 and 2020 (except 2013 and 2021) were positive, including the record high of +1.6 in 2015. Except for winter NAO, all other environmental parameters presented for 2024 in this report indicate warmer than normal conditions (defined as the average over the 1991-2020 climatological period). The air temperatures across the NW Atlantic exhibited consistently positive anomalies throughout the year (excluding May). The sea ice, cold intermediate layer, and bottom temperature were all above normal. The sea surface temperature for 2024 tied with 2012 for the warmest year on record.

Nutrients and Plankton Studies

Spatiotemporal variability in nutrients and plankton were estimated using in situ measurements of oceanographic variables during AZMP seasonal surveys across NAFO Subareas 2-3. The timing and mean intensity of the spring and fall phytoplankton blooms were derived satellite observations of ocean colour. Sub-surface (50-150 m) nitrate inventories were near-to-above normal across Subareas 2-3 in 2024 for a 5th consecutive year, while chlorophyll a inventories (0-100 m) were primarily near normal. The timing of the spring bloom was earlier than normal on the Newfoundland Shelf and near-normal for the Grand Bank and Southern Newfoundland. The timing of the fall bloom was earlier than normal on the Newfoundland Shelf and later than normal on the Grand Bank and the Flemish Cap. Mean chl a surface concentrations during the spring and fall blooms were primarily near-normal, except for Southern Newfoundland where record-high levels were observed in the spring. Near-to-above-normal zooplankton biomasses across Subareas 2-3 were primarily driven by near-to-above-normal abundances of large, energy rich, Calanus finmarchicus copepods.

Biological Studies

Multispecies Trawl Surveys

Two new offshore research survey vesselshave been introduced for these surveys, with comparative fishing undertaken to estimate conversion factors. The data from these vessels have been converted where possible, however implementation of conversion factors could not be applied to all stocks.; For further details see Wheeland and Rideout (2024) The survey area was undertaken at a reduced allocation (roughly 70%) in spring and autumn of 2024;).for further details see Rideout et al. 2025

During a standard survey and depending upon the species, sampling occurs for length, age, growth, maturity stage, condition and stomach contents analyses. In addition, sampling for lengths and weights were conducted on a suite of other species to support ecosystem monitoring. Analysis of maturity data is conducted regularly for groundfish species and are presented to the meeting of NAFO Scientific Council during assessments of cod in Div. 3NO, American plaice in Div. 3LNO, yellowtail flounder in Div. 3LNO, Greenland halibut in SA2+Div. 3KLMNO, Northern shrimp.

Sentinel Studies

The Sentinel Survey of Atlantic cod (*Gadus morhua*) is a fixed gear inshore survey that has been conducted in NAFO Subdivision 3Ps and Divs. 3Pn4Rs since 1994, and Divs. 2J3KL since 1995. Data collected and analyses were tabled at the Regional Stock Assessment in spring 2025 for Divs. 2J3KL Atlantic Cod, and in fall 2024 for Subdiv. 3Ps Atlantic Cod. The objectives of the program are: the use of Atlantic Cod catch rates to develop indices of relative abundance for resource assessments; to incorporate knowledge of inshore fish harvesters in the resource assessment process; to evaluate inter-annual variability in resource distribution over inshore areas; and to collect information on key biological parameters used in assessments (e.g. fish length, sex, and otoliths to determine fish age), as well as biological samples used for genetic, physiological, and toxicological analyses, along with stomach contents for food and feeding studies. Trends in the standardized catch rate for gillnet and linetrawl in Subdiv. 3Ps were highest at the beginning of the time-series, declined sharply in the late 1990s and remained relatively low since Standardized catch rate for gillnet in Divs. 2J3KL were higher at the beginning of the time-series, declined rapidly to their lowest values in 2002, then increased and peaked in 2014 before declining once more between 2015-2020. The model fit for linetrawl catch rate was questionable and not considered in further analyses.

Cod Tagging and Telemetry

Ongoing mark-recapture studies continued in 2024, with 5276 cod tagged and released with Floy tags in Div. 2J3KL and 593 in Div. 3Ps. This tagging effort is consistent with annual average over the last decade. This tagging program provides critical information on mortality to the Northern Cod Assessment Model and an estimate of the recreational fishery catch for NAFO Divs 2J3KL and 3Ps.

