VISVESVARAYA TECHNOLOGICAL UNIVERSITY
Belgaum – 590018

PROJECT REPORT
ON
"AN ASSESMENT OF URBAN HEAT ISLANDS IN AND AROUND MANGALORE CITY OF COASTAL KARNATAKA BASED ON RS AND GIS"

Submitted in partial fulfillment of the requirements for the award of degree
BACHELOR OF ENGINEERING
IN
CIVIL ENGINEERING
Submitted By

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Under the Guidance of
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ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

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Certificate

This is to certify that following students

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Has submitted Final report on "AN ASSESMENT OF URBAN HEAT ISLANDS IN AND AROUND MANGALORE CITY OF COASTAL KARNATAKA BASED ON RS AND GIS" for VIII Semester Bachelor of Engineering in Civil Engineering during the academic year 2018-19. The final report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the Bachelor of Engineering Degree.

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ABSTRACT

An Urban Heat Island is a urban area or metropolitan area that is significantly warmer than its surrounding rural area due to human activities. It is caused by urban canopy, air pollution, reduce in vegetation, increase in roads and movement of vehicles since Mangalore is growing and developing vegetation is reducing and more of concrete structures are constructed.

In this project we have taken LANDSAT 8 images for year 2015 ,2017 ,2019 for generation of Land Use and Landcover and thermal maps where LULC maps indicates the variation in land usage and vegetation over a period of time and thermal maps which includes Land surface Temperature (LST) , Normalized Differential Vegetation Index(NDVI) ,Emissivity maps indicates the change in temperature , percentage of vegetation available ,and the region where more thermal radiation emitting materials present.

In our project we selected the study area as Hampankatta ,MRPL and Baikampady which is an industrial area ,densely populated and has more vehicle movement .We noticed that the temperature difference of about 2°C for every 2years of intervals. The vegetation index is reducing and the Land Use is more compared to Land Cover .

According to the obtained results these areas have the maximum temperature of 33°C-38°C from 2015 to 2019