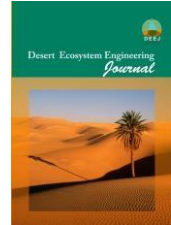




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Evaluation of Combat Desertification Alternatives by using Individual Borda Ranking Model

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Abstract

Desertification is a global problem in most arid and semiarid countries including Iran are facing with this problem. Desertification causes many restrictions in terms of agriculture, food security, livestock rising, industry and providing service costs. This phenomenon is a process which gradually developed and accelerated and adjustment costs is increasing exponentially, so according to resource constraints and the desert area sensitivity, providing optimal combat desertification alternatives natively is necessary to achieve success in controlling and reducing the effects of this phenomenon among different regions. This paper tries to provide systematic and optimal alternatives in a group decision-making model. At the first in the framework of Multiple Attribute Decisionmaking (MADM), indices preference was determined using Eigenvector model. Alternatives priority was evaluated by Borda model. The results showed that the alternative of prevention of unsuitable land use changes (A_{18}) is the most important alternative in combat desertification process in the study area and alternatives of vegetation cover development and reclamation (A_{23}) and modification of ground water harvesting (A_{31}) were in the next priority, respectively. Therefore, it is suggested that the obtained results and ranking should be considered in projects of controlling and reducing the effects of desertification and rehabilitatyon of degraded lands plans.

Keywords: Combat Desertification, Eigenvector Technique, Individual Borda Ranking Model, Multiple Attribute Decision-making (MADM).

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