

Interactive comment on “Identification and mapping of soil erosion areas in the Blue Nile-Eastern Sudan using multispectral ASTER and MODIS satellite data and the SRTM elevation model” by M. El Haj El Tahir et al.

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Received and published: 9 March 2010

Dear Dr. Artemi Cerdà

Thank you for your comments and advice on our manuscript. We have revised the paper in accordance with your suggestions, which will be uploaded to the webpage as soon as the discussion section is closed, i.e. when we are given the opportunity by the Journal’s editorial team to do so. Below is our point to point reply to the comments.

1.Comment: I suggest clarifying which kind of erosion processes you measure. I un-

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derstand that the methods can not contribute with sheet overland flow erosion rates, and that only soil erosion due to gullying (concentrate flow) is measured. This is due to the accuracy of the method. I yes, you need to change your title into the following: Identification and mapping of gully erosion areas

Reply: Although we agree with you that we our work primarily addresses gully erosion phenomena which is the dominant type of erosion in our study area, we feel however that the methods used (particularly the ASTER's spatial resolution) is applicable for soil erosion mapping including sheet erosion as demonstrated by Vrieling et al 2006. The use of MODIS for the generalisation of the ASTER classification results is also justifiable for soil erosion too. We have elaborated and made this point clearer in the revised text.

2.Comment: in you conclusions. The first sentence should be removed. Not necessary

Reply: We agree and have adopted your comment on the revised text. Again we thank you for your valuable comments.

Sincerely El Haj El Tahir et al

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 7, 135, 2010.

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