

Ecological capability assessment of watershed of Shushtar city for aquaculture by Makhdom and AHP method

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Abstract

Regarding to the situation of the country's biological resources, it is necessary any kind planning regarding the use of the lands for different use and its establishment in the various basins according to the ecological capacity and sustainable development while maintaining the quantity and quality of the environment for different needs of society regarding to the use of resources to procure. Therefore, to achieve this goal it is necessary which basis on the terms and conditions of the country's for different climate models, the location of the ecological conditions commensurate with the provision of land to the real potential for the establishment of various uses. The research done in the direction of the ecologic value of Shushtar city basin with 48 ° and 35 minutes longitude location minutes to 49 degrees 34 minutes East latitude and 31 ° 36 ' and 32 ° to 26 minutes for Northern Aquaculture user using the method of AHP and modified the original passage of the face. At the first, the range of the studied basin on the map with 1:25000 of the topography was closed. After the determination of the boundary study range using lines of the topography of the region was prepared. subsequently the DEM maps such as height, slope, direction of slope map of the area was developed and then by using AHP model and Dr. Makhdom aquaculture model to preparation of the table to experts were given the rating after collecting questionnaires and Expert choice software to define the weight of each criteria achieved and priority of criteria in order to building the specified map after the normalization of weight criteria, compared to the integration of GIS with AHP results of the action and the map slope, direction of slope, plant species and plant density of soil texture, soil structure, and ... format Raster was prepared. At the end it has been found that Shushtar city basin aquaculture user in two floors, 48% of the equivalent class 99485 hectares are suitable and 52% in the equivalent 107,190 HA inappropriate class.

Keywords: Aquaculture, Ecological assessment, Shushtar basin, Hierarchical decision making techniques.