Habitat suitability modeling for Common Crane (Grusgrus) in Meighan Wetland of Arak

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Abstract
Meighan Wetland Forbidden Hunting Region of Arak is located at center of Iran in the birds' migratory flyway. In the cold season, thousands of the migratory birds settle this region featuring of the desired habitat conditions annually, especially, common crane. Considering the huge number of common crane in Meighan wetland in the cold season compared to other habitats, this species introduced as symbol of biodiversity in this region. This study was conducted by the use of Maxent method based on maximum atrophy or close to the reality with 4 variables include of water depth, food, land use and man-made events as well as 20 settlement points of cranes. The results indicated that an area of 5037 hectares equal to 21% of Meighan Wetland Forbidden Hunting Region has desired habitat for the cranes. ROC of the model specified that the desirability model validity is equal to .817 showing a great performance of Maxent method. Among the ariables the highest efficacy on habitat of the cranes belongs to water depth (from 5 to 40 cm), food (Cyperusrotundus, wheat and barley germs), land use (wetland, dry, irrigated) and man-made events (more than1000 m) respectively. In order to protect cranes' habitat in this region, some suitable approaches include of protection of the existing desired habitat spots,the lack of industrial and mining activities and supplying Meighan Wetland's Right of Wetland preventing any land usage alteration are suggested.

Keywords: Common Crane, Meighan Wetland, Habitat Suitability, Maxent.