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## **Uncertainty in a changing Arctic**

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# Uncertainty in a Changing Arctic

This poster presents a study of uncertainty in three Greenlandic EIAs. The results show limited explicit acknowledgment of uncertainty and a unsystematic and intransparent use of tools.

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# Uncertainty in a changing Arctic

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## Background

Uncertainty is an inherent part of impact assessment (IA) and can vary in type and source. However, according to previous research, uncertainty is rarely explicitly acknowledged and handled in IA, indicating that this is a challenging issue in practice. This poster adds to the current body of research a study of IA for three projects in Greenland:

- Rare earth minerals mine at Killavaat Alannguat
- Ruby mine at Aappaluttoq
- Airport in Ilulissat

This research was carried out as part of the Fulbright Arctic Initiative in 2018-2020.



## Results

The results show a limited acknowledgement of uncertainty, as can be seen from the table below. Rather, uncertainty is indicated through the use of implicit language. The types of uncertainties most often acknowledged across the cases are concerning choice of design and technology, data, causal mechanisms and calculations and models.

EIA process	Killavaat Alannguat	Ilulissat	Aappaluttoq
A) Explicit acknowledgement of uncertainty phrased as 'uncertainty'	No (0)	Yes (2)	No (0)
B) Explicit acknowledgement of uncertainty not phrased as 'uncertainty'	Yes (3)	Yes (10)	No (0)
C) Implicitly indicated uncertainty	Yes	Yes	Yes

The study also finds that various tools have been applied, which could be used for handling uncertainty, including sensitivity analysis, monitoring and worst-case estimates. However, these tools are often not used systematically, and it is not transparent whether they are targeted at handling uncertainty.

## Discussion

The results spark discussions of how choices of whether and how to acknowledge and handle uncertainty are made, and how consciously participants in the process make these choices?

## More information

<https://doi.org/10.1016/j.eiar.2021.106583>

<https://vbn.aau.dk/en/projects/resilience-under-uncertain-arctic-conditions-exploring-the-potent>



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