

abstract

Evaporation is one of the most important climatic phenomena in arid and semi-arid areas Which causes water loss from the surface of water reservoirs. There are several ways to reduce evaporation from the surface of the water, including physical, chemical and biological methods. Vegetation cover is a biological method that decreases evaporation from the free surface of the water by affecting the evaporation parameters. In this research, the effects of Tamarisk, Eucalyptus, Olive, and Tamarisk-Eucalyptus combination on the wind velocity, temperature, humidity, air pressure and finally the evaporation rate from the surface of Chahnimeh lakes of Sistan were investigated. The results showed that the evaporation rate of each of the tree coverings of Tamarisk, Eucalyptus, Olive, and Tamarisk-Eucalyptus combination were 26.21, 32.43, 11.83 and 34.06 respectively. The maximum evaporation reduction is related to the Tamarisk-Eucalyptus combination. Given that, the effective width of the Tamarisk-Eucalyptus combination is three rows, three windbreak rows suggested in which, the windbreak length for each of the Chahnimeh lakes 1 to 4 is 10.448, 5.348, 10.148 and 15.048 km and Windbreak density is 50-60%.

Key Words: Riparian Vegetation - Reduce Evaporation - Wind Speed



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**reduction of evaporation with creating riparian
vegetation
(case study: chahnimeh lakes of sistan)**

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