On the Use of Remote Sensing and GIS Techniques in Post-Earthquake Damage Assessment and Rehabilitation in Pakistan

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Abstract

A recent earthquake in Pakistan on October 08, 2005 of 7.6 magnitude with a death toll of 80,000 people, is one of the most disastrous events of this century. This unprecedented catastrophe needs scientific studies of post earthquake damage assessment. Undertaking damage identification and assessment for large areas is very expensive; consequently for reconstruction it is important to identify the areas, which are vulnerable to seismicity. The capability to undertake earthquake damage identification and assessment can be improved through current advances in Remote Sensing and GIS technologies. This paper focuses on the use of GIS and Remote Sensing techniques to assess the risk zones of Muzaffarabad city and its environs. High resolution IKONOS imageries will be used for the post earthquake damage identification and assessment. This study is based on Geological/Social parameters like base-rock motion, soil strengthening, slope failure, construction susceptibility and socioeconomic indicators that identifies high and low risk zones at local level for rehabilitation and reconstruction activities.

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