In addition to the mark-recapture tagging program, acoustic telemetry studies have been carried out in the region since 2005 providing information on cod movement and survival. In 2024, 338Atlantic cod were implanted with acoustic transmitters in Divs. 3KL. Due to the long battery life of these transmitters, there are approximately 1200 Atlantic cod carrying active transmitters in Newfoundland and Labrador waters. DFO-NL Groundfish and partners maintain a network of active acoustic receivers in the region. This network of receivers includes 150 stations in 2J3KL (75 inshore, 75 offshore) and 56 in 3Ps (36 inshore, 20 offshore).

Distinction of Cod Species in Seal Diets

There is a research project to investigate if Fourier Transform – Near Infrared (FT-NIR) spectrometry can be used as a viable and non-destructive method to distinguish between Atlantic cod (*Gadus morhua*) and Greenland cod (*Gadus ogac*) recovered from seal (and other predator) stomachs. Additionally, it will be determined if this methodology can also be used to age Atlantic cod otoliths recovered from pinniped stomachs.

Flatfish Tagging

There is on ongoing program for tagging and telemetry of flatfish around Newfoundland and Labrador using acoustic transmitters and floy tags (Greenland halibut in NAFO Div. 2J3KL, Witch flounder in Div. 2J3K, American plaice in Div. 3Ps), and pop-off archival satellite tags on Greenland halibut led by Fisheries and Oceans Canada - NL Region. This program started in 2021and is examining the movement ecology of these flatfish, and aims to quantify seasonal and inter-annual movements of these species in the context of habitat use, migration, and stock and survey boundaries. Tagging locations have been in Inshore Newfoundland (Trinity Bay, Fortune Bay) and offshore in NAFO Div. 2J3K.

Squid

A 3-year research project related to Northern Shortfin Squid was initiated in 2022 (funding provided by Genomics Research and Development Initiative – GDRI and Canadian Scientific Research Fund – CSRF). This project employs new methods (i.e., online surveys, dockside visits, commercial index harvesters, and detailed fishery sampling) to enhance our understanding of the spatiotemporal dynamics of effort, catch, and catch composition in fisheries throughout Atlantic Canada, and use genomic techniques to provide insights into squid stock structure throughout their range. In addition, a species distribution model based on survey trawl data from throughout Atlantic Canada remains in development.

Snow crab

A trap survey for snow crab was conducted in the northern portion of Div. 2I and Div. 2H in the summers of 2013-2024. The surveys, conducted by the Torngat Joint Fisheries Secretariat with in-kind support from DFO, were performed to quantify the distribution and abundance of commercial-sized males in the Nunatsiavut Settlement Area. The survey covered areas to the north, west, and south of the Makkovik Bank. Small-meshed pots were also incorporated into the study to capture females and small males. DFO trap surveys in select inshore bays in 3KLPs continued in 2024. These surveys collect information on biological and population parameters and are used in annual assessments of snow crab. The surveys have also been used for past and on-going monitoring and research into the incidence and impacts of Bitter Crab Disease (BCD), as well as sperm limitation in NL snow crab. A post-season trap survey, conducted by snow crab harvesters, which began throughout most of 2J3KLNOPs4R in 2004 was continued in 2024. These surveys have expanded in spatial scale since 2018 and now cover both a horizontally and vertically broader area of the continental shelf than the historic design. The frequency of small-mesh pots in this survey has also increased since 2018, with near full coverage of the 1250 allocated stations having a small-mesh pot included in 2024. All trap survey series, as well as the multispecies trawl surveys, are integral components of the annual stock assessment and are used to monitor present biomass along with recruitment prospects, mortality, and reproductive capacity of the stock.

Northern shrimp

Genomics research demonstrated strong connectivity of northern shrimp from the Eastern Arctic through to the Grand Banks (Shrimp Fishing Areas, SFAs 0-7), with localized genetically-distinct pools that may be linked to smaller-scale oceanographic profiles (i.e., gyres) (PANOMICS project). Those results are being used to update larval dispersal patterns from biophysical simulations.

