

Investigating the effects of habitat reduction on migratory bird's biodiversity in Parishan Lake over 14 years

Fatemeh Hossein Pour^{1*}

1. Graduate of Natural Resource Engineering-Environment, School of Agriculture, Shiraz University, Shiraz, Iran.

***Corresponding author:**

f.hosseinpour526@gmail.com

Received date: 2021.09.30

Reception date: 2022.04.22

Abstract

Conservation and development of biodiversity are some of the most important issues in lake management. Calculating and studying biodiversity is a difficult, time-consuming, and costly process, and there is no well-established and planned biodiversity guidance. The purpose of this study was to evaluate the significant reduction of Parishan lake biodiversity and its changes due to the reduction of habitat over fourteen years. Census data from 1997 to 2011 were collected and analyzed. In this study, based on the number of species in different conservation categories, 64 species of least concern (LC), 4 endangered species (NT), 2 endangered species (VU), and 1 endangered species (EN) were identified. The frequency of each family was observed with a total of 135347 birds. Most of the birds observed belonged to the Eurasian coot (*Fulica atra*) species of the Rallidae family. Some biodiversity indices (Simpson, Shannon-Wiener, and Camargo) were used to investigate the species biodiversity and evenness of birds during the years 1998 to 2012. The results showed that the Simpson index of 0.925 in 1998 to 0.348 in 2008 year. It was the second year that showed an increase in biodiversity over an eight-year period, and the Camargo Index confirmed the same results. To achieve this, Ecological Methodology software was used. Generally, the results of this study showed that decreasing the water level of Parishan lake significantly reduced the biodiversity of many species.

Keyword: Parishan Lake, Biodiversity, Migratory birds.