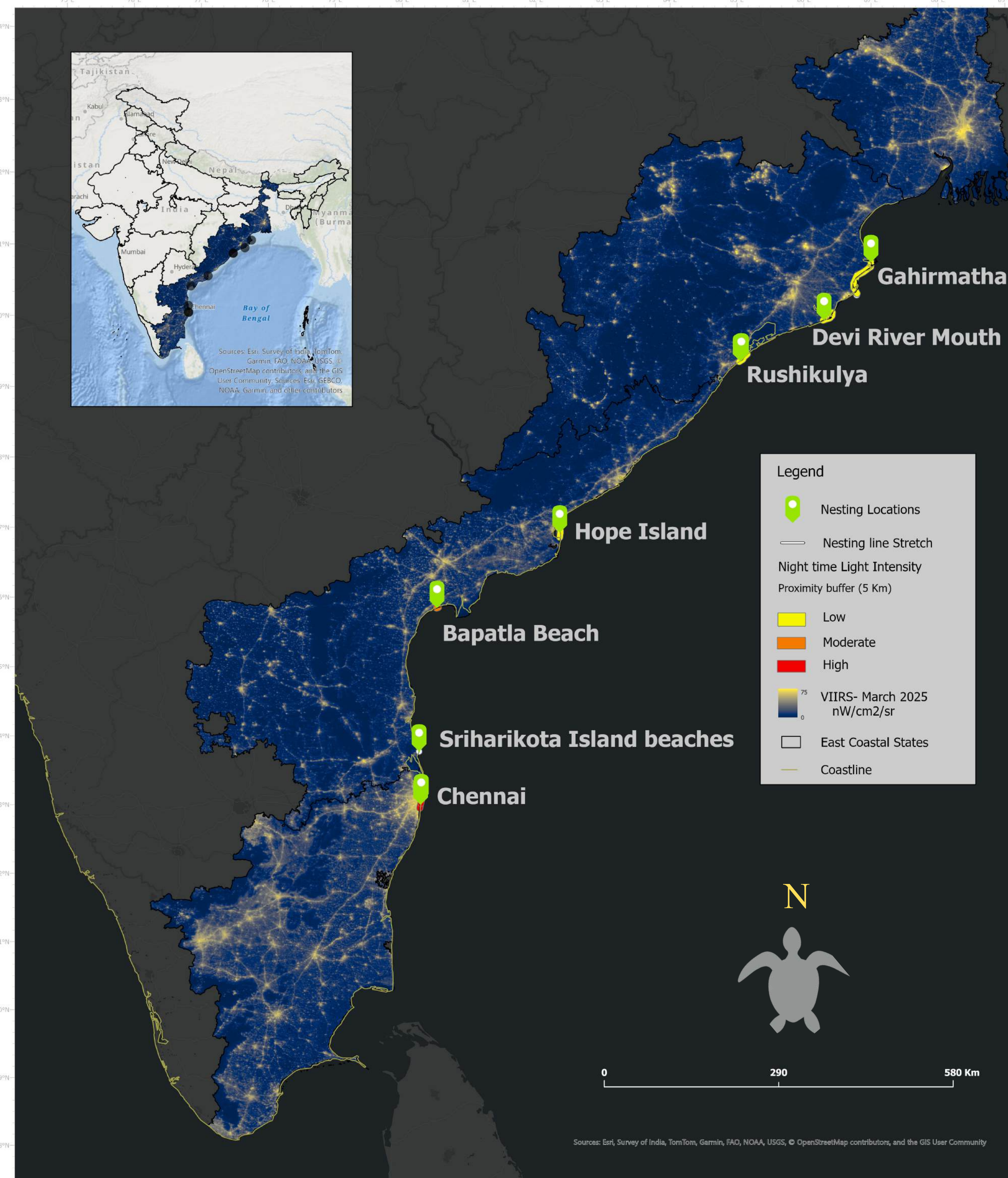