Stock structure from Eastern Assessment Zone to SFA 7 was described using geographic variation in life history traits, dispersal patterns (i.e. estimates of gene flow and larval dispersal), and distribution patterns. These results indicated the presence of two stock assessment regions: (1) North - NAFO Div. 2H and north, and (2) South - NAFO Div. 2J and south. New model-based biomass estimates were developed for northern shrimp and their primary groundfish predators within these two stock assessment regions. A newly approved assessment model, which takes into account these two stock assessment regions, has been implemented. Additionally, new reference points have been adopted for utilization in the evaluation of Canadian domestic stocks. In addition, the results of two research initiatives examining the influence of environmental and ecological conditions on northern shrimp distribution and abundance were published (Zabihi-Seissan et al., 2024, Baker et al., 2024).

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Tables

Table 1. Summary of preliminary catches (t) for stocks within the DFO, Newfoundland and Labrador Region. This table presents Newfoundland and Labrador and DFO Maritimes landings combined. Catches are totaled for a Jan 01- Dec 31 calendar year.

Species	Stock	2019	2020	2021	2022	2023	2024
	2+3K	0	1	6	16	1	0
American plaice	3LNO	633	448	548	441	134	42
	3Ps	99	58	17	12	8	9
	2GH	0	0	0	0	0	7
Adameira d	2J3KL	10,454	10,154	10,885	12,406	12,922	15,51
Atlantic cod	3NO	129	83	102	112	60	40
	3Ps	3,398	2,025	757	847	763	543
Canalin	2J3KL	19,509	16,109	13,949	0	11,355	14,13
Capelin	3NO	0	0	0	0	0	0
Greenland halibut	2+3KLMNO	6,064	5,576	4,595	5,571	4,667	5,62
Haddock	3LNO	73	10	10	20	6	43
	3Ps	169	70	47	23	54	89
	2НЈ	6	34	25	7	11	1
Isoland scallen	3LNO	0	0	0	0	0	0
Iceland scallop	3Ps	51	0	15	5	0	0
	4R	48	24	76	45	71	179
	3K	116	136	175	291	482	916
	3L	163	125	144	186	256	418
Lobster	3PN	297	356	440	332	485	629
	3Ps	1,572	1,750	1,599	1,540	1,747	1,87
	4R	2,511	2,549	2,619	3,748	4,350	6,35
Pollock	3LNO			0	0	0	0
ronock	3Ps	119	79	67	42	51	123
Dod6-L	2+3K	4	4	11	2	1	3
Redfish	3LN	2,982	1,518	2,373	1,446	113	289

Species	Stock	2019	2020	2021	2022	2023	2024
-	30	211	467	358	570	687	925
	Unit 2	2,412	3,742	5,219	7,265	6,918	5,035
Roughhead grenadier	2НЈК	0	3	7	4	2	0
Kougimeau grenauier	3LNO	0	0	0	0	0	1
	3KLNO	0	0	5	2	6	1
Sea scallop	3Ps	924	909	946	1,035	1,042	1,131
	4R	3	7	9	0	16	5
	3L	0	0	0	0	0	0
	3M	0	0	795	0	0	0
Shrimp	SFA 4	11,232	8,280	10,486	14,889	13,624	12,73
	SFA 5	23,440	13,596	11,761	16,227	14,145	13,06
	SFA 6	8,638	6,267	9,581	8,876	7,534	8,159
Snow crab	2НЈ	1,768	1,372	1,180	897	876	961
	3K	6,047	6,541	7,554	9,851	10,432	9,626
	3LNO	15,583	17,786	23,966	30,871	31,727	36,27
	3P	2,789	3,249	5,087	7,728	8,127	8,637
	4R	186	196	313	489	473	639
Squid	2+3	2,540	3,088	11,326	5	100	4
Thorny skate	3LNO	8	4	7	1	0	0
Thorny skate	3Ps	894	487	536	219	17	456
YATI-LE I I I	3LNO	159	148	138	180	99	111
White hake	3Ps	186	116	115	60	103	99
	2J3KL	35	83	151	111	86	48
Witch flounder	3NO	479	427	386	364	125	93
	3Ps	535	109	30	44	23	14
VII . 110 1	3LNO	11,541	13,469	13,707	10,028	2,641	2,841
Yellowtail flounder	3Ps	5	1	0	0	0	0

Table 2. Length composition (0/000) of American plaice from Canadian commercial landings in NAFO Division 2G in 2024.

