Investigating Use of PFDs and PLBs by Professional Fish Harvesters in Newfoundland and Labrador

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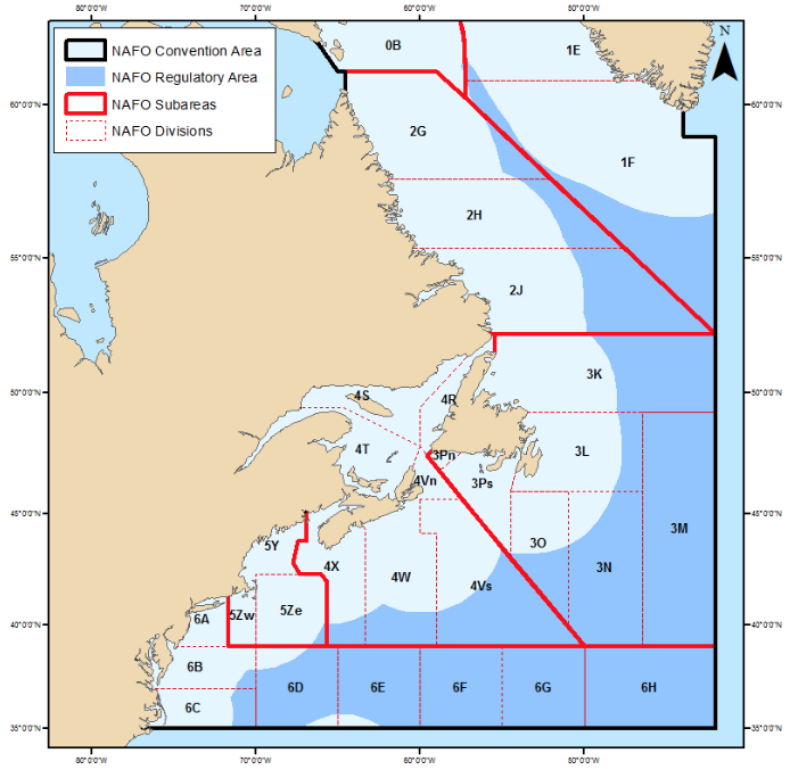
Target Population: Newfoundland and Labrador Professional Fish Harvesters

- Approximately 10,000 registered fish harvesters in 2022
- Inshore and offshore fisheries
- Majority fish multi-species and operated more than one vessel
- Most operate a small open vessel for part of the season
- More than 50% of Federal Core species licence holders are over 55 years of age
- Male dominated industry

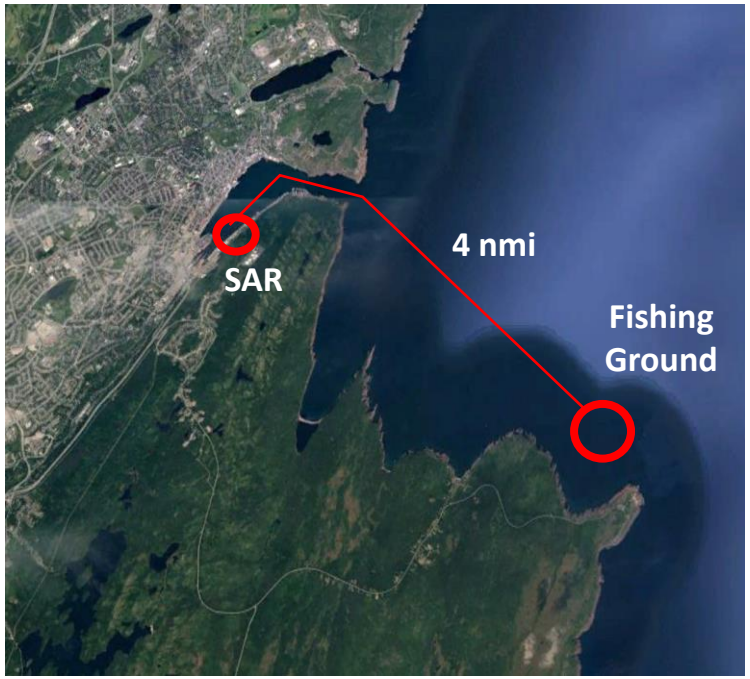
Target Population: Geographic Location

- Newfoundland is an island in the Atlantic Ocean and Labrador is a mainland territory of the province.
- Over 11,000 miles of coastline in the Atlantic Ocean.
- Numerous islands add over 6,821 miles of coastline.



