

Answers to comments by anonymous referee #1

RC C1536

R. Rutherford, I. Moulitsas, B. J. Snow, A. J. Kolios, M. De Dominicis

We thank anonymous referee #1 for taking the time to review the paper and for their detailed and constructive feedback. Our specific comments are given below.

Specific Comments

1. **Referee's comment**

1.1 Aims: Page 4 : Identify the additional parameters referred here, its not clear to the reader which are these parameters.

Our response

The list of parameters investigated is given in §3 Methodology; the particular ones that were additional will be be clarified in §1.1 Aims.

2. **Referee's comment**

3. Methodology: Page 7: Clarify that the used input variables for the Algerian case are typical for the examined period for the studied area, not for the entire Mediterranean.

Our response

The phrase “a typical range of Mediterranean conditions” (p.4955, line 22) will be replaced with an explanation of how the ranges were selected.

3. **Referee's comment**

3.2 Trajectory: In MEDSLIK-II the use of sea currents from water depths other than the sea surface is not relevant to the software versatility. This functionality is added to provide the capability to minimize the double effect of the wind for oil spill simulations, due to the fact that the wind was counted during the computations of the sea currents by the hydrodynamical model.

Our response

We investigated this point during our research. We will remove the remark that this functionality increases the versatility of the software.

4. **Referee's comment**

4.2 Lebanon case: Clarify if there is a substantial difference in the oil beaching algorithm/methodology used in CranSLIK compared to MEDSLIK-II. Also confirm that the used wind angle in the two models are the same.

Our response

The MEDSLIK methodology for oil-shoreline interaction was not investigated. The wind angle, it was the same in both models because they both used the same values for the wind speed components (N and E). A paragraph can be added to make this clear. We believe this general point could best be included in §1.1 Aims.

5. **Referee's comment**

Add some more references when referring to MEDESS4MS, as well as to the Lebanon oil spill accident.

Our response

With respect to additional references for MEDESS4MS we don't understand the comment because MEDESS4MS is only mentioned in the paper on page 4951, line 17 and is itself a reference. Regarding more references to the Lebanon case, it is not clear to us which part of the text the referee thinks needs these; in our view the reference to Coppini et al. (2011) is sufficient.