Length	Sep	Jan	Aug	Jun	Jul
8	85.51				
10		454.54			
12		181.82	76.87		
14				115.73	
16	414.49	181.82		179.03	333.33
18		181.82		231.45	333.33
20				179.03	333.33
22	207.25		307.83		
24	207.25		76.87		
26			461.57	179.03	
32				115.73	
36			76.87		
38	85.51				
SNPT	1000	1000	1000	1000	1000
AL	22.9	11.6	16	19.4	18.5
ALMF	0.00	0.00	0.00	0.00	0.00
AW	0.13	0.01	0.03	0.07	0.11
N	2	1	1	2	2
SLF	7	11	3	7	6

Length	May	Aug	Jun
10	6.09		
12	236.70	68.21	
14	157.73	34.11	
16	137.24		52.18
18	81.92	68.21	184.06
20	116.82	312.41	159.41
22	168.98	312.41	472.48
24	64.63	68.21	52.18
26	5.44	34.11	79.70
28	13.23	34.11	
30	7.79		
32		68.21	
34	3.43		
SNPT	1000	1000	1000
AL	19.8	19.4	15.8
ALMF	0.00	0.00	0.00
AW	0.09	0.06	0.04
N	2	2	7
SLF	13	16	274

Table 4. Length composition (0/000) of American plaice from Canadian commercial landings in NAFO Division 3N in 2024.

Length	May	Dec
28	2.85	
30	22.66	56.34
32	46.71	3.52
34	106.40	80.99
36	129.01	190.14
38	149.37	257.04
40	105.24	186.62
42	83.72	112.68
44	121.24	49.30
46	126.99	42.25
48	44.42	10.56
50	27.16	10.56
52	11.08	
56	3.21	
58	3.92	
60	1.07	
62	4.27	
66	6.77	
68	2.49	
70	1.42	
SNPT	1000	1000
AL	37	39.1
ALMF	0.00	0.00
AW	0.51	0.62
N	1	3
SLF	284	741

Table 5. Length composition (0/000) of Atlantic cod from Canadian commercial landings in NAFO Division 2J in 2024.

Length	Aug
45	0.19
48	0.80
51	7.25
54	20.98
57	54.95
60	132.08
63	241.12
66	239.14
69	157.03
72	74.68
75	33.73
78	15.51
81	6.90
84	4.90
87	4.69
90	2.35
93	1.56
96	0.78
99	0.97
102	0.40
SNPT	1000
AL	63.5
ALMF	0.00
AW	2.45
N	16
SLF	5129

Table 6. Length composition (0/000) of Atlantic cod from Canadian commercial landings in NAFO Division 3K in 2024.

Length	Sep	Aug	Oct	Jul
42	3.14			
45	3.53	0.75	3.52	
48	22.18	8.53		
51	82.99	15.51		
54	158.35	41.00	7.04	6.76
57	190.43	127.42	45.77	40.54
60	235.39	318.40	102.11	202.70
63	310.65	538.69	186.62	256.76
66	344.74	419.52	228.87	195.95
69	255.46	246.45	190.14	135.14
72	153.11	107.67	105.64	87.84
75	83.56	56.15	70.42	33.78
78	59.63	31.97	21.13	6.76
81	36.35	29.91	17.60	6.76
84	20.43	19.45	7.04	13.51
87	9.87	16.11		
90	8.79	11.19	3.52	6.76
93	6.48	3.96		
96	5.05	3.31	3.52	
99	5.71	2.20	3.52	6.76
102	4.17	0.74	3.52	
105		0.37		
108		0.74		
SNPT	2000	1000	1000	2000
AL	126.5	63.51	65.11	125.4
ALMF	0.00	0.00	0.00	0.00

Length	Sep	Aug	Oct	Jul
AW	4.79	2.04	2.62	4.63
N	12	1.00	2.00	15
SLF	2484	148.00	284.00	3387

Table 7. Length composition (0/000) of Atlantic cod from Canadian commercial landings in NAFO Division 3L in 2024.

