

Interactive comment on “Sediment management modelling in Blue Nile Basin using SWAT model” by G. D. Betrie et al.

G. D. Betrie et al.

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Received and published: 13 October 2010

Comment: The paper has limitation in watershed delineation. If the runoff is simulated at El Diem, Sub basin no. 1 should not be included in the simulation as it drains directly to Sudan rather than through the main Blue Nile outlet or El Diem. The effect is clearly shown in the hydrographs as flow is over estimated in most of the cases. The area of the basin is reported to be 184560 sq.km, which is larger than the accepted range of 150,000 – 170,000 sq.km. Detail can be obtained by referring published articles on the same.

Response: The watershed was delineated accurately from a 90*90m DEM. We think that the slight overestimation of flow predictions is due to the error in the soil data,

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which underestimate the soil depth of the basin; please refer the response for Referee 1 for the detailed explanation. Moreover, the subbasin-1 does not drain into El Diem, please refer fig. 5 and 6 in the response for Referee 2.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 7, 5497, 2010.

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