

Application of GIS and AHP technique for land-use suitability analysis on coastal area in Terengganu

ABSTRACT

The land use suitability analysis on coastal area was evaluated by application of GIS and AHP method. Land-use suitability is the ability of a given type of land to support a defined use. GIS has been a powerful tool to handle spatial data in land-use analysis, application of this tool alone could not overcome the issue of inconsistency in expert opinion when trying to judge and assign relative importance to each of many criteria considered in a suitability analysis. To address this issue, the Analytical Hierarchy Process method is used in combination with the GIS tool. This study presents how the integrated tool has handled effectively a land use suitability analysis for building hotels in the coastal area of Terengganu in Malaysia. This study develops a framework for integrating the strengths of GIS and the AHP to incorporate the decision maker's preferences on a range of factors in finding areas/land suitable for coastal development. The findings indicate that the area 1(2111 m) is the best area to build hotel in the coastal area of Terengganu.