Length	Aug	Sep	Jul
42	0.44	0.40	
45		22.37	
48	5.58	69.19	
51	6.87	222.07	
54	11.42	377.42	
57	47.27	447.53	4.54
60	149.27	478.73	50.00
63	315.44	500.41	127.27
66	426.98	427.72	168.18
69	379.93	350.42	150.00
72	256.45	250.64	168.18
75	162.87	198.48	77.27
78	70.61	139.45	59.09
81	41.84	147.20	31.82
84	34.02	90.88	54.55
87	27.29	87.66	18.18
90	20.25	63.30	22.73
93	11.89	46.45	22.73
96	9.50	9.32	27.27
99	5.54	24.45	13.64
102	8.57	20.63	
105	3.01	8.99	
108	1.98	6.15	
111	1.48	9.78	4.54
114	1.40	0.39	
132	0.11		

Length	Aug	Sep	Jul
SNPT	2000	1000	4000
AL	134.1	70.64	255.54
ALMF	0.00	0.00	0.00
AW	5.91	3.35	10.44
N	20	1.00	19.00
SLF	3511	220.00	3527.00

Table 8. Length composition (0/000) of Atlantic cod from Canadian commercial landings in NAFO Division 30 in 2024.

Length	Mar
48	14.49
51	115.94
54	149.76
57	96.62
60	72.47
63	82.13
66	14.49
69	33.82
72	33.82
75	43.48
78	72.47
81	38.65
84	72.46
87	57.97
90	43.48
93	14.49
96	14.49
102	19.32
105	4.83
108	4.83
SNPT	1000
AL	66.3
ALMF	0.00
AW	3.03
N	1
SLF	207

Table 9. Length composition (0/000) of Atlantic cod from Canadian commercial landings in NAFO Division 3Ps in 2024.

Length	Feb	Jul	Apr	Jan
24	0.16			
27	2.44			
30	3.10			
33	1.47			
36	3.46			
39	5.69			
42	6.18	15.87		
45	4.88	7.94		
48	39.56	34.73	3.30	6.90
51	81.19	101.19	42.91	
54	84.40	95.74	151.82	9.22
57	102.53	215.28	201.32	21.96
60	121.42	405.26	158.42	93.75
63	94.35	402.78	128.71	168.79
66	90.96	300.60	75.91	260.83
69	84.83	210.32	72.61	186.19
72	59.45	75.89	49.50	87.30
75	52.16	33.24	16.50	70.84
78	30.15	23.81	26.40	31.84
81	28.40	11.90	19.80	18.84
84	25.97	8.93	19.80	20.57
87	15.23	16.87	13.20	12.34
90	20.99	18.36	6.60	4.44
93	4.23	5.95	6.60	2.06
96	13.27	7.44	3.30	2.06
99	12.64	7.94		
102	1.80		3.30	

Length	Feb	Jul	Apr	Jan
105	6.82			2.06
111	2.28			
SNPT	1000	1000	1000	2000
AL	60.8	62.9	65.8	122.00
ALMF	0.00	0.00	0.00	0.00
AW	2.14	2.43	2.64	4.46
N	1	4	3	5.00
SLF	303	1031	462	798.00

Table 10. Length composition (0/000) of Greenland halibut from Canadian commercial landings in NAFO Division 2G in 2024.

3	Aug	Sep Aug	Jun
-		25.39	
5	199.05	12.64 199.05	41.50
5	341.65	329.39 341.65	31.97
)	40.20	101.22 40.20	108.84
L	148.81	50.55 148.81	314.29
)	133.00	101.33 133.00	135.38
5	30.15	50.67 30.15	39.45
L	26.31	75.94 26.31	108.84
L	26.31	101.10 26.31	131.29
7	38.27	75.94 38.27	61.90
ó	16.26	37.91 16.26	17.01
-		25.28	9.53
-		12.64	
)	1000	1000 1000	1000
)	19	13.6 19	18.1
)	0.00	0.00 0.00	0.00
5	0.05	0.03 0.05	0.07
3	3	2 3	4
ó	126	209 126	65

Table 11. Length composition (0/000) of Greenland halibut from Canadian commercial landings in NAFO Division 2H in 2024.

