

Research Proposal

Urban Heat Effect on Coimbatore

In the last few decades, cities around the world have seen significant urbanization, marked by the increase in building infrastructure and automobiles. Permeable land surfaces, which were once covered by vegetation, have now been replaced with impermeable and high emissivity surfaces and mostly un-shaded. Such urban surfaces tend to absorb the solar radiation and emit it later, which causes an increase in local temperatures. Consequently, the urban areas observing higher temperatures become ‘‘heat islands’’, compared to their rural counterpart.

An urban heat island is a city or metropolitan area that is significantly warmer than its surrounded rural areas due to human activities, whereas, the term heat island refers to any area, populated or not, which is consistently hotter than the surrounding area.

Urban Heat Islands (UHI) can cause deterioration of living environment, elevation of ground level ozone, health disorders and increase in building energy consumptions. Thus the aim of the research includes assessing the impact of urban planning aspects of urban geometry and green cover on the formation of UHI within different zones of Coimbatore, through remote sensing satellite datas and inputs from Indian Metrological Department on Local Climate of Coimbatore for few decades