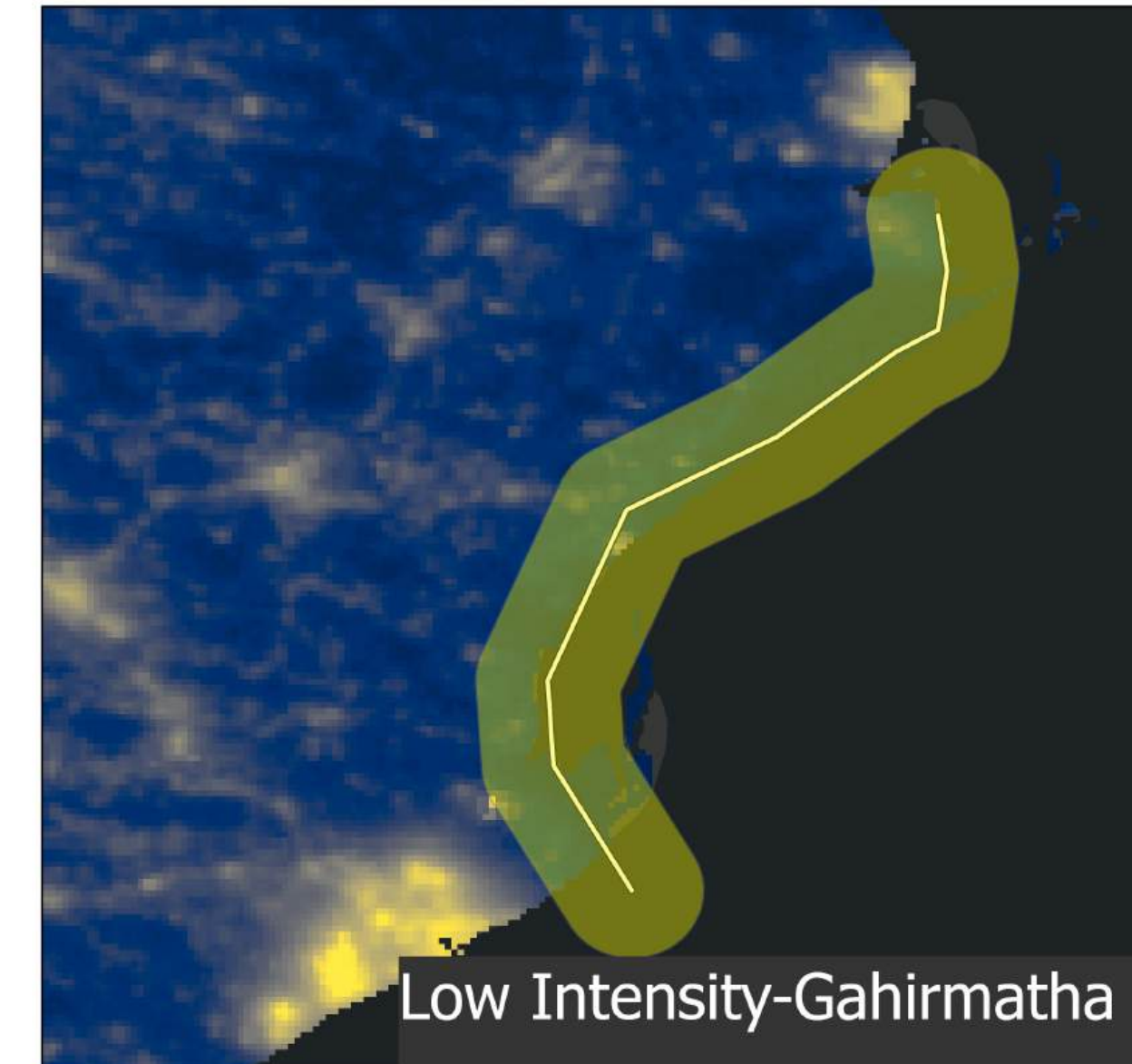


