Challenges in spatial landslide prediction

T. Hohlweck and **T. Glade**

Dep. of geography, University of Bonn, Germany
(timo.hohlweck@freenet.de/+49-228-739099)

The most common deficits of statistical methods for regional landslide modelling is handling the data and the validation of the prediction. Categorisation of continuous data as well as the transformation of thematic data layers often results in a loss of information. This contribution is concerned with the likelihood-ratio-approach to avoid these deficits.

The applied method of validation allows to comprehend the performance even for non-experts and to compare the performance of different statistical methods. The approach was applied to the region Rheinhessen (Germany). Applied data relate to a landslide-triggering event at the turn of the year 1981/1982. Following wet conditions, snow smelt caused more than 200 landslides. Most of them are shallow translational landslides, only a few are deep seated failures. Susceptibility maps of different layer combinations were calculated. The validation shows a very spatial robustness and considers the spatial dependence of regionalized variables. The method proofed its capacity as a robust spatial prediction of landslides.