Length	May	Aug	Jun
10	14.41		
12	67.93	66.01	107.08
14	36.00	155.97	110.93
16	196.76	123.12	191.65
18	311.08	389.62	439.32
20	117.20	181.15	88.41
22	51.77	14.43	20.32
24	78.98	19.04	18.12
26	74.15	27.63	12.08
28	23.70	9.21	12.08
30	16.56	9.21	
32	2.91	4.61	
34	2.89		
36	4.76		
38	0.45		
40	0.45		
SNPT	1000	1000	1000
AL	16.2	15.6	17.6
ALMF	0.00	0.00	0.00
AW	0.03	0.03	0.05
N	2	2	7
SLF	401	404	1158

Table 12. Length composition (0/000) of Greenland halibut from Canadian commercial landings in NAFO Division 2J in 2024.

Length	Feb	Jan	Nov	Jun	Mar	Dec	Aug	Jul
32	5.39	0.53						
34	19.89	0.53						
36	43.06	4.93	3.92					
38	57.98	11.35		5.13	6.57			
40	60.39	12.06	3.92	69.23	22.52	1.98		
42	66.52	37.08	7.60	148.72	29.34	9.55		
44	94.98	140.96	15.93	184.62	28.17	9.55	1.10	
46	173.58	153.56	61.16	174.36	56.42	35.52	3.04	
48	277.91	288.83	106.88	156.41	61.66	66.85	25.35	3.68
50	238.42	320.29	169.88	100.00	78.52	113.38	102.93	1.21
52	261.58	225.20	189.01	69.23	72.99	131.78	152.09	8.66
54	264.37	199.42	151.86	38.46	82.98	182.92	178.68	5.12
56	186.59	140.63	95.01	30.77	61.90	155.54	163.33	8.77
58	74.26	94.03	56.90	10.26	60.99	99.17	205.40	17.23
60	60.14	87.05	41.55	5.13	54.81	70.29	170.34	30.50
62	43.76	60.41	24.41	5.13	43.68	34.24	132.22	33.22
64	14.40	42.01	25.38		37.28	24.52	113.52	50.33
66	13.97	23.83	5.52	2.56	39.00	17.30	96.60	85.23
68	14.19	25.96	13.61		37.69	15.32	134.75	99.93
70	7.80	23.28	5.76		29.03	9.72	140.83	94.18
72	1.97	17.00	3.92		36.82	5.76	61.29	83.45
74	4.88	23.60	6.00		30.23	3.79	61.03	78.75
76	0.51	17.02	1.84		21.49	1.98	66.98	98.85
78	1.97	13.74			17.63	9.03	17.03	64.54
80	0.51	9.11			19.61		50.78	54.42
82	2.92	10.18	2.08		25.83	1.80	35.44	48.36
84	6.61	5.45	3.92		17.40		17.03	46.85

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Table 13. Length composition (0/000) of Greenland halibut from Canadian commercial landings in NAFO Division 3K in 2024.

Jul	Jun	Mar	Jan	Dec	Length
				3.80	34
			5.19	3.80	38
		6.12	21.55	7.60	40
	2.08	33.37	46.68	7.60	42
2.22	1.77	29.94	33.70	26.62	44
12.90	12.44	68.57	51.26	34.22	46
28.68	59.16	60.63	74.61	72.24	48
98.39	103.35	66.32	87.58	102.66	50
133.46	106.65	60.41	82.60	140.68	52
158.49	173.28	98.39	99.16	114.07	54
117.88	120.62	80.47	69.83	129.28	56
142.13	123.53	77.78	62.04	102.66	58
99.97	107.65	71.88	44.08	76.04	60
201.21	78.55	62.76	32.51	45.63	62
182.65	46.84	44.10	36.50	41.83	64
194.66	26.93	32.51	22.54	34.22	66
165.13	14.54	40.02	48.08	19.01	68
139.20	9.54	30.90	29.33	3.80	70
85.73	7.38	20.18	15.16	7.61	72
53.73	2.15	19.31	28.92	11.41	74
48.12	2.85	17.71	27.52		76
26.65	0.70	18.66	26.33	7.61	78
24.82		22.96	6.18		80
17.10		15.02	18.75		82
21.03		5.90	13.96		84
22.14		8.16	4.99	3.80	86
9.41		6.12	4.78		88

