Habitat suitability modeling of water birds and waders in Hamun wetland by by Maximum Entropy model

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Abstract

Climate change and human activities have increased negative pressure on natural ecosystems. Wetlands are such ecosystems that widely affected by these negative changes. Birds as a part of wildlife in a wetland have damaged by destruction of wetlands, so, a large group of them, are at risk of extinction. Habitat destruction in wetlands in arid and semi-arid areas has more negative effects on these birds because of water limitation in these regions. Hamun wetland on the boundary of Iran and Afghanistan is one of the vulnerable ecosystems that are faced by the effects of drought and human activities. Since this wetland has international importance for breeding and resting of migrant water birds, determination of habitat requirements and spatial distribution of water birds in this wetland are essential. In this study, by field studies and Maximum Entropy model, suitable habitats of water birds and waders were determined in 2015. Based on these results, southern parts of Hamun_e_ Saberi and some parts of Hamun_e_ Himand and Pouzak were determined as suitable habitat for water birds. Results of this paper are useful for conservation activities in this wetland.

Keywords: Maximum Entropy model, habitat suitability, Remote sensing, vulnerable ecosystems, water birds.

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