Interspill 2012 Science Workshops

Oil Spill Drift Modeling (SW3)

The workshop was chaired by Nadia Pinardi from University of Bologna and two additional presentations were provided by Lars R Hole from met.no and Valérie Dulière from the Belgian Management Unit of the North Sea Mathematical Models.

The biographies of the speakers and their presentations are provided in PDF version.

The workshop was held on Wednesday 14th March at 09:00. The participation was limited at the beginning of the workshop due to the early hour, too close to the exhibition opening. Workshop started with approximately 20 people attending increasing to approximately 30 after some time.

During the debate with the attendance, several interesting issues were raised and in particular the following ones:

- Accuracy, temporal and spatial resolution of wind and current input data are essential to the accuracy of drift predictions. Today, a spatial resolution of current and wind data down to around 1 km is the general rule, while a better accuracy (possibly down to 100 meters in some years) would bring significant improvements;
- Most models now solve the oil drift using a Lagrangian formalism while weathering processes are in an Eulerian context. A needed improvement is the test of different weathering processes that would consider dispersion and spreading of different fractions of the oil slick coupled with 3D particle trajectory drift numerical algorithms;
- A crucial issue in the next years is to understand model uncertainties and use an ensemble or probabilistic approach to drift and weathering modeling;
- Oil companies have carried out a lot of work on the issues of drift and weathering models, and, for industrial reasons, the information is not available to the scientific community. It would be helpful to consider whether some elements could be released to the scientific community and under which conditions.