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Ocean Science Discussions

Interactive comment on "CAMCAT: an oil spill forecasting system for the Catalan-Balearic Sea based on the MFS products" *by* E. Comerma et al.

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The authors would like to thank the comments of this anonymous Referee. Answers to those are detailed below.

SPECIFIC COMMENTS

Referee 1) I think that the authors should provide further justifications about the reasons that they led them to the selection of a 2-D oil spill model. It should be mentioned though, that the authors recognize the need for the use of a 3-D oil spill model (both in the description of the model and in the conclusions) that will take in to account the already available 3-D oceanographic information. Furthermore, it is quite surprising that for a public supported effort such as CAMCAT, a 2-D oil spill model was chosen to be implemented.

AUTHORS 1) A full 3-D oil spill model would implied an excessive sophistication in terms of: Ţ model development in order to take into account more (vertical) processes and their interactions Ţ input data processing (3D hydrodynamics not always in the same coordinate system), as well as output representation (3D values are not always easy to reproduce, specially the constrained framework data (and picture) distribution through Internet.

Unfortunately, those required sophistications were not possible in the time frame/ constrains. Moreover, main oil spill drifting processes occur in the first layer of the water surface, where wind is the leading forcing agent. When developing operational modelling, model accuracy (resolution, ability) has to be balanced with technical limitations (reduced response time).

Referee 2) It is also mentioned (p.1805) that currently CAMCAT is using the combination of SMC/MFSTEP1671 to produce its forecasts. The reasons that led the authors in this choice are not well justified, even if there is a reference to the relevant work. I think that should be mentioned also in this paper the main results from the comparisons made with the use of different combinations

AUTHORS 2) Even though several other forcing combinations were tested, the main reason to choose those model outputs were their reliability (and longer experience) in terms of operational response: SMC wind forecast has been extensively used by the LIM group to force other regional operational models (ie wave predictions in the Catalan coastline), and MFSTEP1671 has largely been showed as the most reliable large scale hydrodynamics forecast in the Mediterranean Sea.

Referee 3) It is referenced in page 1798 that “the user can see the results as evolution of the spill within +24h and +48h after the spill release”. Does that mean that the end user cannot see the forecasting results for the first 24 hours after the release of the oil in the marine environment (which is very crucial information for efficient reaction to the event)? The authors should provide more information on that.

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AUTHORS In the actual configuration (version 2006, to be possibly updated in 2007-2008), only 3 snapshots or time-steps are represented. Hence, up to 3 locations of the oil spill model results are represented every 24h, corresponding to the spill position at “00h” (initial spill location), “+24h” (location 24h later), “+48h” (location 48h later the spill time). Hence, end-user can see where the pollutant will be 24h after the spill occurred.

Interactive comment on Ocean Sci. Discuss., 3, 1791, 2006.