A Case Study of Flood Monitoring in Pakistan Using AVNIR and PRISM Data of ALOS

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This paper presents the case study of floods of 2006 in Mardan district in North-West-Frontier-Province of Pakistan. Heavy rain fall during 4-5 August 2006 triggered flash floods along Kalpani River in the district, inundating 136 villages. The extraordinary rains also flushed Hoti Bridge over Kalpani River causing casualties and damage to local houses and infrastructure in the district. Advanced Land Observing Satellite (ALOS) data were used to explore its capabilities in identifying extent of damage. PRISM, AVNIR (ALOS) data were used to derive DTM and generate land use / land cover map for extracting low lying areas and assessing extent of damage. The rainfall intensity was analyzed for the area using TRMM data. Further more AVNIR derived soil moisture data were also analyzed to compare pre and post flooding situations in the affected district. It is however thought that the HH, HV and HV combination of PALSAR data images in RGB of post and pre flood could also be helpful to distinguish the wet areas in the affected district.