

Identifying and analyzing drying risk matrix of Maharlou Wetland and its outcomes in the environment

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Abstract

One of the challenging issues for most of the world's societies is environmental crises. Drought is one of the climatic phenomena and disastrous events, which is different from other natural crises. Each time of the occurrence of this phenomenon has been accompanied by serious damage to different economic and social sectors. Objective of the present work was to prioritize the hazards caused by drying-up of Maharlou Wetland and investigate its outcome in the environment surrounding the mentioned area. Unprecedented Maharlou Wetland in Fars Province, which is also called a lake, is located near Shiraz and Sarvestan cities with the geographical situation of 29° and 10' to 29° and 40' north and 52° and 30' to 53° east. First, field observations were conducted in the area and then Delphi questionnaire was used to determine the hazards caused by drying-up of Maharlou Wetland. Considering the occurrence probability and vulnerability rate of the studied area considering each of these hazards, a risk matrix was completed. Results showed that increased temperature, variation in land use, drop in static level of wells, and drying-up of springs on top of the diagonal of the matrix were among the most important hazards. Moreover, reduced environmental humidity, increased salinity, contamination caused by drying-up of industrial wastewater were among the other hazards.

Keywords: Identification, Risk matrix, Outcome, Maharlou Wetland, Hazard