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Modeling of accidental oil spills in the region of the Northern Sea Route

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It is expected that the increasing of oil exploration activity in the shelf zones of the Barents and Kara Seas and the oil transport from Siberia to Western part of Russia and Western Europe by tankers via Northern Sea Route in the nearest future will lead to amplifying of risk of oil and fuel spills.

Developed in AARI oil spill model and 3-D dynamic-thermodynamic model were coupled for simulation of the oil spills transport and transformation.

The modeling oil spills were performed in the region of the Northern Sea Route (Kara Sea). Oil modeling properties were corresponded to properties of the oil of the upper layer of the Prirazlomnoe deposit (Pechora Sea). The numerical experiments were carried out for various characteristics of oil spills and at the various hydrometeorological conditions and seasons.

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