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Geomorphological Changes of Mersa Matruh Lakes District

The study area is located in the central part of the north-west coast of Egypt, bordered to the east by the valley of Tawawiya, and to the west by Wadi Majid, while the Mediterranean coast represents its northern border, and on the south the Water division lines between the valleys of the study area, and in line with the contour line 125 meters Above Sea level . It covers an area of 296.8 km^2, with an average length of 16.3 km from north to south and 19.1 km from east to west . It also extends astronomically between 31 13 24 , and 31 22 30 At North and 27 03 30 and 27 20 50 At East .

The first chapter dealt with the natural geographic characteristics of the study area. The geological characteristics were studied in terms of : Geological formations and structure. The study showed that the geological formations in the area consist of sedimentary rocks belonging to the third geological time (middle miocene) by 25% of the total area of geological formations. And 24.2% of the total area of the study area, and the fourth geological time deposits of modern (Pleistocene - Holocene) by 75% of the total area of geological formations, and 72.7% of the total area of the study area. Of the normal type is almost limited in the region, with North-East and North-West directions, in addition to a set of convex twists in a northeast / southwest direction, confined among the concave twists occupied by the bays of the sea, and the study of climatic conditions indicate that the climate of the study area is mild summer and warm It is rainy in winter, and the north and north-west winds prevail. Most of the study area rains belong to the cyclonic type. The area is morphologically composed of three main units: north to south coastal plain, the edge of the plateau, and the surface of the Miocene plateau.

The second chapter also dealt with the geographic factors affecting geomorphological change in the study area, where coastal erosion with its various factors such as waves, winds and sea currents plays an important role in changing geomorphological phenomena. Stretch only by laying a network of roads serving those stores.

The third chapter dealt with the geomorphological changes in the lower Matrouh lakes and the coastline of the study area, through the study of the spatial development of the low lakes during the period (1907-2017) . The average depth of the lake is 5 m and the western 7 m , in addition to measuring the erosion and sedimentation rates on the shoreline of the study area, which proved to be Can not be monitored by vinegar For topographic maps or satellite visualization due to the decrease in the accuracy of the old ones (before 2002), but require long-term field studies - did not have the opportunity for the student to keep track of this phenomenon.

In the fourth chapter, the morphometric characteristics of the drainage basins and networks in the study area were studied. The study area included six drainage basins. The total area of these basins reached 207.3 km^2, representing 69.8% of the total area of the study area. The basin of Wadi Eylat Omar is the smallest of its inhabitants .The structure conditions and the lithological characteristics played an active role in the different areas of these basins .The drainage density in the basins of the study area is within the low density; the average drainage density was 2.4 km / km^2, and the highest value was in Wadi Al-Raml basin 3.4 km / km^2) and lower Value in Wadi Al Tawawiya Basin (1,3 km / km^2) .

While the fifth chapter clarified the practical importance of the study area by identifying and discussing a set of regional controls and specific elements for the development of the region in terms of tourism, urban, agricultural and industrial, in addition to producing a map that showed the areas of development in the future .