Oceanography/Vol.7/No.28/Winter 2017/1/6-6

Modeling Habitat Suitability of the Dolphins Using MaxEnt in Makran Sea, South of Iran

Shahparian, Mina[1*]; Fakheran, Sima[2]; Moradi, Hossein[3];
Hemami, Mahmoudreza[4]; Shafiezadeh, Mohammad[5]

1- MSc. Student in Habitats and Biodiversity, Department of Natural Resources, Isfahan University of Technology, Isfahan, Iran. Email:mshahpariyan92@gmail.com

2- Assistant Professor in Environmental Sciences, Department of Natural Resources, Isfahan University of Technology, Isfahan, Iran. Email: fakheran@cc.iut.ac.ir

3- Assistant Professor in Environmental Sciences, Department of Natural Resources, Isfahan University of Technology, Isfahan, Iran. Email: hossein.moradi@cc.iut.ac.ir

4- Associate Professor in Environmental Sciences, Department of Natural Resources, Isfahan University of Technology, Isfahan, Iran. Email: mrhemami@cc.iut.ac.ir

5- PhD. Candidate in Environmental Planning, Department of Natural Resources, Isfahan University of Technology, Isfahan, Iran. Email: shafiezadeh_m@yahoo.com

Received Date: January 17, 2017 **Corresponding Author* *Accepted Date: March 1, 2017*

Abstract

The complexity and lack of information about marine ecosystems make a challenge with achieving to data about ecological niche for aquatic species. Spatial-Temporally knowledge on distribution of key species is an important component for systematic conservation planning. However, few efforts have been made to model the habitat of marine mammals in Iran so far. The Coast of Makran Sea in the South of Iran is a high biodiversity region that has a vital marine habitat for a lot of marine species. Dolphins are of the most important species in this region. In this paper, we presented predictive habitat modelling as a potential tool to support decisions for conservation planning. A maximum entropy algorithm (MaxEnt) was used to develop habitat models. As a result of the model, distance from coast and sea surface and temperature were the most important variables to identify the suitable area such as Gulf of Gwadar. The index of area under the curve (AUC) was equivalent to 84/0, indicating the high accuracy and efficiency of the model was to identify distribution areas. These results can be useful for conservation planning.

Keywords: *MaxEnt, Habitat suitability, Marine mammals, Dolphins.*