Geophysical Research Abstracts,
Vol. 11, EGU2009-11870, 2009
EGU General Assembly 2009

Use of Quick bird Very High Resolution data for mapping linear erosion features in Tunisia

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High resolution remote sensing data (SPOT) are usually used to define information required for Environmental modelling such as land use. Quick Bird images were there acquired in order to evaluate the possibilities to extract linear erosion features usually observed on field like rills or gullies. This field work is often difficult and punctual in time and space. The objective of this study was therefore to test erosion features extraction, either directly using a commercial software (ENVI) or a software developed by the French Space Agency (ORFEO tool box), or by visual interpretation. The study area is located in the Lebna catchment in Tunisia, which is one of the three test sites of the MESOEROS21 project that aims to study the impact of climate change on soil erosion at different scales, from the whole Mediterranean basin to the small catchment (some km^2). All of the lineaments present on the image were mapped and labelled according to a defined typology (roads, tracks, stabilized gullies by vegetation, active gullies, major rills, rills . . .).
These extractions were compared with a set of field observations including length and shape of linear features caused by erosion. The final step is the validation of runoff and erosion modelling of the catchment using field data, erosion parameters interpreted and automatically extracted from Quick Bird.