



MERE Research Seminars
in
Environmental and Resource Economics

Noise signals value: Trading off marine mammals and seismic survey information

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Place: Room 120,
Niels Bohrs Vej 10, 6700 Esbjerg

Abstract

This paper explores competition over the ocean as a sound transmission medium between marine mammals and oil exploration activities. Seismic surveying uses underwater sound transmission to increase information regarding the presence or absence of hydrocarbon resources and therefore lowers expected costs of subsequent exploratory drilling and reduces additional search costs. However, this surveying may interfere with marine mammals' use of the medium and reduce fitness amongst these populations by shifting behavior away from optimal feeding, migration, and reproduction patterns. Seasonally ice-covered Arctic waters temporally constrain seismic surveying opportunities, so that spatial planning over the transmission medium's use is required to mitigate environmental damages. We develop a spatially explicit model to examine these tradeoffs on the Western Greenlandic coast. We find that important changes in the surveying plans take place when whales are taken into consideration.



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