Length	Dec	Jan	Mar	Jun	Jul
90	3.80	1.20			7.33
92		3.79			2.89
94					1.94
96		1.20	1.82		1.09
98					1.09
SNPT	1000	1000	2000	1000	1000
AL	53.9	56.3	123.36	54.8	57.1
ALMF	0.00	0.00	0.00	0.00	0.00
AW	1.42	1.81	4.67	1.47	1.8
N	1	2	9.00	3	2
SLF	263	531	1807.00	948	518

Table 14. Length composition (0/000) of Greenland halibut from Canadian commercial landings in NAFO Division 3L in 2024.

Jun	Jul	Length
	2.76	40
	5.51	42
2.98	13.77	44
14.93	30.30	46
59.70	71.62	48
95.52	90.91	50
164.18	126.72	52
140.30	137.74	54
146.27	148.76	56
116.42	129.48	58
101.49	101.93	60
47.76	49.59	62
35.82	46.83	64
23.88	22.04	66
17.91	8.27	68
14.93	2.76	70
5.97	2.76	72
11.94	2.76	74
	2.76	80
	2.76	84
1000	1000	SNPT
54.5	53.9	AL
0.00	0.00	ALMF
1.51	1.39	AW
1	1	N
335	363	SLF

Table 15. Length composition (0/000) of Redfish from Canadian commercial landings in NAFO Division 2G in 2024.

Length	Feb	Jan	Jul	Jun	Aug	Mar	Sep
6	4.64	22.20	3.60	5.10			
7	114.28	279.66	81.25	312.46	49.01	87.90	23.61
8	206.33	31.72	224.21	407.53	409.47	308.45	226.04
9	148.74	35.44	59.78	64.64	138.00	337.03	153.41
10	222.94	31.72	126.55	116.69	200.57	104.03	175.43
11	88.72	54.20	248.07	56.96	116.58	96.20	89.74
12	44.12	65.60	154.51	15.27	31.17	42.46	87.00
13	63.49	48.43	73.32	9.46	38.31	12.02	100.66
14	43.62	141.72	15.36	0.67	11.18	5.13	62.78
15	20.63	160.31	5.09	10.55	2.14	2.55	37.45
16	22.32	101.32	1.02	0.67	2.14	3.53	26.17
17	15.16	9.04	1.29		1.43	0.70	12.88
18	4.48	14.38	2.04				3.04
19	0.53	4.27	3.92				
21							1.79
SNPT	1000	1000	1000	1000	1000	1000	1000
AL	9.3	10	11.5	10.2	8.3	9.1	10.6
ALMF	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AW	0.02	0.02	0.03	0.01	0.01	0.01	0.02
N	2	4	3	4	3	4	3
SLF	381	1045	651	583	595	1014	719

Table 16. Length composition (0/000) of Redfish from Canadian commercial landings in NAFO Division 2H in 2024.

Jun	Feb	Aug	Apr	May	Jan	Length
				0.40	28.86	5
19.80	39.08	20.55	11.97	52.35	381.30	6
449.04	489.65	286.75	223.26	482.78	180.93	7
300.83	383.91	431.39	338.84	132.70	152.07	8
82.66	66.67	59.23	50.69	46.56	157.89	9
72.77	20.69	43.17	74.57	39.90	68.57	10
27.42		27.75	54.89	41.80	18.01	11
21.54		52.20	66.70	57.83		12
12.44		32.48	61.77	62.66	6.95	13
9.50		21.79	47.15	34.57	1.95	14
		16.24	29.05	28.30	1.74	15
		5.96	26.12	14.53		16
4.01		1.24	7.39	3.34	1.74	17
			6.38	1.83		18
		0.41	0.52	0.31		19
		0.41	0.34	0.16		20
			0.34			21
		0.41				22
1000	1000	1000	1000	1000	1000	SNPT
8.8	8.1	7.4	7.5	8.6	9.5	AL
0.00	0.00	0.00	0.00	0.00	0.00	ALMF
0.02	0.01	0.01	0.01	0.01	0.02	AW
7	2	2	1	2	6	N
1389	367	544	435	362	1618	SLF

