Evaluation of Personal Floatation Device (PFD) and Personal Locator Beacon (PLB) Use Among Newfoundland and Labrador Fish Harvesters

An Executive Summary Submitted to the

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Executive Summary

Commercial fishing continues to be one of the most dangerous occupations worldwide, with consistently high fatality rates and a disproportionate number of deaths resulting from drowning following vessel incidents or falls overboard. Despite the known effectiveness of personal floatation devices (PFDs) and personal locator beacons (PLBs) in preventing fatalities, previous research and accident investigations have identified a persistent lack of use of both devices.

This project used a mixed-method approach to evaluate the use of PFDs and PLBs among professional fish harvesters in Newfoundland and Labrador (NL), and assessed the effectiveness of a province-wide PLB intervention introduced in February 2022. The project included:

- a systematic literature review on factors associated with PFD and PLB use,
- three cross-sectional surveys conducted between 2024 and 2026,
- analysis of PLB registration data, and
- focus group discussions.

While the cross-sectional surveys found that more fish harvesters reported using PFDs often or always compared to those who reported rarely or never, the focus group discussions indicated that there are still a proportion of fish harvester that do not use a PFD. Similar inconsistency in PFD use by fish harvesters can be found in the literature from other regions. The literature review, cross-sectional surveys, and focus group

discussions all highlighted comfort, work interference and entanglement risks, cost, and social norms as barriers associated with the lack of PFD use. Additional insights from the focus group highlighted concerns related to fit for women and fatalistic views regarding cold-water survival.

In the initial survey, which was administered after the PLB campaign was introduced, the majority of fish harvesters reported never using a PLB. The results from Surveys 2 and 3 indicated that PLB awareness and uptake increased substantially from Survey 1. Not only did we observe an increase in the number of fish harvesters reporting using PLBs, but we observed a shift toward the later stages of behaviour change for PLB use over time, moving from precontemplation, contemplation, and preparation stages of readiness to action and maintenance.

The stages of behaviour change describe an individual's readiness to adopt or maintain a behaviour, such as use of PFDs or PLBs. Fish harvesters in the precontemplation stage are not using PFDs or PLBs and are not considering changing their use, while fish harvesters in the contemplation stage are considering increasing their use and preparation stage are planning to increase their use in the near future. Those in the action stage refer to fish harvesters who have recently increased their use, and maintenance stage refers to regular use with the intention to continue doing so.

The focus group discussions also indicated that there was a high awareness and acceptance of PLBs and their effectiveness. Objective PLB registration data supported

these findings, highlighting a substantial increase in the number of PLBs registered in Newfoundland and Labrador following the implementation of the PLB campaign.

Despite improvements in PLB adoption and registration, additional intervention is required to ensure proper use of these safety devices. The findings of the survey and focus group suggest that knowledge of proper activation steps and practical barriers such as attachment concerns may limit proper use or constant wear.

Overall, the PLB campaign was an effective intervention for improving uptake and use; however, sustained improvements in safety behaviour will require ongoing education, reinforcement, and efforts to address persistent cultural and practical barriers. Future intervention should consider an approach that promotes the adoption of PFDs and PLBs supplemented by an education piece on effectiveness, proper use, and maintenance.