AN INQUIRY INTO THE ANTECEDENT PRECIPITATION CONDITIONS RELATED TO EARTHSLIP GENERATION IN THE BELIHUL OYA CATCHMENT, MATURATA AREA

T.A. Kuruppuarachchi*, Y.B.M.C.J. Seneviratna**,
E.R. Ranatunga*
*Institute of Fundamental Studies, Hantana Rd., Kandy.
**Dept. of Geography, University of Peradeniya.

In humid tropical regions earthslips generally take place during individual rainstorms or during prolonged wet periods. In the Central Highlands of Sri Lanka the occurrence of high magnitude precipitation events of rare frequency has often been described as the triggering cause of widespread earthslips and related landslides. An examination of long term precipitation records and landslide activity in the Belihul Oya Catchment of Maturata area reveals that slope instability takes place over a wide range of precipitation depths. Threshold conditions required to induce earthslips in this area were identified by employing 'antecedent precipitation index' (API) which indirectly define the pore pressure regime of soil mantles preceding each daily rainfall. An inference on the recurrence of recent high magnitude rainstorms was also obtained.