Contemporary Research in Urban Planning

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AN AUTOMATED LAND USE MAPPING USING REMOTELY SENSED DATA FOR TOWN PLANNING PURPOSES: REVIEW OF PROPOSAL

Norzailawati Mohd Noor

INTRODUCTION

Since a century, land use map has been defined or related to source of information for a variety of land uses for a certain area in spatial formed or describing in diagram. Land use information is important particularly when it has been used by decision makers who want to know the consequences of their decision on the land resources and environment of certain area. In Malaysia, land use maps are used in government departments which are particularly provided by four sources - National Mapping Department, Agricultural Department, Town and Country Planning Department and Forest Department in terms of recognizing land use types for an area that involved in any plan or future development. Through experience, every department were emphasizes the output into their own requirements, such as mapping department provided overall land use classes in general. While, Agricultural department provide their land use map according their needs of agriculture contexts likewise a forest department that resulted un-uniformity and less integration between departments particularly on scale and classification system.

Town and country planning department's land use maps emphasized the land used according to cadastral lot with information on each lot contains should be direct to the land used according to entities on the ground. Moreover, town planner will produce the output according to requirement of scale that are stated in the development plan which comprises of National Physical Plan (JPBD 2006), Structure Plan (JBPD 2003) and Local Plan (JBPD 2003). Hence, according to this, the scale for this task lies between 1:760 000 and maximum requirement of mapping scale was approximately 1:300 that commonly practiced in local plan. Since land use map in town and country planning was completed with all fields and more than 50 local plan was 'in status', the application of remote sensing tools in making land use maps for planning purposes appears extremely useful since this field has still lack of expertise to provide the update output due to time and cost constraints. Moreover, through experiences and favourable reports made elsewhere, it is felt that the digital image processing and automated classification of satellite data could play quite a significant role in meeting the need and the increasing demands for more up to date land use information as the country is presently experiencing a rapid development (Ahand, 1989). This chapter attempts to find out the methodology on automated land use classification for maximum scale of land use map for planning purposes besides promoting remote sensing applications into town and country planning.