Abstract:

The lack of water problem in dry and semi dry areas made a fragile living condition in these areas. According to the water per capita decrease and the significance of providing food for community members made it necessary to control surface water by making dams or using Artificial Nutrition methods. The aim of the present study is to locate an appropriate area for Artificial Nutrition in Jiroft Plain to use data layers as in drainage dense, altitudinal classes, petrology, Vegetation, land use, agrology, and slope. At the first acquired data layers related to the aim of this research were converted into the Restry format through Arc GIS software. Then by acquiring the data value of layers were calculated by mathematic computation, pair comparing matrix which selected parameters in place of Artificial Nutrition in Jiroft Plain by using the FAHP method and professional advice in order to determine the Weight of criterions. According to the result obtained among the seven parameters, the slope parameter with the Weight of (./327) had the maximum Weight, and was consider as the first precedence in Artificial Nutrition. Also parameters such as agrology, petrology, Vegetation, land use, altitudinal classes and drainage dense took the second to seventh positions respectively. The result of layer and the final Weight completion of phase hierarchical analysis also showed the subject from the all the space of the Jiroft Plain Auriferous 532.8 KMs (23.68%) in a very appropriate class for Artificial Nutrition Operation, 1445 KMs (64.3%) in a good class, 78.8 KMs (3.9%) in the middle class, 43 KMs (1.92%) inappropriate class and 138 KMs (6.2%) was in a completely inappropriate class.

Key words: Groundwater, **Locating**, **ArcGIS**, **FAHP**, **Slope, Jiroft Plain**

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