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Hydrology and Earth System Sciences Discussions

Interactive comment on "An integrated geological, hydrogeological and geophysical approach to the characterisation of the aquifer in a contaminated site" *by* M. A. Di Paola et al.

Anonymous Referee #1

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The general purpose of the paper can be considered consistent with the wide scope of HESS, because it regards the characterisation of an aquifer in a coastal contaminated area with a multidisciplinary territorial approach. The data discussed appear original but not very consistent with a territorial analysis, because they seem to be concentrated along a freeway (Asse Attrezzato) and not distributed in an area representative of the groundwater flow system. The conclusions reached are not very substantial, tending more to the valorisation of the multidisciplinary approach than to the real reconstruction of a recharge/flow/contamination model of the surficial aquifer. The applied methods appear weak especially regarding the hydrogeological analysis, being above all not present the reconstruction of groundwater flow by means of a groundwater head map, or maps of any contaminant distribution. According to the lack of a significant hydroge-

ological approach, consistent with a territorial purpose, the results can be considered partially relevant only, except for the detailed geological model.

Apparently the presentation is regularly structured even if a very important methodological part can be considered negligible. Specifically, the geological part should be synthesized. It occupies nine pages against the six pages occupied by the hydrogeological and geophysical surveys, plus conclusions.

The language appears generally fluid, even if in some cases the scientific terms are incorrect, as in the case of slime (probably used instead of silt). The figures presented have a very low quality and detail.

The paper appears generally poor, especially for the hydrogeological approach. Therefore the paper cannot be published in the present form, but it should be submitted to another round of review, after the integration with new distributed hydrogeological, and possibly, hydrogeophysical data.

Interactive comment on Hydrology and Earth System Sciences Discussions, 2, 229, 2005.