REMOTE SENSING AND GIS TECHNOLOGY FOR TEA PLANTATION AND YIELD IN CAMERON HIGHLANDS

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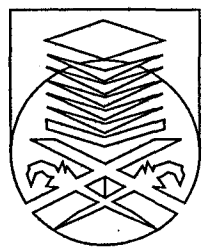

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in partial fulfillment for the award of the degree of the
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DECLARATION

I declare that the work on this project/dissertation was carried out in accordance with the regulations of Universiti Teknologi MARA. The project/dissertation is original and it is the result of my own work, unless otherwise indicated or acknowledged as referenced work.

In the event that my project/dissertation be found to violate the conditions mentioned above, I voluntarily waive the right of conferment of my degree of the Bachelor of Surveying Science and Geomatics (Honours) and agree be subjected to the disciplinary rules and regulations of Universiti Teknologi MARA.

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Abstract

Remote sensing and GIS technologies have been efficiently used for monitoring several annual crops like rice, wheat, etc. Therefore, developing an approach for monitoring tea plantations using remote sensing and GIS has become a pressing need. The lack of previous studies in monitoring tea using remote sensing provided the idea to develop an approach that can aid in monitoring the growth of plantations and help in taking effective measures when the need arises. Productivity is very important in tea plantation. So, from the early detection, the farmer can detect which area are healthy and ready to pluck the leaves and which area have the stress condition using the Normalized Difference Vegetation Index (NDVI). Remote sensing is the most cost-effective source of information for updating a GIS and it is a valuable source of current land use/land cover data. Remote sensing techniques has been utilized successfully in certain areas of application, including agriculture and related fields, especially in the developed countries were agricultural patterns are well defined and methodologies developed. Some cost benefit studies agree that satellite remote sensing can provide cheaper and faster information. The proper action can be taken if the problem occur during the plantation monitoring. Economic efficiency of remote sensing data applications can be expressed both directly as reduction of the cost and indirectly by an increase in the quality, reliability, and details of information. Malaysian agriculture should attempt to operationalize remote sensing and geographic information techniques (GIS) intensively for future planning and control of the sustainable agriculture development. Remotely sensed data, when complemented by existing and supporting GIS, could improve management decision in Malaysian agriculture for the next millenium.

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Noor Azira Binti Mohd Azman

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