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Analysis of heavy metals as a key indicator to predict shallow slope failure (Article)

Othman, R.[a], Hasni, S.I.[a], Baharuddin, Z.M.[b]

[a] International Institute for Halal Research and Training, International Islamic University Malaysia, Kualal Lumpur, Malaysia

[b] Herbarium Unit, Department of Landscape Architecture, Kulliyyah of Architecture and Environmental Design, International Islamic University Malaysia, Kuala Lumpur, Malaysia

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Abstract

Degradation or decline of soil quality that cause **shallow slope failure** may occur due to physical or chemical processes. It can be triggered off by natural phenomena, or induced by human activity through misuse of land resources, excessive development and urbanization leading to deforestation and erosion of covered soil masses causing serious threat to slopes. The extent of damage of the slopes can be minimized if **a** long-term early warning system is predicted in the landslide prone areas. The aim of the study was to characterize chemical properties of stable and unstable **slope** along selected highways of Malaysia which can be manipulated **as indicator** to forecast **shallow slope failure**. The elements in soil chemical properties contributed to each other **as** binding agents that affected the existing soil structure. It could make the soil structure strong or weak. Indicators that can be used to **predict shallow slope failure** were low content in iron, lead, aluminum, chromium, zinc, low content of organic carbon and CEC. © Triveni Enterprises, Lucknow (India).

Author keywords

CEC; **Heavy** metal; Oxisols; **Shallow slope failure**; Soil chemical properties

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Othman, R.; International Institute for Halal Research and Training, International Islamic University Malaysia, Kualal Lumpur, Malaysia; email:rashidi@iium.edu.my

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