

Abstract:

Underground dams as a replacement for the medium and small dams on the ground, to storage and efficient use of water developed. Underground dams to face obstacles that are below ground level to control subsurface water flows in natural deposits as they mature. The benefits of this dam, preventing water loss, reduce evaporation, prevent water pollution and strengthen the aquifers. Darab region with rainfall of less than 300 mm and evaporation over 2500 mm per year, despite the study and implementation of various schemes for watershed management, water shortages in different sectors, it is evident again, can be a good choice for study or feasibility of an underground dam construction in the region. The purpose of this research is based on the criteria of impact, suitable locations for underground dam construction in the basin plain Darab be specified. The study examines the use of techniques DEMATEL, and their effects, which is a significant indicator of the relationship between the indicators and their effects, to show the dependency relationships between ANP and Fuzzy-ANP Drtknyk criteria used. The location based on Boolean, integration with GIS and GIS- Fuzzy Fuzzy-ANP and ANP were performed. Criteria geology, hydrology, topography and socio-economic criteria used as is. Areas with the most suitable location for the construction of underground dams in this research are: the geomorphological and geological units, respectively, in the Quaternary Qssg, Qcs, Qsgc, PLQb and Qap and alluvial fan and pediment, streams 3 and 4 located on the slopes less than 5%, Ranges and drylands, distance to the place of consumption as much as possible close to the road were low.

Key words : ANP, F-ANP, Darab, Site Selection, Underground Dam.



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