



Predicting water erosion at the regional scale in Africa

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Soil erosion by running water is regarded as one of the most widespread forms of soil degradation in Africa, and as such, poses potentially severe limitations to sustainable development. The evaluation of the impact of soil erosion is difficult due to a lack of up-to-date and relevant data. A step forward for improving our knowledge would be the ability in most of the regions to locate at the regional scale the most sensitive areas.

This research shows how soil erosion can be predicted at the regional scale with freely available datasets (SRTM, WorldClim - Global Climate Data, soil database of the Soil Atlas of Africa, . . .). A concrete application at 1 km resolution is proposed with the empirical RUSLE model. The emphasis is put on the Mediterranean region, which is particularly sensitive to erosion due to its climate characterized by dry summers followed by intense autumn rainfall and often a steep topography with fragile soils. Together with this application a review of the potential of several modeling approaches for Africa is given. A particular attention is also paid to the validation issue.