

عنوان مقاله:

Irrigation strategy management using System Dynamics approach: a case study of Shapour river basin in Iran

محل انتشار:

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خلاصه مقاله:

Decrease in the quantity and quality of water in the agricultural sectors affected by climate change and drought in addition to the lack of agricultural demand management policies results in over-withdrawing of water in upstream irrigation districts. Also, this causes the water and salinity stress in downstream districts, and occurrence of intra-basin disputes and conflicts. In this study, considering this problem, a system dynamics approach was carried out to evaluate and find appropriate irrigation strategy with respect to crop patterns and irrigation technology. This framework applied to an irrigation district on upstream of Shapour river named Khesht district with traditional irrigation technologies. Findings revealed that the drip technology for date orchards and sprinkler for the cultivation part adopting over irrigation strategy for orchards part and deficit irrigation for cultivated part resulted less water and salinity stress. Also, this scenario had minimum water consumption in comparison with employment of other technologies and strategies.

کلمات کلیدی:

Irrigation Strategy, Crop Pattern, Root Zone, System Dynamics, Vensim

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