

## Modelling processes of dryland degradation using ERS ATSR-2 and SAR data

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### *Abstract*

Earth observation data are increasingly being used to parameterise models of Earth surface processes. Recent developments in soil erosion modelling have improved understanding of the processes of dryland degradation, and Earth observation data provide an ideal way to apply models spatially, thereby overcoming the reliance on discrete field measurements. This project seeks to derive surface erodibility parameters (particle size, soil moisture regime, surface roughness, vegetation cover, induration) for input into process-based rainsplash and aeolian soil erosion models from the SAR and ATSR-2 instruments on board ERS-2. Erosivity will be derived from extant meteorological records of the area, much of it held at Institute of Hydrology, at ICRISAT Sahelian Research Centre, or available on-line via the HAPEX SAHEL information system.

**Keywords:** soil erosion, modelling, Niger

Keywords: ESA European Space Agency - Agence spatiale europeenne, observation de la terre, earth observation, satellite remote sensing, teledetection, geophysique, altimetrie, radar, chimique atmospherique, geophysics, altimetry, radar, atmospheric chemistry

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