

## **Developing building inventory for seismic hazard assessment (A Case Study of Baluchistan Province)**

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### **Abstract**

The performance of buildings in the earthquake mainly depends on the nature of building, its structural details, typologies as well as the nature of earthquake. For effective Earth Quake Risk Assessment (ERA) and subsequent mitigation, building inventory plays an important role. The last building inventory in Pakistan has been developed in 1998-99. A large number of new buildings have been added to the stock of built environment in the meanwhile. Hence a reliable and readily available building inventory is required for planning and research purposes. Many tools and techniques have been employed to develop the building inventory, which have relative advantages and disadvantages. In this research Low Resolution Satellite Imagery (LRSI) supported with actual field observations have been used to calculate the number of buildings. Low cost low resolution satellite images have been analyzed to classify the building typologies in the earthquake affected areas of Sothern Pakistan (Baluchistan province). The analysis was followed by inspection of randomly selected houses in various parts of the province, to check it reliability and relevance. Based on the initial analysis, the method has been extended to develop Building Inventory for Baluchistan province of Pakistan. The study will help in developing effective disaster mitigation plans by the Government authorities in the province.