

# **Urbanization and Urban Heat Island Analysis of Lagos, Nigeria: Using Remote Sensing and GIS analysis to determine Urban Heat**

## **Executive Summary**

The process of urbanization is often viewed as a sign of progress, but it brings with it a set of challenges that need to be carefully examined. The Sustainable Development Goals emphasize the need to develop urban areas that are livable and sustainable. One of the most important issues to address in this regard is the urban heat island effect, which occurs when human activities and changes in land use cause temperatures in urban areas to rise. This issue is closely tied to SDG Goal 11, which focuses on creating sustainable cities and communities, and has a ripple effect on both public health and climate change, linking with other key goals.

When it comes to sustainable urban development, it's important to focus on analyzing urban heat islands (UHIs). This summary provides a detailed plan for comprehending the UHI effect in Lagos by combining remote sensing and GIS analysis in an innovative way. The goal is to uncover the connection between urbanization, high temperatures, and their effect on people's health.

The proposed analysis embraces a multidisciplinary approach, leveraging the synergy between remote sensing and GIS techniques. Landsat 8/9 OLI/TIRS C2L2 band 10 images are the cornerstone of this endeavor, portraying surface temperature variations. Through data acquisition and processing, these images will be merged to form a depiction of the urban landscape.