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Quantitative and Public Perception of Landslide Risk in Badulla, Sri Lanka

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Landslides are often triggered by intense precipitation and are exacerbated by increased urbanisation and human activity. There is a significant risk of large scale landslides in Sri Lanka and when they do occur, they have the potential to cause devastation to property, lives and livelihoods. There are several high landslide risk areas in seven districts (Nuwara Eliya, Badulla, Ratnapura, Kegalle, Kandy, Matale and Kalutara) in Sri Lanka. These are also some of the poorest areas in the country and consequently the recovery process after catastrophic landslides become more problematic. Therefore landslide risk management is an important concern in poverty reduction strategies.

We focused on the district of Badulla, Sri Lanka to evaluate the a) quantitative scientific analysis of landslide risk and b) qualitative public perception of landslides in the area. Combining high resolution, hazard and susceptibility data we quantified the risk of landslides in the area. We also evaluated the public perception of landslides in the area using participatory GIS techniques. The evaluation of public perception of landslide risk has been complemented by use of Landscan data. The framework of the methodology for Landscan data is based on using the second order administrative population data from census, each 30 arc-second cell within the administrative units receives a probability coefficient based on slope, proximity to roads and land cover. Provision of this information from these complementary methods to the regional planners help to strengthen the disaster risk reduction options and improving sustainable land use practices through enhanced public participation in the decision making and governance processes.