## 5<sup>th</sup> International Conference on **GIS and Remote Sensing**

September 16-17, 2019 | Rome, Italy

## Using of Remote Sensing and GIS to Evaluate Landuse/Landcover around Lake Qarun, El - Fayoum Governorate, Egypt

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The spatial characteristics of land cover are useful for understanding the various impacts of human activities on the overall ecological conditions of the environment and to meet the needs for an up-to-date overview of land use and land cover (LULC). Sustainable management strategy and land use planning require accurate measurement of dynamic changes in LULC features. The objective of this study is to monitor the change in the LULC around Lake Qarun, El- Fayoum governorate, Egypt, using maximum likelihood classification method. Landsat satellite images (ETM+ 2001 and OLI 2016) were used to determine the changes in LULC in the study area with a total coverage of 3075 km2 over a period of 15 years. Ground truth points were collected during several field trips conducted in 2016 were used for performing the accuracy assessment for the final produced maps. Four LULC classes were determined for each date; agricultural land, urban area, barren land and water class. The result stated that the maximum likelihood classification accurately classified the assigned images with overall accuracy of 99 and 92 % for 2001 and 2016 classified images, respectively. Thus, this technique was recommended to be used for such an area.