

## **Land use land cover (LULC) changes techniques in gis application: A case study of Sabah, Malaysia**

### **ABSTRACT**

This study focuses on the land use land cover (LULC) changes in Kota Kinabalu city, Sabah Malaysia, in 1990 to 2020. The main objective of this study is: (i) to classify the land use land cover (LULC) in Kota Kinabalu, Sabah; and (ii ) to determine the changes of LULC occur in the Kota Kinabalu, Sabah. Four feature classes had been set up namely built up area (BUA), vegetation area (VA), water bodies (WB) and open space area (OSA). Satellite imageries data are obtained from USGS Earth Explorer for Landsat 5 TM for 1990 and Landsat 8 OLI/TIRS for 2020. The integration of GIS and RS are applied to carry out the analysis of LULC. The result indicates significantly positive increase in cover area for BUA and WB, while VA and OSA are decrease. This study through LULC changes techniques proved that increase in population either through local-birth or migration will lead to an expansion of urban development, which indirectly enhance the pollution and develop possibility degradation of environmental health quality. Lastly, this study proves that integration of RS and GIS technologies provide an effective tool for urban planning and management