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Interactive comment on "Evaluation of the Search and Rescue Leeway model into the Tyrrhenian sea: a new point of view" *by* A. Di Maio et al.

Anonymous Referee #2

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General Comments: The manuscript "Evaluation of the Search and Rescue leeway model into the Tyrrhenian sea: a new point of view" by A. Di Maio et al. deals an important issue of human and socio-economic relevance. The optimisation of the SAR operations is a day-to-day increasing need.

The Authors propose an innovative leeway calculation, which is tested against the standard and widely used approach of Breivik and Allen (2008) through a comprehensive set of numerical experiments and a real PIW case and a dummy experiment field data .

The manuscript is well structured and nicely written. It is concise and the results are robust. The English has been much improved after including the corrections suggested by Reviewer #1. Those suggestions have also improved other aspects of the

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Discussion paper

manuscript.

Therefore I recommend the manuscript for publication, but I would like the Authors to consider some suggestions and to correct some typos. Further I refer to the updeted version, uploaded as SP on

Minor remarks:

1. I think that a Figure including the domains of the ocean models used would be illustrative for the reader.

2. Pag 8, line 13: The perturbation coefficients are 4 times LARGER than the ones proposed by Breivik and Allen (2008). I think this result merits a more in depth discussion, as it shows the unavoidable shortcomings of a very general statistical approach.

3. Authors very correctly note the importance of tidal dynamics in the Messina Strait and surrounding areas, however it is not clear to me if the TSCRM includes tidal forcing. This should be clarified.

4. In Figures 3,5,7,9 it is difficult to distinguish the lines, it appears as there is a single lines colour and style for every two sets.

Typos: Title: into the Tyrrhenian...> in the Tyrrhenian..

P1, L3: stocastic > stochastic P1, L17: Safety and assets > Safety of lives and assets P.1 L18: sea > sea state P1, L20: life > lives P3, L16: main > aim P3, L17: targest > targets P3, L26: (PIW). > (PIW) case. P4, L5: used tp produce > used to produce P4, L7: transmitting > providing P4, L19: foundamental > fundamental P5 : I do net see the need of introducing two new acronyms (DWL, CWL) when you can use Ld and Lc P5, L19: Know > Known P6, L10: geographycal > geographical P6, L10: arbitrarly > arbitrarily P7,L1. Know > Known P7, L3: Tabled configurations (if you refer to a previous work, cite it here please). P7, L25: geographycal > geographical P7, L29: statistic > statistics P8, L4: ...the results don't change significatively > ...does not change significantly the results P8, L7: am > pm in both cases P8, L9: am > pm in both cases

P8, L17: very higher > much higher P8, L20: weight > weights P8, L25: statistic > statistics P8, L28: don't > do not P8, L29: doesn't > does not P9, L11: hydrodynamic > circulation patterns P9, L17: The most > Most P9, L17: brunch > branch P9, L19: track > drives P9, L20: track > drives P9, L20: Due to this analysis we conclude > This analysis allows us to conclude P9, L30: at along > along P10, L3: coastline > coast (both) P10, L5: such as the > as well as P10, L6: because it is the > as a P10, L7: informations > information P10, L11: working to this hypothesis > working to test this hypothesis

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