Climatic Changes and their Impact on Tourism Activities related to the Marine Environment in Egypt: Mitigation and Adaptation Strategies.

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ABSTRACT

This research intends to evaluate the impact of climate change on tourist activities related to the coastal environment. The study concentrated on Sharm El Sheikh, Dahab, Ras Mohammed, Nabq, and Abu Galum in the Gulf of Aqaba region of Egypt, due to the natural attractiveness of these regions in the marine environment, including coral reefs and vivid fish, which bring millions of visitors yearly. However, these places are sensitive to the consequences of climate change and different damaging human activities, demanding an evaluation of the most relevant mitigation and adaptation measures to relieve severe climatic effects on the marine environment in the Gulf of Aqaba. To fulfill the overarching aim of the study, several subordinate objectives were delineated, including the identification of the most significant climate changes and their effects on the natural elements of the marine environment in the Gulf of Aqaba region of Egypt as well as the identification of the most effective mitigation and adaptation strategies to alleviate the impacts of climate change on these natural components. To fulfill the study's aims, a quantitative technique was used via a survey given to a purposive sample of 213 specialists, including faculties members from the faculties of tourism and hotels—tourism studies departments (Fayoum University, Benisuef University, South Valley University, Suez Canal University), faculties of science (Fayoum University, Suez Canal University, Alexandria University), and faculties of arts (Fayoum University, Suez Canal University, Alexandria University). Climate change specialists at the Ministry of Tourism and Environment, the Egyptian Meteorological Authority, the Institute of Oceanography, and the Climate Change Research Center and its Impact on Water

Resources. Practitioners, including divers and operators of water sports companies, have an extensive understanding of climate change and its consequences on the marine ecology in the Gulf of Aqaba. The research tested four hypotheses to establish the influence of climate change on marine tourist activities in the Gulf of Aqaba. The research ended with a collection of outcomes, the most noteworthy of which are, Perhaps the clearest of these is that climate change impacts the natural components of the marine environment in the Gulf of Aqaba and that human activities have a substantial influence on the marine ecosystems in the Gulf of Aqaba. Moreover, mitigation and adaptation techniques, when they exist, are not applied. Based on the results of the field study, the study concluded with a set of recommendations, perhaps the most important of which is enhancing the use of renewable energy sources in the region, such as solar and wind energy, and implementing programs to restore coral reefs and other degraded marine ecosystems.