Social vulnerability assessment for disaster management using GIS: A case study of Nala Lai Rawalpindi

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Abstract

The most momentous force of natural disasters is at the local level, where human settlements are smashed and livelihoods are put at risk, economic losses are ensued, and there may be injuries or loss of life in the affected areas. Disaster management often only covers the physical component of hazard; which the social vulnerability component is usually unnoticed. Life pattern of some people can put them more at risk during disasters than others. As damages vary geographically, over time, and among different social groups, vulnerability also varies over time and space. In the current study the socioeconomic and demographic factors that affect the resilience of communities were used along with GIS databases to address the social vulnerability of people living around Nala Lai Rawalpindi area. Social variables (gender, age, sanitation conditions, income, housing type, education, no. of spouse) were collected at individual house level. These social variables were used in weighted overlays in GIS environment to create social vulnerability maps that can facilitate target policy to assist vulnerable populations. It is strongly recommended that the emergency management authorities should understand life pattern in vulnerable areas to efficiently and impartially manage the resources.