

The Spatial Analysis for the Allocation of Coastal Land Resources in Taiwan

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Abstract

Flexible, complicated and special coast environment not only plays an important place to breed ecology, but also is a buffer zone to join sea and land. Facing climate abnormality caused by global environment change and developing sensitive coast should appropriately make spatial plan via integrated coastal management tools to avoid the balance of ecological system and the damage of geographic resources. Abundant coast resources in Hsinchu County own two important wetlands, even a place where to keep the most natural coast in the western part of Taiwan. Owing to increasing leisure activity and industrial development and how to obtain the optimal balance point and spatial distribution mode of coastal land resources on ecological environment and socio-economic benefit, it will be an important issue for coastal planning and decision-making in Hsinchu Count. In order to solve information lack of coastal land, insufficient representation of management system, difficulties in planning system operation, this study will not only combine Geographic Information System (GIS), ecological planning method and biodiversity analysis according to coastal environment properties, but also employ GIS spatial offset-Kriging. Simulating the distribution of environmental resources by quantification to analyze the load of coastal land resources and integrate the spatial allocation of in Hsinchu County will minimize a spatial conflict between the preservation of coastal ecology and land development to the minimum. Eventually, the results obtained from the spatial analysis not only integrate the potential of coastal land and information on ecological sensitivity as well as provide the development of coastal land the preservation of environmental resources for the reference in Hsinchu County in the future, but also can be used for a study foundation of

environmental management technologies related to ecology and space.

Keyword : coast, land resources, ecological planning, biodiversity, spatial analysis, Kriging