

THE EFFECT OF THE NATURAL FACTORS ON FORMING THE PATTERN AND GEOMORPHOLOGY OF THE LAGOONS IN KHOR AL-ZUBAIR.

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Abstract

This study deals with the natural spatial distribution of various geomorphologic phenomena, as well as, the natural and human factors shared in their development. The studied area is located in Khor Al-Zubair area, about 15 km south of Shatt Al-Basrah artificial channel in Basrah Governorate- Southern Iraq, the eastern and western borders of studied area there are many lagoons and bifurcated tidal channel.

The present study based on the direct measurements of the natural geomorphologic phenomena via many field trips in addition to the analysis of many maps, Satellite images and Aerial photographs, the obtained data were statistically treated. On the other hand, the current study also proved that the present Al-Kheran areas were originally representing an extension of Abu-Al-Khasib agricultural soils. The dendritic patterns observed now a day were not prevailed 700 years ago, the study also shows that there are certain subsurface factors playing a major role in the studied area developments. The climatic factors played an influential role in Khor Al-Zubair area. Some of the factors had an indirect influence, e.g. temperature and rainfall, whereas the wind played a direct role in influencing the tidal current velocity. The physical, chemical and geotechnical features of the soil had an sound influence on tidal drainage and the existence of various landforms, such as the gully and land slides. The slope played a major geomorphic role in the determining prevailing patterns by influencing the ebb current speed especially the fast one, moreover, the semi diurnal tide in Khor Al-Zubair highly affect by increasing the exposition of the tidal flats to most of geomorphic processes, e.g. wind and solar radiation. The current study has elucidates that the direction of geomorphic processes for the 1917-1962, and 1962-1998 periods was toward the deposition and erosion respectively. Eventually, the tidal drainage basin has fine texture and a high drainage density and the dendritic drainage basin has arrived to a maturity stage.

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