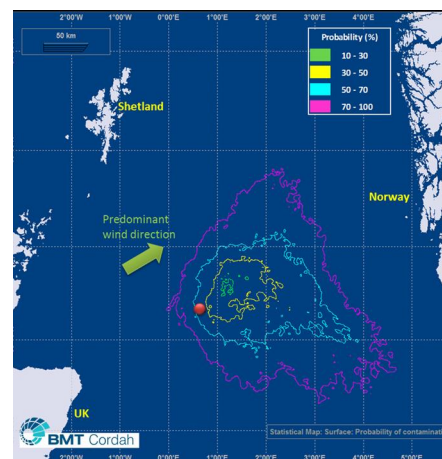
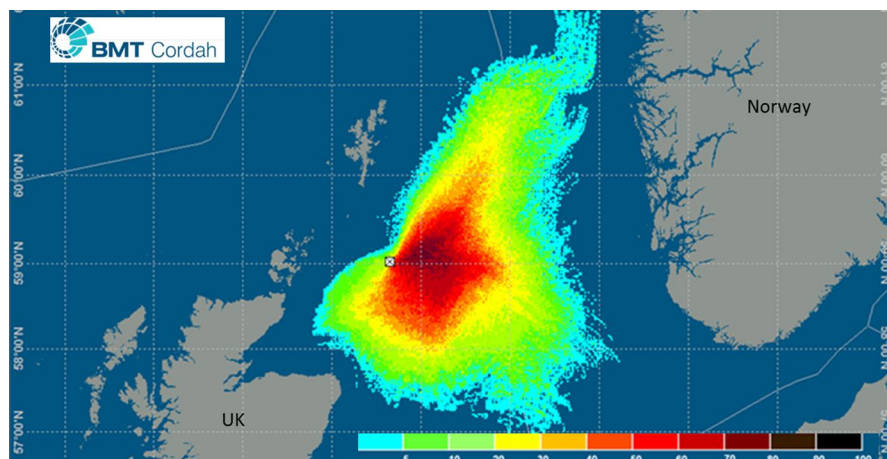


Oil Spill Modelling



The Challenge

An oil spill could dramatically impact environmental and socio-economic receptors. Operators have an obligation to reduce and mitigate against the effects of such an event, should it occur.

These must be clearly and logically investigated through an Environmental Impact Assessment (EIA) and reported in an Environmental Statement (ES) for submission to the regulator. Oil Pollution Emergency Plans (OPEP) must also address these issues.

As experts in the undertaking of EIA's and the production of ES's and OPEP's for the Oil and Gas Industry, BMT Cordah provide the best solution for ensuring the compliance of your projects against legislation.

Our Solution

BMT Cordah is able to offer a flexible team experiences in the application of oil spill modelling techniques. These, combined with our understanding of the practicalities of such events in the marine environment, allow for the prediction of locations and associated environmental sensitivities that could be impacted during a spill event.

Oil spill modelling and analysis provides an understanding of:

- How and where the oil is likely to disperse over time;
- The extent to which the oil is likely to arrive on the shoreline;
- Where oil concentrations could exceed certain thresholds; and
- The potential environmental impacts of the spill event.

Our Services

- Application of OSCAR (SINTEF 3D Oil Spill Contingency and Response model);
- Application of OSIS (BMT 2D Oil Spill Information System);
- Representation on the Oil and Gas UK Modelling Group;
- Consulting with regulators and stakeholders;
- Investigating transboundary and cumulative effects;
- Designing mitigation measures and monitoring programmes;
- Producing clear and logical ES and OPEP documentations;
- Preparing reports investigating oil spills, both on the UKCS and internationally.

1

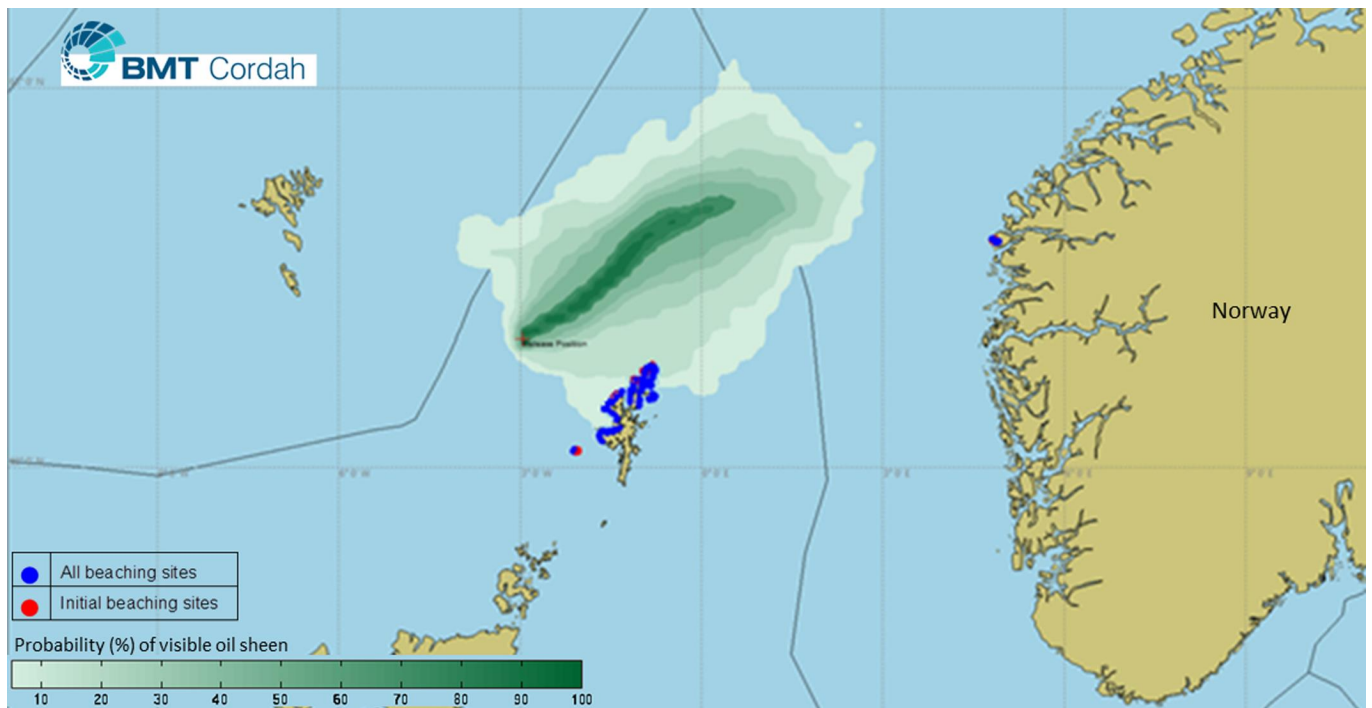
1: Hypothetical surface oil spill modelled with OSCAR showing the percentage probability of contamination (stochastic scenario)

2

2: Hypothetical surface oil spill modelled with OSCAR showing the percentage probability of contamination (contours) and the predominant wind direction (stochastic scenario)

Example of studies carried out by BMT Cordah

- Victoria OPEP (Bridge Energy)
- MacCulloch OPEP (ConocoPhillips)
- Bentley ES (Xcite Energy Resources)
- Niobe ES (Suncor Energy)
- Standalone studies (ERML - Nigeria)



Our Offer

OSCAR Modelling

- Simulation of surface and sub-surface oil behaviour
- Determination of 3Dimensional oil dispersion
- Includes transport, behaviour, weathering and fate of oil
- Allows determination of potential ecological effects
- Inputs include time-series of wind, wave and tidal conditions
- Allows specification of site-specific bathymetry, temperature and salinity

OSIS Modelling

- Simulation of fate and dispersion of surface oil behaviour
- Determination of 2Dimensional oil dispersion
- Includes transport, behaviour, weathering and fate of oil
- Allows determination of potential ecological effects
- Inputs include time-series of wind, wave and tidal conditions
- Allows specification of site-specific bathymetry, temperature and salinity

OSIS Training

- Our experienced team can undertake training, specified to meet particular client needs

Metoccean Data and Weather Forecasting

- Provision of wind, wave and tidal conditions at pre-specified time steps and locations

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