

Evaluating the use of dispersants

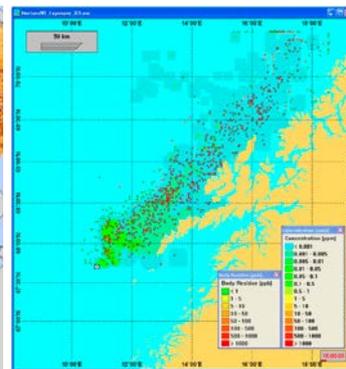
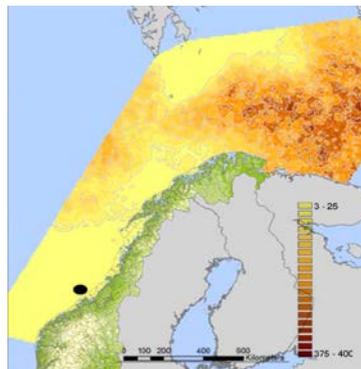
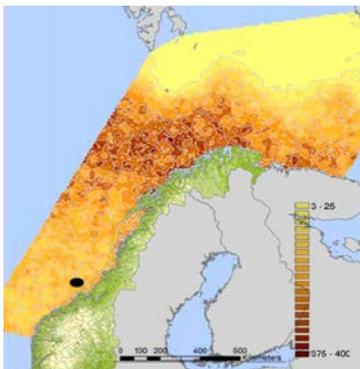
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A methodology for evaluating a strategy for use of dispersants in oil spill contingency

A methodology for conducting oil spill response analysis to evaluate a dispersing strategy has been developed. The methodology includes an analysis of a selection of standardized discharge scenarios, and was developed according to the Norwegian regulation for dispersant use. The methodology forms a basis for preparing a set of generic action plans for use in an early phase of an oil spill situation. The generic action plans may be used as a basis for preparing more operational action plans as the oil spill scenario develops. The methodology consists of:

- Selection of a set of oil spill scenarios (50, 500, 1000, 2000 m³ and a blowout)
- Knowledge about the weathering and the physical-chemical properties of the oil, including the time window for use of dispersant
- Oil spill response including use of dispersants, mechanical recovery and a potential mixture of the two response techniques, compared to no-response
- Overview of vulnerable natural resources in the potential influence area (e.g. fish eggs/ -larvae and seabirds)
- Simulations by use of the OSCAR (Oil Spill Contingency And Analysis) model
- Exposure studies of birds on the sea surface and spawning products in the water column
- NEDRA (Net Environmental Damage Response Assessment)
- Development of generic action plans as a basis for operational action plans during an oil spill situation



*Left and middle: Examples of sensitive maps of the spread and abundance of Atlantic Puffin (summer and autumn)
Right: Modelled distribution of spawning products in the water column as larvae particles*

The analysis will contribute to the decision made by the companies concerning use or not use of dispersants in an early stage of an oil spill. This will also contribute to ensure a good communication toward the authorities. The output from the oil spill response analysis forms

valuable input for preparing oil spill contingency plans. *A schematic overview of scenario based oil spill contingency analysis as a basis for developing generic action plans for use of dispersants*

