

HUMBOLDT Application Scenario

Ocean

The Ocean scenario is one of 10 scenarios (including the latest Mid term call additions) developed within HUMBOLDT. The scenarios aim to prove (by testing) how the technology-components developed in the HUMBOLDT project can be implemented, configured and made useful for easy, interoperable and combined use of different and heterogeneous (spatial) data sources.

The primary objective of the Ocean scenario (undertaken by the partners BODC (UK), CLS (FR), HCMR (GR), IFREMER (FR) and MARIS (NL)) is to test the HUMBOLDT framework for its ability to solve data harmonisation issues in applications for assessing and managing marine and ocean oil/contaminants spill crises. In order to reach this objective it is very important that the framework developers are introduced into the Ocean domain specific standards and demands. Therefore a process has been created of defining the system specifica-

tion for the scenario that supplies these demands in a structured way.

The Ocean demonstrator will be based on two components:

- ⊞ Data integration solving harmonisation issues using the framework components
- ⊞ Visualisation of harmonised datasets using defined standards and components and thus proving the solution works.

The basis for the demonstrator can already be found in existing developments in the Ocean domain. In four regions HUMBOLDT partners have been (and still are) developing models, viewing and decision support software to determine the best solution in case of an oil spill crisis. These applications are developed to assist decision makers in the regions to decide which countermeasures are needed.



The modelling components, based on physical oceanographic data, (waves, wind, currents etc), are very ocean domain specific and will not be effected by HUMBOLDT developments. However the input of datasets and output of the modelling software definitely will be. Harmonisation and standardisation of input and output will make the data useful in a wider area, and will improve the set up time for a new case when a crises occurs. Harmonised datasets, discoverable via a catalogue and accessible via services in a common protocol can easier (and much quicker and cheaper) be included in the decision support software.

Another important area is the cross-domain approach that is being taken. Two different information communities are involved in this deployment area, with specific technology and data: that of 'sea/ocean' and 'land'. Until now the viewing and decision support software lacked input from the land domain because appropriate datasets were hard to find and use. This is caused by a low degree of cross-border standardisation and harmonisation. It means for example that image data (raster) of the ocean part will be combined with topographic and ecological data (vector) of the beaches and shores.

The HUMBOLDT framework software will help to bridge the different worlds, each traditionally with its own software, (meta)data, procedures, and standards. It will supply software components and processes to solve the harmonisation and standardisations in the Ocean domain, so to transform datasets from source to target model. Within the Ocean domain itself there are already many harmonisation solutions in place, but they are limited to the marine and ocean community. The HUMBOLDT software components will be tested if they have the capability to make the step from one domain to the other and if they take into account the specific Ocean demands.

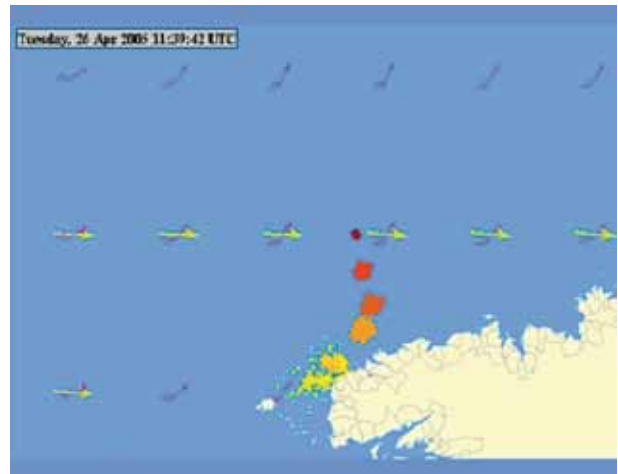


figure: Example of output of Mothy modelling software - CEDRE, IFREMER (France)

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