

Quaternary Lake playa In Iran; Significant source of windblown dust

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Abstract

During the late Quaternary with the end of Pleistocene epoch and climatic fluctuations in Holocene, a coarse face of arid environments created in many parts of Iran. Playas are remained coast of Quaternary lakes with geomorphic facies including Sabkha, Chott, Clay pan and Kavir (Salty pan). The studies indicated a strong bond between civilization developments in margin of playas in Iran. A windblown dust transfer from playas to piedmonts knows the dust cycle in arid zones. Today many permanent lake playas are drying due to anthropogenic activities mainly overexploitations and mismanagement of water resources. Although the drying process of Urmia lake, as widest endemic lake of Iran and international habitat is bolded, but unfortunately all of lake playas of Iran are drying or dried approximately such as Hurolazim in south west, Hamoon in east, Parishan, Gavkhoni, Bakhtegan and Maharloo in central Iran. The aim of this article is studying significant role of these lakes for windblown dust emission in recent years. Since many of these lakes involved sabkha and salty pans, emission of salt components with windblown dust is a hazard for human health. In this paper has been studied the role of dried lake playas as degradation-aggregation zone for windblown dust emission in recent decade. Based on the recent windblown dust in Khozestan and Hurolazim lake playa alterations, a conceptual analysis has been done. The finding shows that Khozestan plain receives windblown dust from nearby Hurolazim Lake playa with decreasing water table and landuse changing in this area. The close relationship between the lake playa and dust nature of Khozestan suggests that eolian transport can be arisen from Lake Playa. These results have important implications for combating desertification and windblown dust problems.

Key words:

Windblown dust, Quaternary lake playa, Khozestan, Hurolazim