The current Norwegian Barents Sea oil spill risk governance framework would need considerable remodelling

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Norway's Barents Sea. Credit: Tuuli Parviainen

A recent case study from the University of Helsinki examines different ways of framing oil spill risks with regard to the Norwegian Barents Sea

where new areas have been recently opened for oil exploration and exploitation. The study demonstrates that there is an urgent need for new ways of integrating different risk frames and multiple ways of knowing into the risk governance processes of complex socio-ecological risks, such as oil spill risks.

The different, often conflicting, perceptions of risks as well as societal values present challenges in the governance of environmental risks. The opening of new areas for offshore drilling in the Arctic is highly controversial. As the ice cover in the region is melting at an alarming rate, new areas have been opened for the petroleum industry in the Norwegian Barents Sea.

The decision of the Norwegian government to open new areas for maritime operations closer to the ice edge remains highly controversial as the oil spill risks of offshore operations are exacerbated due to, e.g., the possible presence of ice, harsh weather conditions, and the ineffectiveness of current response measures. Considering the contribution of fossil fuels to climate change, opening new areas for the petroleum industry impedes reaching the goals of the Paris climate agreement.

The study indicates that the current governance framework is unapt for integrating the multiple risk frames and knowledge systems into decision-making processes.

"We suggest that social learning and collaborative knowledge production are needed to move towards developing a shared understanding of the problem situation and the solutions," says Tuuli Parviainen, doctoral student in the Ecosystem and Environment Research Programme, University of Helsinki.

Considerable differences in how risks were defined and perceived by the

participants were revealed by the study. The participants emphasised a wide range of environmental, economic and social risks, including both the long-term local and global consequences of offshore drilling operations, e.g., how offshore drilling contributes to climate change. In addition, the respondents identified different knowledge sources as important when assessing the risks, including, e.g., interdisciplinary research and traditional knowledge.

Therefore, questions—such as who should take part in identifying and evaluating risks; who are seen as relevant or as "experts" in assessing risks and who are not; what governance measures are considered important; and who should be involved in ensuring the legitimacy of the decisions—need to be explored as part of oil spill risk governance processes.

In their paper, Parviainen et al. (2019) demonstrate the multiple ways in which risks with regard to the Norwegian Barents Sea are perceived and defined, and analyse the types of knowledge that the risk frames are based on. Risk frames were elicited using semi-structured interviews to construct qualitative mental models: mental modelling can be used to bring forward and illustrate the extent of uncertainties as well as the ambiguity related to evaluating and assessing oil spill risks.

"The current risk governance framework, including, e.g., the Barents Sea ecosystem-based management plan and the industry risk assessments, have largely focused on natural sciences and engineering studies, and risks are understood principally in terms of probabilities and consequences. We would suggest that assessing and evaluating risks and risk control options cannot be left to experts alone," Parviainen states.

More information: Tuuli Parviainen et al, Risk frames and multiple ways of knowing: Coping with ambiguity in oil spill risk governance in the Norwegian Barents Sea, *Environmental Science & Policy* (2019).

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