

NAFO Research plan for Scientific Council

Vessel identification: *FV Calvert* (FIN 140739)

Purpose: Comparative fishing in support of the CAN-NL Multispecies Survey

Location and dates of the research activity: NAFO Regulatory Area in Div. 3LNO to depths of 750m. May 16-June 2, 2024.

Name of the principal investigator: Atef Mansour, Regional Director Science, Fisheries and Oceans Canada, St. John's, Newfoundland & Labrador, Canada.

Whether any catches retained on board will be marketed: Catches will not be retained or marketed.

Total estimated research catch of the survey target species: This is a multispecies trawl survey with no single target species. For commercial finfish, typical survey catches are in the range of 1-20 tonnes across the survey area in Div. 3NO (~120 sets), with occasional larger total catches of Yellowtail flounder and Redfish (*Sebastes* spp.). <500kg are captured for most other species (e.g. non-commercial finfish, benthic invertebrates). Given normal interannual variation the actual species and catch amounts will vary somewhat from those listed here.

Summary of scientific methods or procedures:

Comparative fishing will be completed alongside the regular survey in Div. 3LNO. The regular survey is carried out with Canadian Coast Guard Ship *CCGS John Cabot* ("survey vessel") and the second vessel is a chartered commercial fishing vessel *FV Calvert* (FIN 140739) ("*comparative vessel*"). The purpose of this work is to gain conversion factors between the two vessels, enabling the potential use of the *FV Calvert* as a backup survey vessel in the future in case of issues with regular survey vessels. This is year 2 of 2 of this comparative fishing program with the *FV Calvert*. In year 1 all paired fishing occurred Canada's Exclusive Economic Zone in Div. 3L.

Vessels will carry out side by side tows as laid out in Canadian DFO survey plan as a "shadow" survey (ie. *Cabot* will carry out DFO RV survey sets and *Calvert* will do a paired tow at every station). Both vessels will complete standardized 15 minute tows using a Campelen 1800 shrimp trawl. Comparative fishing methods are described in Wheeland et al. 2024¹.

Set locations will follow the depth-stratified random allocation of the spring DFO survey (see Appendix 1). A maximum of 100 paired sets are anticipated, with sets primarily distributed across the southern Grand Bank (Div. 3NO). Limited paired tows may occur

¹ Wheeland, L., Skanes, K., Trueman, S. 2024. Summary of Comparative Fishing Data Collected in Newfoundland & Labrador from 2021 - 2022. Can. Tech. Rep. Fish. Aquat. Sci. 3579: iv +132 p.

in Div. 3L if weather precludes work further south, or if the work in Div. 3NO is completed ahead of schedule.

Catches on the FV Calvert will be processed as follows:

- Sorting, identifying, and weighing all species in the catch following the standard DFO-NL multispecies survey protocol.
- For all commercial finfish, unsexed length frequencies will be carried out. Length frequencies include 200 lengths (or whatever was caught) for each species in each set. Occasionally, two category sampling may be required: ie. Pick larger fish of a particular species from belt, smaller fish from sub-sample and measure separately, ensuring an adequate sample for each category.
- Pandalid shrimp and snow crab will be sampled following the standard survey protocols (individual measurements, sex, maturity staging, shell condition as applicable).
- Wolffish and any incidental shark catches will be measured and released alive at site of capture.
- Any Greenland shark will be measured, sexed, and a fin clip taken.
- Corals, sponges, and bryozoans will be identified, counted and weighted following the standard survey protocol, with representative samples frozen for further analysis onshore.
- Additional sampling (e.g. fin clips, isotope samples) will occur opportunistically to support ongoing research programs.

Additional information:

Whether an observer with sufficient scientific expertise will be on board: The vessel will have a crew of 9 science staff from Fisheries and Oceans Canada

Information on when the research results will be presented to the Scientific Council: A summary of results of the Calvert Comparative fishing program will be presented to SC in June 2025.

where relevant, any requests to derogate from the provisions in paragraph 3(c):
N/A

where relevant, indication that the activity constitutes a nonrecurrent new survey or research: This is a 1-year program, supplementary to the recurring surveys by DFO-NL.

Appendix 1: Set allocations in Div. 3LNO. Paired tows by the Calvert will be completed at a subset of these stations (approx. maximum of 100 stations).





