



Journal

J. Biol. Chem.
Environ. Sci., 2017,
Vol. 12(3): 179-197
<http://biochemv.blogspot.com.eg/>

MONITORING URBAN GROWTH OVER NILE DELTA ARCHAEOLOGICAL HILLS, EGYPT

Hammad*, M. A., M. Hussein*, F,
Ammar**, E, Zaghloul***, and M, El
Bahey****

*Al Azhar University. Faculty of Agriculture, Cairo.

**Nuclear Material Authority, Cairo.

***National Authority for Remote Sensing and Space
Sciences (NARSS).

****General Director, Ministry of Antiquities
previously.

ABSTRACT

Urban encroachment became a serious threat to archaeological sites especially in the Nile Delta of Egypt. The problem is escalating with the rapid increase of population and the failure of finding an alternative solution. The archaeological sites in the Delta are usually characterized by several scattered hills (Kom or Tell in Arabic).

Three of these hills, namely Tell Atrib, Tell Faraon, and Kom el-Hisn were selected for investigation to evaluate the extent of encroachment including both urban and agricultural within a period from 1947 to 2014. Topographic maps and Landsat images (Landsat 8) were used.

The results show that the area of Tell Atrib decreased from 85.86 Feddan in 1947 to a 14.31 Feddan by the 2014 year, where 83.3% were lost by urban encroachment. Tell Faraon site at the east of the Delta with an

original area of 42.56 Feddan in the year 1947 was shrunk to 11.92 Feddan in 2014 due to urban sprawl. The loss was estimated at 65.12%. Concerning Kom el-Hisn, It is clear that urban and agricultural encroachment diminished the area by 75.0% which is the greatest between the three studied sites.

Key words: agricultural encroachment, Geographic Information System, Kom, remote sensing, urban growth.