# Geospatial Analysis of Land Use/land Cover Impact on Soil Heat Influx

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**SUMMARY**

Urbanization is one of the main patterns in the advanced history. Urban areas have higher solar radiation absorption and a greater thermal conductivity and capacity for releasing heat stored during the day at night . The estimation of LULC impact on soil heat flux is a very important component. The study was conducted to estimate LULC impact on soil heat flux using remote sensing and GIS for Ibadan, Oyo state, Nigeria. The study was conducted for 1984 and 2013, covering the interval of 30years. Landsat-5 and 8 were used for the analysis to estimate radiance, reflectance, Net radiation, soil heat flux and land surface temperature. After the estimation of all the components soil heat flux was computed. The results shows that, exposed surface area has higher soil heat flux than its surrounding areas. Soil heat flux range increased from 1984 to 2013. In 1984, the soil heat flux of the ranges between 162.265w/m2 and 229.672w/m2; In 2013 the soil heat flux range between -29.098w/m2 and 320.682w/m2. The exposed surface area has higher soil heat flux than its surrounding areas. Areas with exposed surface; built up, corresponds to soil heat flux values higher than that of surrounding vegetation areas .Soil heat flux range increased from 1984 to 2013. In 1984, the soil heat flux of the ranges between 162.265w/m2 and 229.672w/m2; In 2013 the soil heat flux range between -29.098w/m2 and 320.682w/m2. This shows that the change in LULC has a significant impact on soil heat flux due to reduction in normal vegetation of the study area and increase in exposed surface lead to an increase in soil heat. The positive trend of soil heat flux indicate that the soil is warming up and the negative sign indicate that the soil is cooling.