

## PREFACE

The intersection of urban development and environmental sustainability is crucial in contemporary research. Nighttime light emissions (NTLs), a significant byproduct of urbanization, serve as key indicators of both progress and environmental impact. This study, "Unraveling the Environmental Impact of Nighttime Light Emissions (NTLs) in the National Capital Region (NCR) 2010-2024," delves into the evolution of NTLs over a decade and a half, assessing their environmental consequences.

By examining data from 2010 to 2024, this research bridges urbanization trends and environmental health, exploring the correlation between increased light pollution and its ecological impacts. The study highlights the methodological approaches used to measure and analyze NTLs, the observed spatial and temporal patterns, and the identified environmental effects.

Adopting a multi-disciplinary approach, this research integrates remote sensing, environmental science, urban planning, and geography to provide a comprehensive understanding of the dynamics at play. This holistic perspective ensures a nuanced analysis of the interplay between urban growth and environmental quality.

The findings aim to contribute to the discourse on sustainable urban development, offering data-driven insights and policy recommendations to mitigate the adverse effects of light pollution. As urban areas continue to expand, balancing development with environmental stewardship becomes imperative, ensuring that progress does not compromise ecological integrity.

This study aspires to be a valuable resource for researchers, policymakers, and urban planners, fostering a deeper appreciation of the environmental impacts of nighttime light emissions and guiding efforts toward more sustainable urban futures.