بسم الله الرحمن الرحيم

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تم رفع هذه الرسالة بواسطة / مني مغربي أحمد

بقسم التوثيق الإلكتروني بمركز الشبكات وتكنولوجيا المعلومات دون أدنى

مسئولية عن محتوى هذه الرسالة.

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A STUDY OF SOME ENVIRONMENTAL IMPACTS OF AN OPERATIONAL WIND FARM ON MIGRATORY SOARING BIRDS AT GABEL AL-ZEIT//RED SEA, EGYPT

Submitted By

Osama Ahmed Moustafa Saadawy Gebaly

B.Sc. of Science (Chemistry& Zoology), Faculty of Science, Cairo University, 1994

A Thesis Submitted in Partial Fulfillment
Of
The Requirement for the Master Degree
In
Environmental Sciences

Department of Environmental Basic Sciences
Faculty of Graduates Studies & Environmental Research
Ain Shams University

2022

APPROVAL SHEET

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ABSTRACT

Egypt includes a great part of the Great Rift Valley/Red Sea flyway; the second world's most important flyway for migratory soaring birds. It acts as a corridor between Eurasia and Africa The aim of the present study is to study the phenology and survey the numbers of species and individuals of migratory soaring birds that pass through a wind farm (240 Megawatts (MW) wind energy project of Kreditanstaltfür Wiederaufbau (Germany's development bank) (KFW) located in Gebel Al-Zeit area, Red Sea Governorate, Egypt. Bird monitoring was conducted by visual observations, for eight hours during daytime at the whole survey period in two fixed observation points, during the period extending from March 4th to May 10th, 2018. This observation period covered a four-week peak of spring migration season. A total of 143,906 soaring birds belonging to 32 species were counted. The most common bird species was the white stork (63.1%), the northern steppe buzzard/common buzzard (13.21%), the great white pelican (7.42%), the European honey buzzard (6%), the Levant sparrowhawk (2.38%), and the black kite, (2.17%). Globally threatened (vulnerable, endangered, and critically endangered) migratory soaring bird species recorded in the study area surpassed 1% of the flyway population. These species include the Egyptian vulture (1.2%) and the steppe eagle (3.02%). Two other near threatened bird species; i.e., the pallid harrier (6 individuals), and

the red-footed falcon (two individuals), were also observed. These results spotlight on the importance of protecting the study area as a bird migration corridor.

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