



Dynamic interactions between biodiversity and Geomorphology from Hurgada to Quseir - Red Sea Coast Using RS and GIS

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Study area extends from Hurghada to Quseir, between latitude $33^{\circ}20'00''$ and $33^{\circ}50'$ east, between the widths $26^{\circ}00'00''$ and $27^{\circ}30'00''$ north . It was covered by the eastern desert and overlooking Red Sea coast. Subject importance is a study of geomorphological diversity units and different effects of biodiversity on erosion and mutual impacts of the biological environment and geomorphology in addition to touristic human activities and their impact on the biological and geomorphological environment.

The study deals with Biogeomorphology of Red Sea Coast between Hurgada and Quseir Using RS and GIS, and study of interactions and feedbacks between living and nonliving parts of the landscape. Straddling the disciplines of geomorphology and ecology, biogeomorphology is inherently interdisciplinary. Microorganisms, plants, and animals contribute to the development of landforms and landscapes in many different ways, both actively and passively, through processes of bioconstruction, bioweathering, bioerosion, and bioprotection. Equally, geomorphological processes create and alter habitat, and influence environmental conditions for organisms. As an overarching field of environmental study, the scope and diversity of biogeomorphological research is immense, ranging from the scale of interactions between individual mineral grains and microorganisms, up to global biogeochemical cycling and climate change over geological time.

Mangrove trees are a vital component. Marine crustaceans are economically relevant, and the growth sites of the species known as Avicenna - Shura - are distributed from mangroves in the soft-lands along the Red Sea coast. The number of these sites increases and widens. The length of these trees increases as we go. Hurghada is located in the area of Umm Munqar (El Gouna) and the other type of mangrove (Rizovora) or Crimea begins to appear to the south of the latitude 23 degrees north, but doesn't reach degree of abundance of the first type within the borders of Egypt.

Red Sea is characterized by more than 200 species, starting with the dense soft species that thrive in low-lying coastal areas, and the other species that thrive. They thrive in deep water and can be found in areas where water plankton is growing. Many coral reefs have been destroyed rapidly in recent years due to rapid development of tourist activities (Q, E.Frihy, et al. (1996), P1)

Study Objectives is Studying the geomorphological and biogeological diversity, different effects of biological erosion, identify the geographical distribution of biological effects and associated geomorphological events and Delineating existing mangroves and coral reefs stands and siting suitable locations for mangroves plantation Using spatial data analysis

Methods and techniques in this study is Using EXCEL , Field study, Laboratory model, experiments, analyzing spatial data by using GIS techniques and remote sensing Erdas Imagine 2013 (IRI) and Infrared Thermal Sensor for Landsat Global DEM with a spatial resolution of 30 meters, in addition to using Google Earth Pro

Key Words:

biology - geomorphology - biogeomorphology - Coral reefs - bioerosion - Rocky Coasts - Sandy Coasts - Sea Grasses - Mangrove