Agricultural and Other Important Analysis through GIS

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DESCRIPTION

Land-use suitability may also suggest various things to different experts based on the intended cause for which the land is favorable. For the agriculturist, it would imply the suitability of the land for cultivation of crops, animal husbandry and pasture and to the urban planner the suitability of the land for construction of houses, landfill sites, etc. Site selection analysis will best identify a specific site for a suitable activity based on its recognized potentials such as location, size and other attributes. Land suitability analysis is more than just a Geographical Information System (GIS) based technique. Land suitability analysis is one of the significant contributions of ArcGIS. The ArcGIS program is beneficial for analyzing the scope desired to determine the suitability of land. There are two kinds of methodologies which might be associated with land quality and index. It is an essential tool for an ArcGIS database for data compilation.

Data on numerous parameters which include soil, slope, flood, water and road are used for spatial analysis that could enhance land suitability analysis. The planning associated with each specific type of land use is based on ArcGIS which includes information about land suitability analysis, mapping urban and agriculture land suitability so as to use prior information regarding the present state of various devices of the land which might be highly crucial when applying site specific management interventions. Socio-economic organizational factors and geophysical conditions of the land for decision making in identifying land management using geospatial techniques. This requires application of geospatial technology through the Geographic Information System (GIS) which will provide the functionality to analyse and interpret land suitability modeling on numerous scales, time and cost effectively. In land suitability modeling all the factors of environmental conditions might be weighted based on their level of influence using multicriteria assessment to provide a land suitability map. Moreover, land suitability mapping using GIS provides a classification of the urban and agricultural area into zones each of which has a different likelihood or risk, of experiencing particular land using processes. Such maps are fundamental to land-use planning aimed at the urban and agricultural land. The method is based on the processing of directly mapped and interpreted data. In order to illustrate the working of GIS suitability for agricultural production, a realistic procedure has been performed through reclassifying the 13 kinds of subject maps.

CONCLUSION

The attributes of every thematic map were ranked on a scale factor of 1-3 based on their suitability for urban and agricultural land. The weighted overlay procedure is based on the GIS of a land suitability model that consists of management of an evaluation scale. Soil is the most important criterion for determining an area's suitability for urban construction or for agriculture. Proximity to roads is one of the criteria that should be considered from financial and social points of view during urban and agricultural site selection processes. However, proximity to a road network is recommended for urban land use as well as for agricultural land because of high transportation costs. Therefore, to minimize such problems, the land selected must be sited very near to roads. Proximity to roads was reclassified based on the fact that very distant sites are not suitable. Accordingly, sites more than 5000 m from existing roads were excluded.

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