

C-60: Human settlements base approach for priority area selection in Landslide hazard mapping project for Kegalle District

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Landslide Hazard Mapping Project (LHMP) Phase I was carried out with the technical and financial assistance of UNDP by NBRO in Badulla and Nuwara Eliya Districts. Phase II of the LHMP is being executed for the Districts of Ratnapura and Kegalle. It is planned to extend this project to cover remaining landslide prone districts namely: Matale, Kandy and Kalutara.

Initially for LHMP the Agriculture Base Mapping Project (ABMP) 1:10,000 sheets were used as base maps. Geology, Landslides, Hydrology, Slope, Landform, Landuse and Human Settlements maps were identified as State of Nature Maps needed for a hazard zonation. Thus, by developing a comprehensive legend for each map sheet the project was carried out by using already available data, aerial photo interpretation and field checking. Depending on degree of landslide hazard and for optimizing utilization of resources available to the project it was decided to select a priority area. In Phase I, priority area was selected by considering the number of landslides that have occurred per map sheet and sheets with the highest number of landslide incidents were selected as the priority area for mapping.

This methodology had its own shortcomings as it has not adequately given prominence to the impact on human settlements. Thus, in Phase II of the project, priority area was selected by considering the number of landslides as well as human settlements (Townships) in the districts. Yet, as the project was executed by considering the area of map sheets, large extent of less important human settlements areas were also mapped. Therefore, in order to overcome above shortcomings, the project team has developed a macro level approach for

This methodology consists of: (a) Selection of vulnerable slopes at macro level by using 1:50,000 maps (b) Identification of Township boundaries in the district by considering existing U.C, former T.C and V.C. boundaries. (c) Identification of towns in the land use map of 1:10,000. (d) Consideration of the town limits established by the Town & Country Planning Department (e) Past landslides per grid.

By carrying out the project using the above methodology it has allowed the project team to study almost all the human settlements in detail and to provide information on landslide hazard zonation. Therefore in future the project will give high priority to the human settlement factor in preparation of Landslide Hazard Zonation Maps which can be used by planners, engineers, architects, decision makers etc. as an affective component in planning.