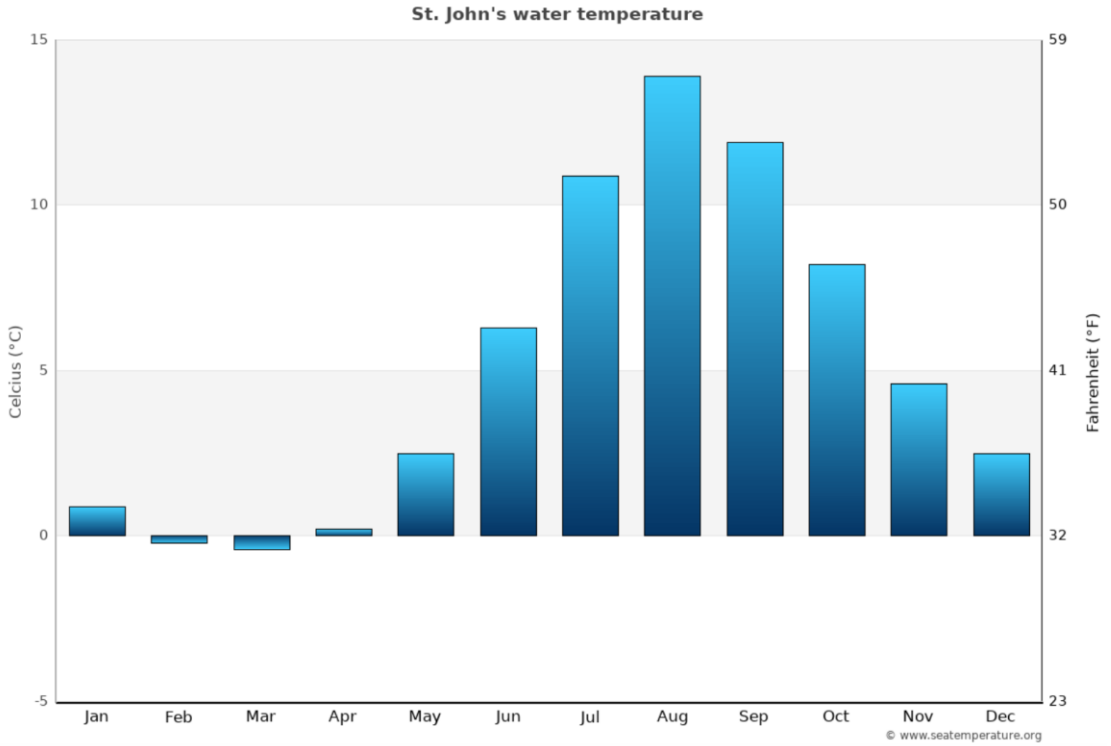
Target Population: Tragic History

- 72 fatalities in NL fishing industry from 2002-2023.
- Lack of PFDs and emergency distress signals were identified in many incidents.



Target Population: Harsh Environment

- Water temperature ranges from -1 to +14°C in Newfoundland and Labrador



Target Population: Harsh Environment

- 1-10-1 Principle (Giesbrecht)
  - 1 minute cold shock response
  - 10 minutes to swim failure
  - 1 hour before severe hyperthermia

+

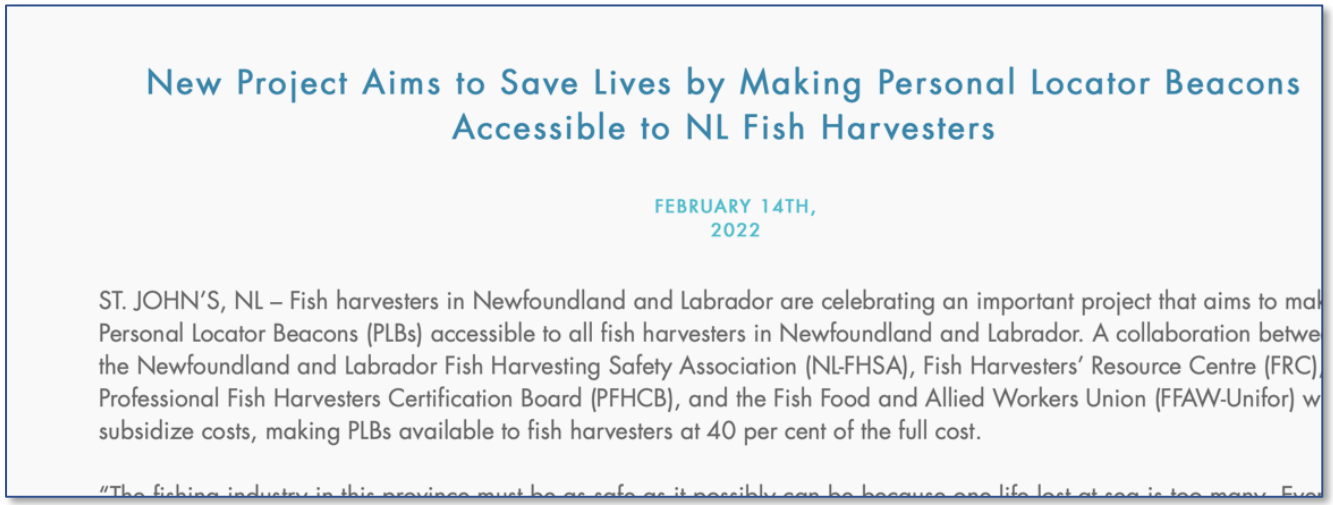
= Increased Chance of Survival

Target Population: Harsh Environment

- Nautical Legacy (2007)
- Emergency distress call was sent
- 5 had immersion suits
- 1 was wearing t-shirt and shorts
- More than 90 minutes in the cold water
- All survived

