



**The impact of
COVID-19 on
Arctic shipping:
an occupational
health and safety
perspective**

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Outline

1. Research background: increased maritime traffic in the Arctic and the COVID-19 pandemic
2. Research Question and methods
3. Findings: (1) OHS hazards related to Arctic navigation;(2) COVID-19-related OHS challenges; (3) OHS challenges exacerbated by the pandemic
4. Summary, policy recommendations and our next step of the study



Research Background: Increased Arctic Shipping

- The northern maritime region of Canada comprises the Arctic Ocean, the Beaufort Sea, Hudson Bay, Foxe Basin, Baffin Bay, and several canals and straits linking the islands of the Arctic Archipelago (Government of Canada 2007).
- The decrease of sea ice, and the increase of shipping activities in the Canadian Arctic (Dawson et al.2018; Lasserre and Cyr 2022).
- Destination shipping/transit shipping: a vital service for isolated Arctic communities.



Research Background: Maritime OHS in the Arctic

- Between 2005 and 2017, 2,638 ship accidents were reported in the Arctic, and 133 accidents were reported in Canada, ranking fourth after the United States, Russian Federation and Iceland (Arctic Council 2021).
- Arctic maritime hazards: ice navigation, topside icing, low temperature, intense ultraviolet light, uneven day or night durations, high latitudes, remoteness, and climatic variables that affect visibility and sea conditions (IMO 2010).
- Seafarers face a variety of OHS challenges related to the Arctic maritime hazards.



Nunavik Eastern Arctic Shipping Inc. [Source: NEAS, Canada].

Research Background: Maritime OHS during the COVID-19 pandemic

- The COVID-19 pandemic has put maritime workers around the world in precarious situations. As pointed out by the IMO, seafarers are experiencing a growing humanitarian crisis (IMO, 2020).
- The COVID-19 pandemic has had a significant effect on workplace health and safety and has unpredictably altered how work is performed.
- The impact of the COVID-19 pandemic on Arctic maritime occupational health and safety cannot be ignored.



Research Question and Methods

Research Question:

What are OHS challenges faced by Canadian Arctic seafarers during the COVID-19 pandemic, and regulatory gaps in maritime OHS law?