Table 17. Length composition (0/000) of Witch flounder from Canadian commercial landings in NAFO Division 2J in 2024.

Length	Feb	Jan	Mar
34	11.77	2.35	19.64
36	44.20	19.87	59.03
38	52.33	40.97	74.42
40	402.33	104.47	82.57
42	366.39	146.92	104.12
44	350.02	204.01	139.04
46	355.97	177.31	164.94
48	211.40	131.74	113.92
50	131.23	81.84	70.07
52	54.25	57.28	69.70
54	4.45	23.12	44.84
56	11.77	9.70	33.40
58	3.92	0.42	12.35
60			4.17
62			4.24
66			3.54
SNPT	2000	1000	1000
AL	84.9	43.56	43.86
ALMF	0.00	0.00	0.00
AW	1.15	0.56	0.59
N	4	4.00	4.00
SLF	598	1072.00	957.00

Table 18. Length composition (0/000) of Witch flounder from Canadian commercial landings in NAFO Division 30 in 2024.

Length	Feb
30	8.25
32	3.30
34	17.17
36	36.65
38	70.98
40	196.32
42	248.16
44	246.07
46	122.60
48	36.65
50	7.37
52	2.42
54	4.07
SNPT	1000
AL	40.7
ALMF	0.00
AW	0.45
N	2
SLF	498

Table 19. Length composition (0/000) of Yellowtail flounder from Canadian commercial landings in NAFO Division 3N in 2024.

Length	May	Dec	Sep	Nov	Oct
18	0.68				
20	0.59				
22	5.30	5.35	4.04		
24	11.29	3.12	14.12	6.51	
26	25.93	7.64	40.40	19.65	37.53
28	50.27	37.76	74.38	22.10	77.23
30	72.58	126.97	129.77	25.55	88.18
32	98.41	192.96	204.43	89.13	212.83
34	141.33	266.20	252.18	125.93	196.66
36	161.74	279.17	360.87	165.29	362.97
38	145.20	341.01	340.41	177.83	408.41
40	122.50	295.87	272.48	175.25	322.92
42	80.11	207.92	150.31	98.99	160.20
44	47.52	121.01	94.52	63.43	77.23
46	20.70	82.82	38.97	10.63	50.10
48	10.82	22.22	18.07	13.92	5.75
50	2.81	7.60	3.67	5.80	
52	1.64	2.23	1.38		
54		0.17			
58	0.58				
SNPT	2000	1000	1000	2000	2000
AL	71.8	34.54	35.80	70.5	69.8
ALMF	0.00	0.00	0.00	0.00	0.00
AW	0.84	0.41	0.42	0.76	0.69
N	16	11.00	3.00	2	8
SLF	4275	2604.00	818.00	366	1832

Table 20. Length composition (0/000) of Yellowtail flounder from Canadian commercial landings in NAFO Division 30 in 2024.

Length	May	Sep	
22	1.75		
24	2.69		
26		3.76	
28	25.83	8.40	
30	32.70	15.18	
32	86.77	61.81	
34	140.02	234.80	
36	144.18	340.80	
38	135.82	306.17	
40	143.63	270.93	
42	117.94	301.48	
44	96.07	201.68	
46	42.87	136.08	
48	10.77	62.70	
50	13.99	33.13	
52	4.98	20.57	
54		2.52	
SNPT	1000	2000	
AL	36.6	76.14	
ALMF	0.00	0.00	
AW	0.46	0.94	
N	3	3.00	
SLF	742	696.00	