Секция «География»

# LAND USE LAND COVER CHANGES IN SOME AREAS IN NILE DELTA USING REMOTE SENSING AND GIS TECHNIQUES

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**Abstract**

Recently land-use change has been the main concern for worldwide environment change .This paper is intended to highlight the impacts of Egyptian revolution on the agricultural soils in Nile Delta using of remote sensing and GIS. Where the main objective of this study is to investigate the urban sprawl and vegetation cover changes and its impact on agricultural land from 2001 until 2013 in El-Gharbia governorate as a case study using integrating remote sensing and GIS. Three temporal data sets of images from two different sensors : Landsat7 Enhanced Thematic Mapper (ETM) with 30 m at acquired 2010 with 7.8 m resolution, consequently were used . Four different supervised classification techniques (Maximum likelihood (ML), Minimum Distance , Neural networks (NN); and Support vector machine (SVM) were applied to monitor the changes of the investigated area .the classification were evaluated using a set of 260 validation sites. The results indicated that the finest one is support vector machine followed by Neural networks where overall accuracy reached 97.2 % and 95.3% and Kappa coefficient reached 0.94 and 0.89 respectively. Also the results illustrated that the vegetation degradation rate has increased after the Egyptian revolution during 2011 to 2013 came along with increase of urban sprawl.

Keywords: Egyptian Revolution, Land use land cover, Change detection, Rremote sensing and GIS

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