Intervention: PLB Distribution Program

- Fish Harvesters PLB campaign
  - NL Fish Harvesters Coalition (NLFHSA, FFAW, FRC, PFHCB)
  - 2500 PLBs available to fish harvesters for 40% of the cost
- Canadian Coast Guard Auxiliary
  - Distributed 500-600 PLBs to SAR volunteers



New Project Aims to Save Lives by Making Personal Locator Beacons Accessible to NL Fish Harvesters

FEBRUARY 14TH, 2022

ST. JOHN'S, NL – Fish harvesters in Newfoundland and Labrador are celebrating an important project that aims to mak Personal Locator Beacons (PLBs) accessible to all fish harvesters in Newfoundland and Labrador. A collaboration betwe the Newfoundland and Labrador Fish Harvesting Safety Association (NL-FHSA), Fish Harvesters' Resource Centre (FRC), Professional Fish Harvesters Certification Board (PFHCB), and the Fish Food and Allied Workers Union (FFAW-Unifor) w subsidize costs, making PLBs available to fish harvesters at 40 per cent of the full cost.

Methods: 3 Phase Project

	Task	Description
Phase 1	Systematic literature review	Factors associated with use of PFDs and PLBs
Phase 2	Survey	Online questionnaire to determine the usage rate, stages of change, and factors associated with the use of PFDs and PLBs in NL
Phase 3	Follow-up surveys	Online questionnaire to determine if there is any change in the rate of use, stages of change, or factors associated with the use of PFDs and PLBs in NL

Methods: Phase 1 Systematic Review

- Searched 5 databases
- Literature published in English
- Inception to August 2022
- Search terms included: All derivatives of (PFD OR PLB) AND Boating
- Inclusion and exclusion criteria:
  - Factors related to PFD or PLB use by professional fish harvesters
  - Excluded recreational use and non-fishing occupational uses of PFDs or PLBs
  - Excluded swimming use of PFDs

Results: Phase 1 Systematic Review

Barriers to PFD use

- Fatalistic views
- Interferes with work
- Uncomfortable
- Creates entanglement hazards
- “Won’t happen to me”
- Cost

(Giles, 2010; Lucas et al, 2012, Murray & Dolomount, 1995; Weil et al, 2016)

Facilitators to PFD use

- Integrated technology (such as, PLBs and strobe lights) may increase use of PFDs
- Access to a variety of styles
- Regulatory requirement
- Captain requirements
- Lifejacket training

(Oporia et al, 2022; Sorensen et al, 2019; Weil et al, 2016)

Methods: Phase 2 Survey

- Online survey using Qualtrics
- Fish harvesters 15+ years of age
- Recruitment will be carried out through community organizations' email listserv, social media groups, poster advertising, and industry courses
- Approval from Interdisciplinary Committee on Ethics in Human Research and Committee on the Ethics of Research Involving Indigenous Groups

Methods: Phase 2 Survey

<u>Questions</u>

- Demographics
- Vessel Characteristics
- Behaviour (usage rate and stages of change)
- Attitude towards PFDs and PLBs
- Knowledge about PFDs and PLBs
- Perception of risk, risk behaviour, and lived experiences
- Knowledge and response of PLB intervention

Survey Outputs

- What is the current usage rate and willingness to use PFDs and PLBs?
- Does PFD and PLB use vary depending on demographic group or vessel type/size/activity/location?
- Do individuals change their PFD and PLB use behaviour from primary vessel to secondary vessel?
- Is risk perception or risk behaviour an indicator of willingness to use PFDs and PLBs?
- What are some of the barriers?

Summary

- PFDs and PLBs are your best friends in a boating related water immersion incident.
- The PFD keeps you afloat and the PLB can decrease the search/exposure time.
- Incident reports indicate that there is still a lack of use of PFDs and PLBs.
- Survey will help us better understand the factors associated with PFD and PLB use.
- Survey results will be used to develop interventions to increase the use of PFDs and PLBs by fish harvesters in NL.

Acknowledgements

Funders

- Canadian Centre for Fisheries Innovation (CCFI)
- WorkplaceNL

Industry Partners

- Newfoundland and Labrador Fish Harvesting Safety Association (NL-FHSA)
- Professional Fish Harvesters Certification Board (PFHCB)
- Fish Food and Allied Workers Union (FFAW)
- Fish Harvesters Resource Centre (FRC)

Thank You

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