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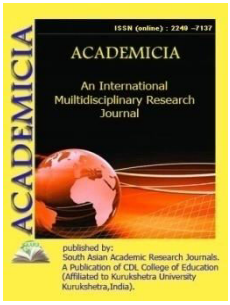

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INSTABILITY SURVEY OF BASALTIC SOIL SLOPES IN MAHARASHTRA, INDIA

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ABSTRACT

Mahabaleshwar regarded as a destination for tourist and is situated in Maharashtra, India's most beautiful and important tourist finish point, suffering frequent slope owing to heavy rain and complex geologic circumstances. The area's litho component is Deccan Trap Basalt, most notable consecutive basaltic flows to Tertiary during late Cretaceous era. The area is extremely susceptible to temperature, different degrees of alteration, soil formation, and presence of bole beds in between two successive basaltic flows. In this region, soil formation cycle is one of most significant reasons for slope disappointment. These deformed soils create instability on slopes, and eventually aggregate into collapses on the slope. During arena studies, petrographic analysis alongside X-ray deflection, five kinds of soils were discovered which show changes in composition and color variations. Geo mechanical characteristics viz. five kinds of soil samples were tested for bulk density, particle size inspection, Atterberg limit, uniaxial compressive power, cohesiveness in addition to internal friction angle; using help of numerical software Slide 6.0, the impacts of various soils on slope stability were shown based on limit equilibrium process.

KEYWORDS: *Basaltic Soil, Soil Formation, Types of Soils, Weathering.*

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