

ABSTRACT

As the years pass urbanization continuously increases. Because of this urbanization population is also increasing. Urbanization is generating many environmental problems as Urban Heat Island effect. The first phenomena were observed by an English chemist Luke Howard almost two centuries earlier. The present work is studying LST pattern on surface parameter, which is combination of ISA and NDVI. This work has been done for Jaipur city for years 2009, 2011 and 2013 for summer winter seasons.

In the present work remote sensing data are obtained from MODIS to retrieve LST, NDVI, ISA and SMI. The study shows of Surface Index (SI), firstly, calculated correlation of NDVI and ISA with LST and then by combining of these parameters SI has been evaluated. This SI shows rising temperature pattern as SI value increases in both season summer and winter.

The SMI index is the soil moisture index, which is calculated from LST and NDVI. It is used to find soil condition or surface condition. SMI shows decreasing pattern of LST as SMI increases. This will help in agriculture, flood or drought conditions and in way to reduce the effect of UHI.