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Production of a New Model for Evaluation of Iran Ecological Capabilities in Order to Establish Services and Civil Development Application

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ABSTRACT

This study is aimed to design a new model for service and civil development application in order to be used in evaluation of Iran ecological capability studies. For this purpose in the first step, the frequency of sustainable and unsustainable ecological factors in Iran was known. In the next step, the Delphi method was used which is itself a branch of phase theory methods. Effective ecological factors priorities and frequency value of each factor were determined by completing 750 questionnaires for desired branches (Delphi group). Questionnaire data were analyzed using software SPSS 11.0. After designing, model was introduced to geographical information system using Arc info program. Model sensitive analysis test was done with the purpose to determine the level of sensibility in favorable replies against the specific changes in target function with the simplex method using Lingo software. This model is used in evaluation of ecological capability at the time of ecological resources analysis in the field under examination and after the preparation of environmental unit maps. Indeed environmental unit map is considered as a base map in ecological capability evaluation in this study. To asses the capabilities of the new method, ecological capability of District 22, Municipality of Tehran was evaluated as a case study and service and civil development application map was prepared using Arc-view GIS 3.2a program. Results of the studies on this section, according to the new method, the points given in environmental units vary from zero to sixty-five. There are restricting factors such as some environmental units along river path, fold passage and hilly areas, which hinder these units from getting service and civil development application.

Key words: Ecological Capability, Civil Development Applications, Geographical Information System