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Some features of the MOHID Water Modelling System and on the reliability of such model for the Black Sea basin

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Summary

The objective of the present work is to present an overview concerning the MOHID Water Modelling System that is currently under implementation in the Black Sea. MOHID is a three-dimensional water modelling system developed by MARETEC (Marine and Environmental Technology Research Center) at the Technical University of Lisbon.
This system allows the adoption of an integrated modelling philosophy, not only of processes, but also of different scales (allowing the use of nested models) and systems (estuaries and watersheds), due to the adoption of an object oriented programming philosophy. The integration of MOHID different tools, (MOHID Water, MOHID Land and MOHID Soil) can be used to study the water cycle in an integrated approach. Since these tools are based on the same framework, the coupling of them is easily achieved. Besides the description of the different modules available in MOHID and of some theoretical aspects concerning the modeling philosophy, the present work provides some brief comments on the reliability of such a modeling system in the Black Sea basin and of the advantage of developing a joint system for waves and currents by coupling MOHID with SWAN spectral phase averaged model.

Keywords: hydrodynamic model, MOHID, integrated modeling, Eulerian transport model, Lagrangian module

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