

EGU2020-19882

<https://doi.org/10.5194/egusphere-egu2020-19882>

EGU General Assembly 2020

© Author(s) 2022. This work is distributed under the Creative Commons Attribution 4.0 License.



## ICEWISE: A game to test the effects of sea ice forecast reliability on voyage planners' confidence

**Berill Blair**<sup>1</sup>, Malte Muller<sup>2</sup>, Cyril Palerme<sup>2</sup>, Rayne Blair<sup>3</sup>, David Crookall<sup>4</sup>, and Machiel Lamers<sup>1</sup>

<sup>1</sup>Wageningen University and Research, Netherlands (berill.blair@wur.nl)

<sup>2</sup>Norwegian Meteorological Institute, Norway

<sup>3</sup>Eszterhazy Karoly University, Hungary

<sup>4</sup>Université Côte d'Azur, France

A group of scientists in a multi-national consortium have worked together to improve climate services for maritime actors in Arctic waters. The consortium under the project Enhancing the Saliency of climate services for marine mobility Sectors in European Arctic Seas (SALIENSEAS) running 2017-2020, has aimed to coproduce improved (sub)seasonal sea ice forecast and iceberg detection services. The project involved metervice experts and end users to collaboratively explore ways in which forecast services can reduce uncertainties for stakeholders.

However, direct questioning about perceived risks and uncertainties during operations do not always lend themselves well to traditional inquiries such as self-report surveys. Stakeholders can and do experience difficulty accurately recalling and rating past perceptions and connecting them to varying environmental conditions. As an alternative, experiential approaches such as participatory simulation are able to furnish a reliable environment that facilitates replication, experimenting and learning.

We present a novel approach with which to explore effects from the reliability of sub-seasonal sea ice forecasts on the user's perception of uncertainties. Our methods combine anticipatory methods through the use of scenarios with participatory simulation in a computerized simulation/game called ICEWISE. In our paper we will:

- introduce the game and the newly developed seasonal sea ice forecast
- present results from a gaming workshop conducted with experts in Arctic marine operations
- discuss the role of full and structured debriefing in maximizing the learning that takes place during gaming sessions

To conclude, we reflect on the upcoming stages of data collection, which will culminate in an exploratory model. The model will serve to inform sea ice service providers about the potential mediating effects deriving from the reliability of sea ice forecasts on the user's own perceived confidence in successful voyage planning.