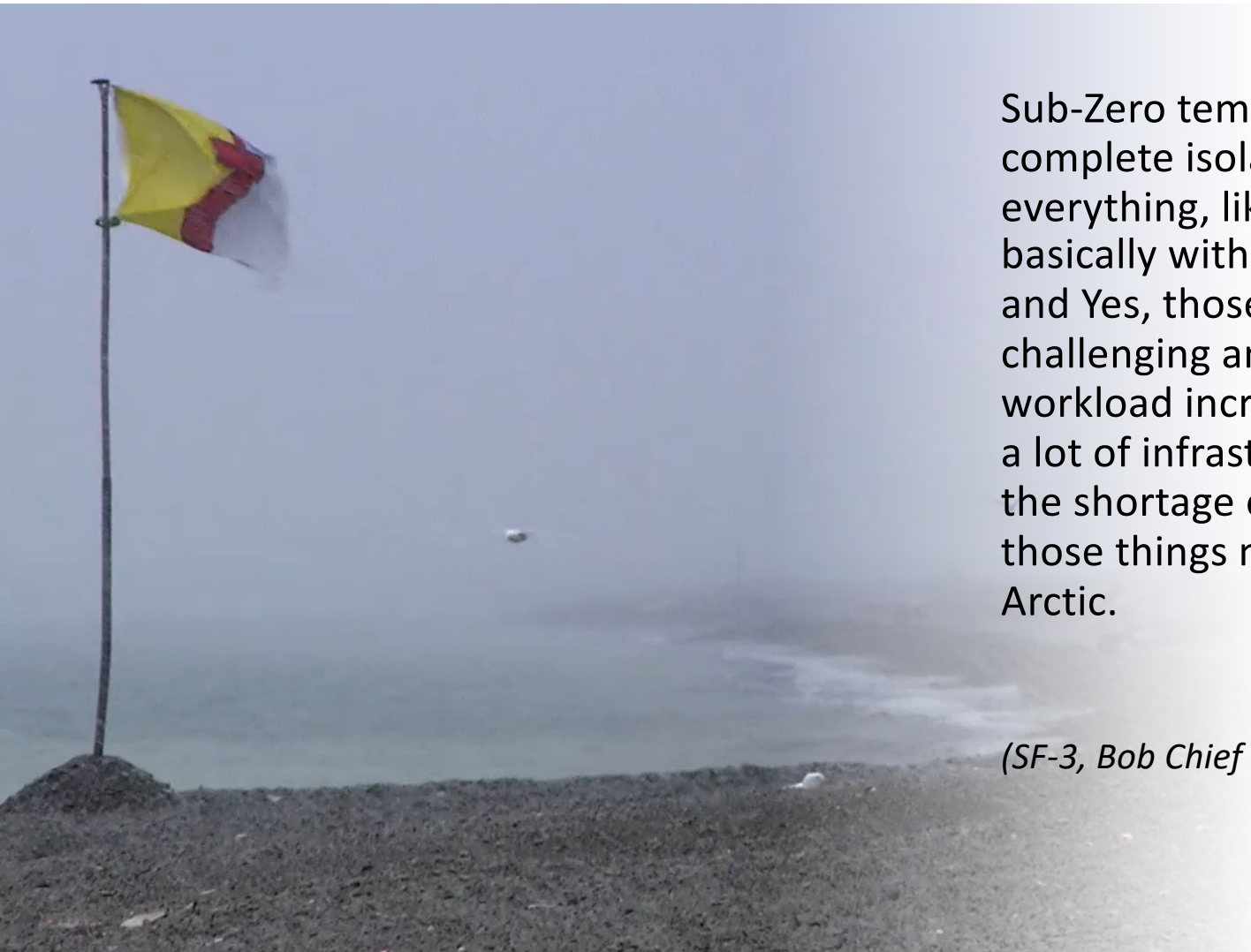
• Research methods

- A review of TC Ship Safety Bulletins
- Media coverage analysis
- 20 Semi-structured interviews between 2020-2021 (online)
 - 9 seafarers (Captains, Chief Engineers, Officers and ratings)
 - 4 union representatives (two are ex-Arctic ratings)
 - 5 managers from shipping companies and one maritime consultant
 - 1 Accident investigator
- Thematic Analysis

OHS Hazards related to Arctic shipping

- Coldness – low temperature
- Ice Navigation
- Deck Ice building
- Strong winds and rapidly changing weather
- extended periods of darkness or daylight
- Uncharted narrow passageways
- Remoteness to search and rescue





Sub-Zero temperatures and harsh sun, and complete isolations. No mobile network or everything, like socially you're cut-off basically with the vessel wall for a while and Yes, those things do make it challenging and in the Arctic, I think the workload increases because you don't have a lot of infrastructures and you work with the shortage of this the terminals. So yes, those things make it a lot of hectic in the Arctic.

(SF-3, Bob Chief Engineer)

COVID-19 related OHS challenges

- A complete ban on shore leave...
- *"The Government of Nunavut regrets, but no shore leave will be permitted by crew members during the 2020 re-supply season"* (The Government of Nunavut, 2020).
- Provincial/company self-isolation requirement before signing on or after signing off the duty.
- *"Travel restrictions and isolation is very tough, very challenging for crew. [...] Not so bad once you get onboard but then when you return, [...] because of it's so difficult to travel most companies are extending your rotations because it is so difficult to travel. And so to make it more inexpensive for the companies."*

SF-14, Maritime
Consultant

A portable office separating public and ship areas
[Source: NEAS, Canada].



