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Radar remote sensing to support humanitarian action

Abstract

While optical sensors are already a substantial part in humanitarian work (e.g. for the mapping of dwellings in refugee camps, the identification of geohazards, or the monitoring of natural resources), the role of radar satellites is widely neglected. Yet, they provide information which can be decisive for the work in a humanitarian context: Their independence from cloud cover and daylight allows a quicker response in the case of emergencies. Furthermore, the active nature of image acquisition allows to detect structural characteristics of surfaces which cannot be sensed by multi-spectral sensors. Besides an evaluation of the little use of radar data in the field of humanitarian action, case studies are presented which underline the direct integration of radar images into the workflows of humanitarian organizations. Furthermore, suggestions for an effective transfer of these techniques into practice are given.