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المستودع الرقمي للمدرسة مبني على المنصة المفتوحة DSpace و يتم إدارته من طرف مديرية المكتبة للمدرسة العليا .

كل الحقوق محفوظة للمدرسة الوطنية العليا للري.

Abstract: The eastern coast of the Algiers, which stretches over 15 km, is currently experiencing very intense socioeconomic and urban development that is causing severe disturbances to the coastal environment. The main issue of this study concerns itself with understanding the evolutionary trends of this system and assessing its state of vulnerability towards erosion phenomena. This work focuses on the historical study of the variation in the shoreline position by combining photogrammetry data and in situ DGPS measurements (Differential Global Positioning System). Data treatment was carried out using a geographic information system (GIS) and the Digital Shoreline Analysis System (DSAS) geostatistical computing tool. These techniques have enabled identification of the erosion/accretion rates and description of the evolutionary trends over a period of 58 years by calculating the net rates of coastline changes over three time periods (1959–1980, 1980–2003 and 2003–2017). The results show that the net rate fluctuates between sites, with an overall tendency towards erosion (49% of the coastline), associated with a significant variation in the average annual rates. The computed statistics show that the study area was in a state of accretion between 1959 and 1980, with an average end point rate (EPR) equal to 0.72 m/year. This net rate of change turned negative and became alarming during the period between 1980 and 2017 when the EPR decreased to - 0.54 m/year. These trends are due to a combination of the cumulative effects of storms and anthropogenic actions. Hence, sustainable management policies must be developed rapidly by coastal managers to rehabilitate the area.

Key words: Erosion ; Shoreline ; Coastal vulnerability ; DGPS ; DSAS ; Eastern Algiers ; GIS ; Geomorphology

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