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## Why (and where) are ghosts fishing? Mapping areas of commercial gear loss risk in British Columbia

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# Why, and where, is commercial fishing gear lost in BC?

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## Background

Lost fishing gear is a globally understudied problem, damaging marine ecosystems through habitat degradation, killing marine life, and negatively affecting commercial fishing operations. Gear loss is often accidental and due to a variety of reasons. Since 2018, Canada has been mitigating this damage by funding derelict gear retrieval and responsible disposal programs. However, in order to effectively retrieve lost gear in British Columbia, it is important to know where and why it gets lost in the context of the Pacific region fisheries.

## Methods

Commercial fishers in various port cities around Vancouver Island and coastal British Columbia were surveyed between September 2021 to March 2022. Fishers were asked to rank various reasons for gear loss from least to most important in addition to mapping locations where they've lost gear or come across others' lost gear. Questions were answered in the context of the fishers' most economically important fishery, and they could take the survey for up to 3 different fisheries.

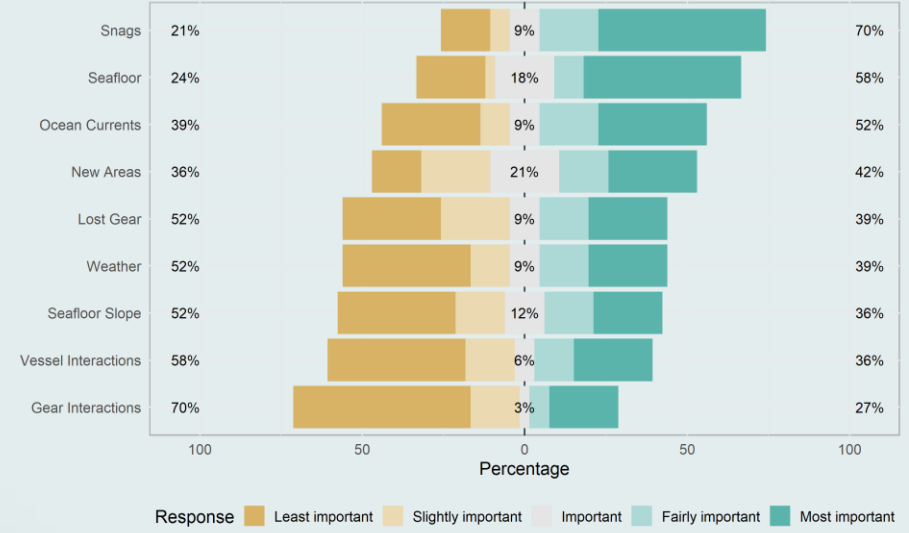


Figure 1. Survey responses (n = 33) for ranking questions, where fishers were asked to rank different reasons for gear loss from least to most important. Percentages of responses for least to slightly important (yellow), important (grey), and fairly to most important (teal) are indicated on the left, middle, and right of the plot respectively.

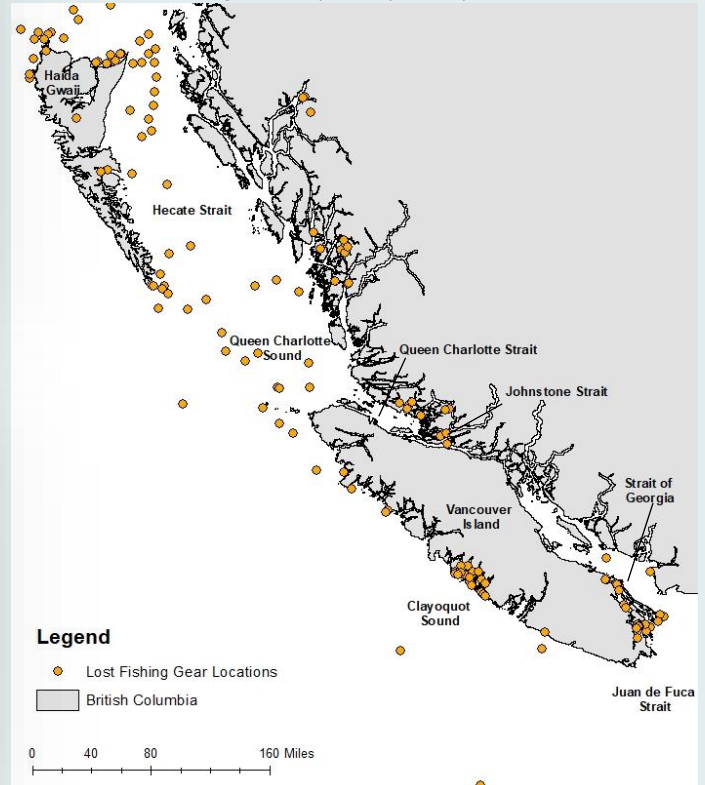


Figure 2. Locations of lost commercial fishing gear, as indicated by the survey, in the Eastern Pacific Ocean off of the West Coast of BC. Yellow points indicate locations where fishers have either lost their own gear or found others' lost gear.

The **most important factors** for commercial fishing gear loss in B.C., based on our data, are: gear getting snagged on the bottom, rocky seafloor, and strong ocean currents.



The **most prevalent areas** for gear loss, based on our survey, are: Clayoquot Sound, southern Vancouver Island, and Haida Gwaii.



Questions? Email me! [caitiefrenkel@gmail.com](mailto:caitiefrenkel@gmail.com)