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WEBINAR TALK ON

DEVELOPMENT OF GUIDELINES ON LANDSLIDE VULNERABILITY ASSESSMENT AND LANDSLIDE RISK INDEX FOR CRITICAL INFRASTRUCTURE IN MALAYSIA

SPEAKER:

IR. TS. DR. HJ. MOHD KHAIROLDEN GHANI

16 APRIL 2025
WEDNESDAY

3.00PM - 5.00PM

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SYNOPSIS

Malaysia experienced numerous geohazards throughout the years. Most of the geohazards are associated with the failure of the natural hill slopes. The increasing geohazards in the mountainous and hilly terrain of Malaysia are often associated with soil mass wasting. The failed soil masses are transformed into liquefied debris or mudflow of tremendous velocity and momentum, capable of sweeping away everything found along its path. Understanding the natural geomorphic and geological processes on tropical mountainous terrain is the key to understand the nature and extent of the associated landslides.

The Construction Industry Development Board (CIDB) under its subsidiary Construction Research Institute of Malaysia (CREAM) has taken a significant effort to support and directly address the specific agenda related to Sustainable Development Goals (SDG) 11: Sustainable Cities and Communities and SDG 13: Climate Action by publishing these landslide disaster risk reduction guidelines to holistically adapt to climate changes. Landslide risk assessment prescribed in National Disaster Risk Reduction mentioned that in practice, effective landslide risk mitigation should be implemented at local (individual slope) or regional level.

The recommended choice of indicators and their weight values are based on a combination of qualitative (expert judgment on previous records) and quantitative approach (specific numerical modelling on the impact of landslides). The experts' judgement recommendation should be prioritized if previous landslide damage record is insufficient. This study proposed vulnerability of a building-residential for translational landslide type which constitutes of four clusters, namely Susceptibility of CI, Surrounding Environment, Landslide Intensity and People with respective indicators (C, E, I, P), sub-indicators and weightage. The proposed methodology has been tested in Lembah Bertam, Cameron Highlands and the proposed Guidelines on Landslide Vulnerability Assessment and Landslide Risk Index for Critical Infrastructure in Malaysia has been developed. Recently the Construction Industry Standard (CIS 32: 2024) for landslide vulnerability assessment has been approved for publication.

SPEAKER'S PROFILE

Ir. Ts. Dr. Hj. Mohd Khairolden Ghani has joined Construction Research Institute of Malaysia (CREAM) since May 2007. Previously he held position at Centre for Built Environment (CBE) and Sustainable Construction Excellence Centre (MAMPAN). He holds his Doctor of Philosophy (Ph.D) in Built Environment from the University of Malaya, Masters in Civil Engineering and B.Eng (Hons) in Civil and Professional Engineer (P. Eng) from Board of Engineers Malaysia (BEM) and Professional Technologist (P. Tech.) from Malaysia Board of Technologist (MBOT). He is also corporate member of The Institution of Engineers Malaysia (IEM) and ASEAN Chartered Professional Engineer (ACPE).

He was appointed as Industrial Advisory Panel (IAP) Faculty of Civil Engineering UTM, Industry Advisor at College Vocational (KV) Setapak, Industrial Advisory Panel (IAP) at Lincoln University.

His expertise and specialisation are in project management, green building technology, sustainable practices, facility management, and construction digitalisation. He has also published journal papers and articles.