

Modelling for oil and chemical spills

Cefas are recognised experts in the modelling of oil, chemical and cargo spills. Our emergency modelling capability covers UK and European waters and contributes to the advice given to the UK Coastguard Agency and other government organisations during an incident.

Our capability

Cefas offers a range of spill modelling services including

- predictions of the location and magnitude of impacts during a spill incident
- information to inform clean-up and post-spill monitoring
- model scenarios for pre spill risk assessment and planning.

We maintain an expert team trained and experienced in the following suite of models

- OSCAR/DREAM (Sintef)
- ChemMap (RPS/ASA)
- Spill (CAO, Cefas)

These models provide both surface and deep spill capability for oil, chemical and cargo loss incidents.

Model input data is secured by automated downloads of UK Met Office wind fields and Copernicus 3D current fields with the option of a high resolution tidal database for nearshore response.



Our expertise

Staff involved in spill modelling generally have a background in physical oceanography and modelling to PhD level, with a strong understanding of the physical system and the strengths and weaknesses of the models and their inputs.

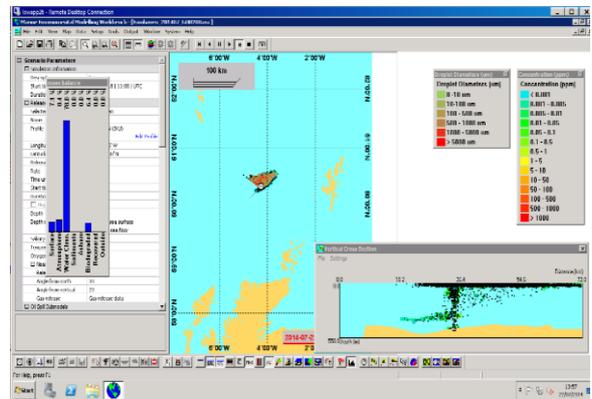
Cefas emergency response staff are trained regularly in running spill model software and stand ready to respond when required. The team consists of five people with access to our spill models via a secure internet connection and are able to respond at any time or location.

Model output is provided to Cefas experts who can then assess the likely biological impact.

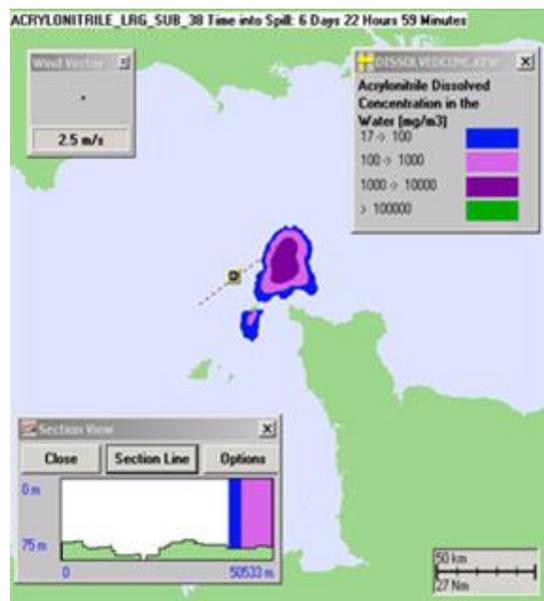


Trusted advice

We offer a proven track record of providing practical modelling support and advice for a wide range of marine incidents. We have successfully modelled all major UK marine spill events over the last 25 years including the *Braer Sea Empress*, and *Napoli* incidents together with numerous less serious spills. We have also modelled a number of incidents involving container or cargo loss for which we have provided predictions of trajectories and landfall.



Output from **OSCAR** oil spill model demonstrating deep spill capability.



Output from **Chemmap** chemical spill model showing surface and depth concentrations of a dissolved chemical following a spill simulation

Enquiries

For further information on our emergency response modelling services, please contact John Aldridge on +44 (0) 1502 524349 or john.aldridge@cefas.co.uk.