J Geol Geophys 2018, Volume 7
DOI: 10.4172/2381-8719-C1-018

Rainfall induced landslide hazards of Bangladesh: Challenges, issues and sustainable development

A T M Shakhawat Hossain
Jahangirnagar University, Bangladesh

Bangladesh is a south Asian tropical monsoon country and experiencing high intensity of short term rainfall in recent years in the south eastern part of Bangladesh. This research has established that most of the recent landslide events in Bangladesh are caused by heavy rainfall and threatening the sustainability of Bangladesh. These hazards need to be considered with other factors for sustainable development. Attempts have also been made to establish the rainfall threshold for south eastern part of Bangladesh. It is clearly established that a total rainfall of 180 mm for six consecutive days and a single day rainfall amount of 343 to 425 mm is sufficient for shallow landslides and deep-seated landslides in the south eastern folded part of Bangladesh. Seepage and stability modeling of some of the selected slopes were evaluated. It is clearly established that seepage pattern can significantly influence on the infiltration capacity and factor of safety values. The pore water pressure development during raining has also an important role on the safety factor. Variation of the factor of safety values with time is also discussed. Some challenges and mitigation measures are discussed in managing landslide hazards for sustainable development of Bangladesh.

shakhawathos2004@yahoo.com

Notes: