

APPLICATION OF THE INTEGRATED MODEL OF GIS AND AHP FOR EVALUATING SUITABLE LAND-USE IN THE ZONE OF THE SALTWATER AND FRESHWATER INTERACTIONS IN THE CONTEXT OF CLIMATE CHANGE: A CASE STUDY IN KIEN GIANG PROVINCE

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Summary

Land evaluation in the zone of the saltwater and freshwater interaction in the context of climate change is a multi-criteria decision making (MCDM) problem that relates to various fields (natural, economic, social). In this research, the integrated model of GIS and AHP group (AHP-GDM) was applied to solve this land evaluation problem. The process model is as follows: i). Zone the saltwater and freshwater interaction in the context of climate change scenario B2 in year 2030; ii). Overlay natural thematic layers to build a land mapping unit in this zone and analyse land use suitability by FAO(1976) method; the suitable land use systems (S1, S2, S3) are then analysed with economic and social indicators; iii). Finally, apply AHP-GDM to calculate the weight of each indicator, overlay all thematic layers in GIS, calculate the suitability index (S_i) by the method of weight average, classify S_i to determine the suitability map in GIS, union map 2015 and suitability map to propose a change of land use types in adaptation to climate change.

Keywords: *Climate change, land evaluation, GIS, AHP in group decision making (AHP-GDM).*