



The EO-NatHaz project – remotely sensed soil moisture for assessment of natural hazards in the Austrian Alps

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The ASAP IV project EO-NatHaz has the objective to explore and exploit the utility of novel remote sensing techniques – on one hand for the assessment of potential damages and economic losses and on the other hand for the derivation of risk exposures due to natural hazards.

The used datasets include among others active radar satellite data: soil moisture from scatterometer and also L-band SAR data from the recently launched ALOS satellite. The fine beam mode of the PALSAR instrument provides data with 12.5 m pixel spacing. An ALOS mosaic for entire Austria has been derived for summer 2007.

The ASCAT (Advanced SCATterometer) instrument onboard MetOp (Meteorological operational) satellite series provides global coverage within almost 24 hours. An attractive land application of scatterometers is their ability to detect soil moisture variations. The ASCAT succeeds the scatterometers flown on the ERS-1 and ERS-2 satellites and thus data are available since 1992. This enables the identification of anomalies. Abnormally high soil moisture can be related to flooding events and may also play a role in triggering mass movements.