# Article information:

Numerical simulation of multiphase oil behaviors in ice-covered nearshore water - ScienceDirect  
<https://www.sciencedirect.com/science/article/pii/S0169772222001176>

# Article summary:

1. This study simulated 3D wave propagation in shallow water with different broken-ice aerial coverage percentages to assess the fate and transport of oil spill in a nearshore area.

2. The presence of ice can affect the spreading of spilled oil in water, and the maximum oil volume fraction varies with increasing ice coverage on the water surface area.

3. Wave frequency, averaged flow velocity, and oil properties all affect the oil spread extent and the oil volume fraction.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

The article is generally reliable and trustworthy as it provides a detailed overview of a numerical simulation of multiphase oil behaviors in ice-covered nearshore water. The article is well-researched and provides evidence for its claims, such as citing relevant studies that have been conducted on this topic previously. Additionally, it provides an extensive discussion on how different factors such as wave frequency, averaged flow velocity, and oil properties can affect the spread of spilled oil in water.

However, there are some potential biases that should be noted when reading this article. For example, it does not provide any counterarguments or explore any alternative perspectives on this issue which could lead to a one-sided reporting of the topic. Additionally, there is no mention of possible risks associated with this type of simulation which could lead to an incomplete understanding of the issue at hand. Furthermore, there is no mention of any promotional content or partiality which could lead to an inaccurate representation of the facts presented in this article.

In conclusion, while this article is generally reliable and trustworthy due to its well-researched nature and evidence provided for its claims, there are some potential biases that should be taken into consideration when reading it such as one-sided reporting, missing points of consideration, missing evidence for claims made, unexplored counterarguments, promotional content or partiality etc., which could lead to an incomplete understanding of the issue at hand.

# Topics for further research:

* Multiphase oil behavior in ice-covered water
* Wave frequency effects on oil spread
* Averaged flow velocity effects on oil spread
* Oil properties effects on oil spread
* Risks associated with numerical simulations
* Alternative perspectives on oil spread in water

# Report location:

<https://www.fullpicture.app/item/c6790e98394e73b509fb15f6d39d1283>