A Study on Factors Influencing Landslides in Sri Lanka

L. D. C. S. Subhashini[1] and H. L. Premaratne[2]
[1]Department of Information Technology, University of Sri Jayewardenepura;
[2]University of Colombo School of Computing
shashiks5212@gmail.com

Landslides are the most recurrent and prominent disasters in Sri Lanka. Sri Lanka has been subjected to a number of extreme landslide disasters that resulted in a significant loss of life, material damage, and distress. It is required to explore a solution towards preparedness and mitigation to reduce recurrent losses associated with landslides. This research study is aimed to recognize specific factors that might influence the occuring of landslides in Sri Lanka.

A questionnaire was used for the collection of primary information. Numerous factors were considered when defining the research sample, but mainly focused on the lessons learned through a literature review. As the main focus of the research was on landslides in Sri Lanka, several GIS (Geographic Information System) experts in the university system were also invited to participate in the survey. Data was gathered from one hundred and twenty six experts on the area of landslides from four universities of Sri Lanka. The data was then analyzed using the SPSS (Statistical Package for the Social Sciences) software.

Twelve factors were identified and it is important to note that the most significant factor that influenced the occurring of landslides was rainfall, which has the highest mean value in analysis. The other factors identified were Soil Material, Geology, Land Use, Curvature, Number of Previous Occurrences, Soil Texture, Slope, Aspect, Influence of Construction, Soil Drainage, and Soil Effective Thickness which also highly influence in occurring landslides.

Key words: *Landslides, Influencing factors, Rainfall*