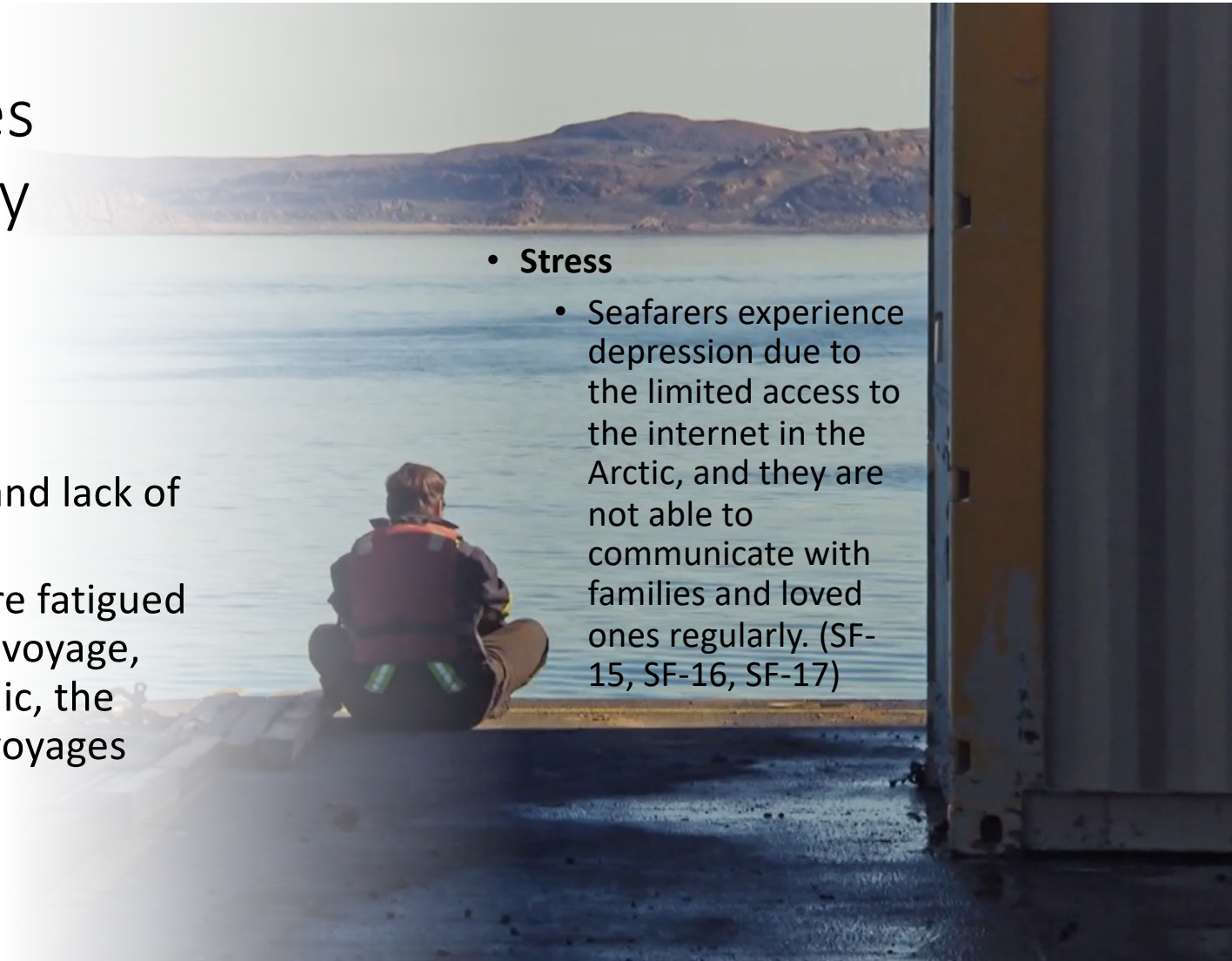
OHS challenges exacerbated by the pandemic

- **Fatigue**

- Shift work, long hours and lack of sleep (SF-15, SF-16)
- Crew members are more fatigued towards the end of the voyage, and during the pandemic, the short breaks between voyages were cancelled. (SF-3)

- **Stress**

- Seafarers experience depression due to the limited access to the internet in the Arctic, and they are not able to communicate with families and loved ones regularly. (SF-15, SF-16, SF-17)



Summary and policy recommendations

- Canadian Arctic seafarer faces multiple layers of OHS challenges during the pandemic, from
 - the environment (ice, weather, coldness),
 - the lack of maritime infrastructure, and search and rescue resources,
 - the isolated working environment.
- COVID-19 related public-health measures and travel restrictions, further exacerbate the challenging labour conditions of Canadian Arctic Seafarers.
- Maritime OHS challenges should not be ignored by public health governance and maritime safety governance in the Arctic.
- Port-based/community-based maritime welfare facilities should be developed as core Arctic maritime infrastructure to support seafarers.



Acknowledgement and our next step

- This research was funded by the Ocean Frontier Institute, ClearSeas, and Memorial University of Newfoundland.
- Work was done in collaboration with National Seafarers' Welfare Board, and various maritime welfare organizations in Canada.
- Special thanks to our unsung heroes, seafarers who continue to carry essential goods to the Arctic, to Canada and to the world, despite facing tremendous challenges.




Join Our Research Study:
Support Essential Workers at Sea
During and After the COVID-19 Pandemic

What is the study about?
A 15 minutes online survey to explore seafarers' needs and use of mental health services


Who can participate?
Seafarers located in Canada who worked at any time during the COVID-19 pandemic

How to Participate?
Click on the link above to access the survey.
For more information, contact arojasaldier@mun.ca


Compensation:
You will be able to participate in a lottery of three \$50 Amazon gift cards



1.00



Thank you! Any questions?
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COVID-19 related OHS challenges (2)

Public health guidance, in particular social distancing, was not feasible to apply on board, as an isolated working environment.

“Okay, we don’t touch anyone. But it is impossible to make two metre distancing because you kind of got everything close here. The ship elevators are not designed to keep two metre distancing. You stay away but its not designed to give you two metre distancing. Okay, the work is also not designed to give you that two metre distance. It is very crowded area. if someone gets positive or with the symptoms, it is practically everyone on board then. And we have no idea what to do.”

(SF-5 Second Officer)