



## **Evaporation Modeling in Lakes in Arid and Semi-arid Regions**

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Evaporation is the main loss from the system but, in contrast to losses to the groundwater, the evaporative loss does not have any direct benefits in the immediate environment of the reservoir. Evaporative losses make small reservoirs less efficient than large reservoirs. Significance of its accurate estimation increases when the problems are associated with the water resources accounting of arid and semi-arid regions. Direct measurement of evaporation from water surface is very difficult. The process of evaporation is a complex phenomenon, which is a function of solar radiation, temperature, wind speed, vapour pressure deficit, atmospheric pressure and the surrounding environment. Accurate estimation of evaporation is important for designing and planning projects in which a water balance is key factor as well as for conservation of water. In other words, accurate estimation of free water surface evaporation in arid and semi-arid regions, what criterion can be followed for selection of reliable evaporation method, is an important area of research. The precise estimation of evaporation from a water body requires extensive databases, which are often missing and/or expensive to generate on routine basis. In this paper, different methods for evaporation from small lakes in arid and semi-arid regions (According to the available data) is considered and different parameters affected this phenomenon are discussed (i.e. wind speed above the water surface, heat storage of lake, roughness length of water surface, etc.).