UNIVERSITI TEKNOLOGI MARA

SITE SUITABILITY EVALUATION FOR OIL PALM USING GIS AND AHP

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AUTHOR'S DECLARATION

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ABSTRACT

This examination is to distinguish and organize the potential oil palm ranch in Perak utilizing Geographic Information System (GIS) and Multi-Criteria Decision Analysis (MCDA) innovation. This work was evaluated the potential appropriate territories for oil palm in view of a few parameters that normally utilized by past examination. The criteria are climate, topography and soil. Where in climate I will focus on rainfall and temperature, for topography data elevation and slope are used and lastly, for soil, soil types and ph value are selected. Reasonableness weighting was resolved utilizing the pairwise correlation grid of Analytic Hierarchy Process (AHP) instrument and appropriateness score utilizing Weighted Overlay work in ArcGIS 10.5. The general consistency ratio (CR) was under 0.10 demonstrates a sensible level of consistency. The aftereffects of the examination are given and confirmed real information of existing oil palm ranch in Perak. The degree of suitability of each factor was classified as highly suitable (S1), moderately suitable (S2), marginally suitable (S3) and not suitable (N) for oil palm plantation.

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