

Title: Perlaksanaan spatial multi-criteria analysis sebagai sistem sokongan perancangan dan membuat keputusan

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Abstract:

The current application of Geographical Information System (GIS) in development plan studies in Malaysia can be developed further to increase the level of rationality for our planning practice. Among the process is by combining and creating geographic data (as an input) to a process of decision making (as an output) also known as a Spatial Multi-Criteria Decision Making (SMCDM). The analysis of SMCDM started with the problem's identification until the preparation and the selection of land use's development alternatives involving three (3) phases of interrelated analysis. Using the preparation of land use development proposal in the district of Pontian as the case study, the process begins with the preparation of suitability maps for main land uses as well as the overall land use suitability map. It was followed by generating the proposal of land use's allocation scenarios and the process of evaluation and choice for the best scenario at the final stage. At first, a strategic issues for various land uses and related policies has been systematically integrated for generating of the major land use suitability maps as well as the general land use suitability map. By going through the process of refining the output, the alternative proposals for the land use's allocation is generated in forms of three different scenarios. The SMCDM technique has been use to the process of evaluation and for the choice of best scenario through the scientific process by using both the spatial and non spatial application to generate more structured, rational, transperance and accountability of choices. Besides proving the effectiveness of SMCDM to the planning and decision process, the method can be potentially utilized for preparation of the physical development plan especially at the micro level such as District Local Plan and (RTD) and Special Area Plan (RKK).