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**GIS GUIDED LAND SUITABILITY ANALYSIS FOR URBAN
DEVELOPMENT ACTIVITIES IN TRINCOMALEE URBAN COUNCIL
(TUC) AREA**

A PROJECT REPORT PRESENTED BY

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To the Board of Study in Earth Science of the
POST GRADUATE INSTITUTE OF SCIENCE

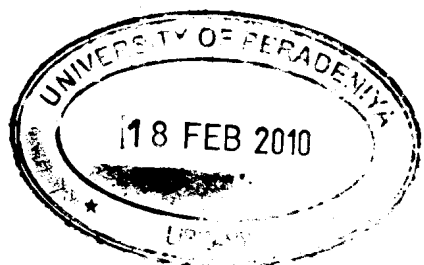
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(TUC) AREA**

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ABSTRACT

This research project analyses the suitability of land in the Trincomalee Urban Council Area (TUC) for three main development activities. The analysis has been carried out using the techniques of Geographical Information System (GIS).

Land is a very essential commodity which is demanded for human needs particularly for urban activities. The land is fixed in supply but the demand is infinite. Therefore the disposal of land for suitable use is vital in determining the optimum benefit of land and overall development of a city. Identification of suitable land for a kind of activity in the urban context has been carried out through the conventional methods which were time consuming, costly and to certain extent inaccurate. The rapid development in computer hardware and software has opened possibilities to carry out the land suitability analysis in a systematic and scientific manner.

Geographical Information System is an effective tool in the context of planning and decision making process that the application of GIS has revolutionized the spatial analysis which is not only time effective but also cost effective and most accurate particularly in spatial analysis.

The research project has been focused on the importance of land for urban development, theory of land use structures, concept of land suitability, suitability of land for urban activities, concept of Geographical Information Systems in urban planning, background of the Trincomalee District and Urban Council area, the existing urban activities in the Trincomalee Urban area and the land suitability analysis for urban activities in the Trincomalee Urban Council area.

The results of the land suitability analysis in the Trincomalee Urban Council area, using GIS techniques revealed that there are several suitable sites for new urban activities such as commercial activities, solid waste disposal, and industrial activities within the TUC area.