A Coast that Never Sleeps

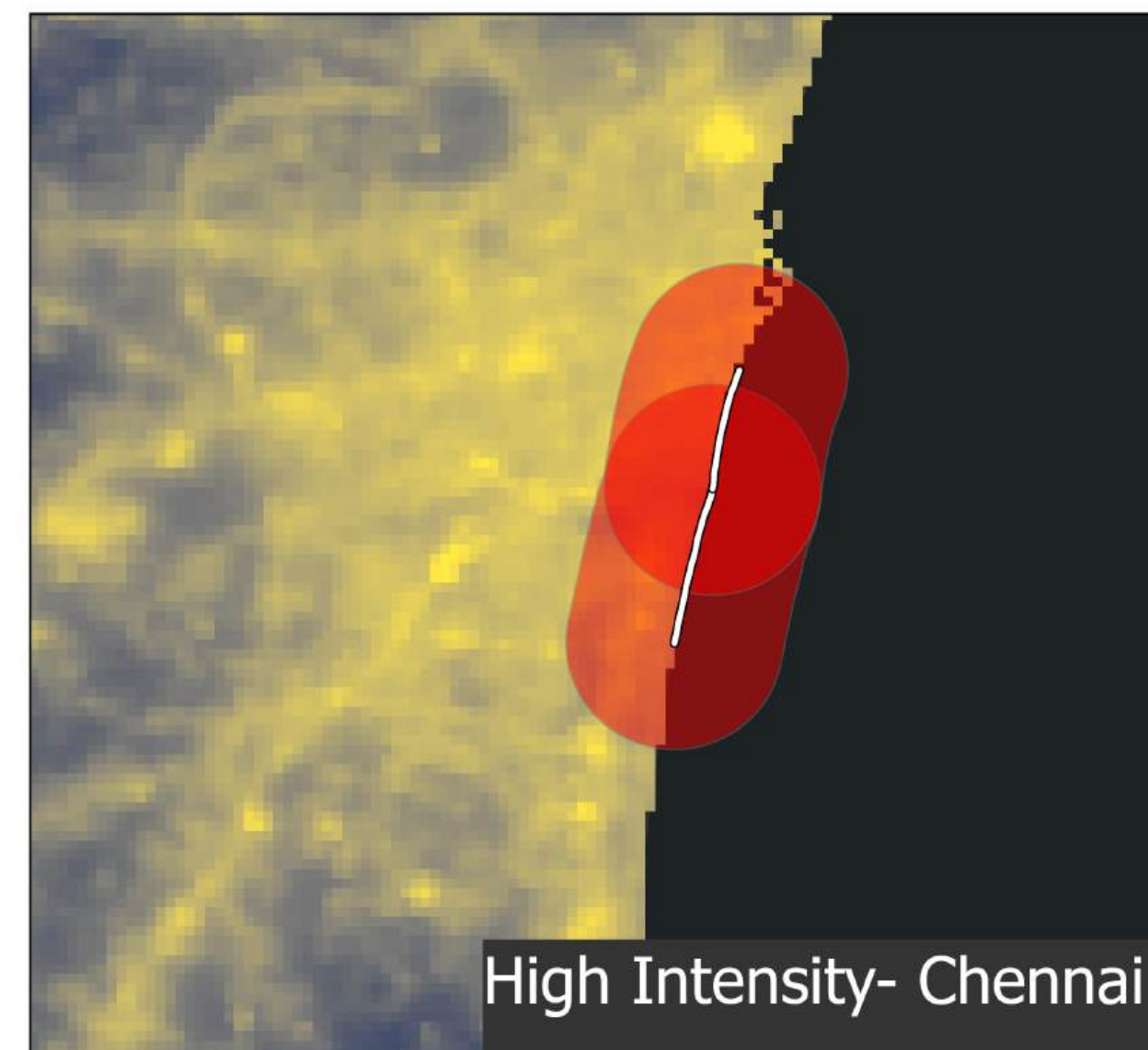
Night time Illumination along Olive Ridley Nesting Beaches



This Map combines VIIRS Night lights Monthly Cloud-Free Composite satellite data with Olive Ridley turtle nesting beaches along India's east coast (Tamil Nadu, Andhra Pradesh, Odisha). It highlights where artificial nighttime illumination overlaps with critical nesting habitats, supporting conservation and sustainable coastal management.



Rushikulya, Hope Island, Devi River Mouth, and Gahirmatha have comparatively low nighttime light intensity, indicating darker coastal environments more typical of natural nesting habitats.



Chennai has the highest nighttime light intensity, reflecting a highly urbanized coastline.

Olive Ridley Fact sheet

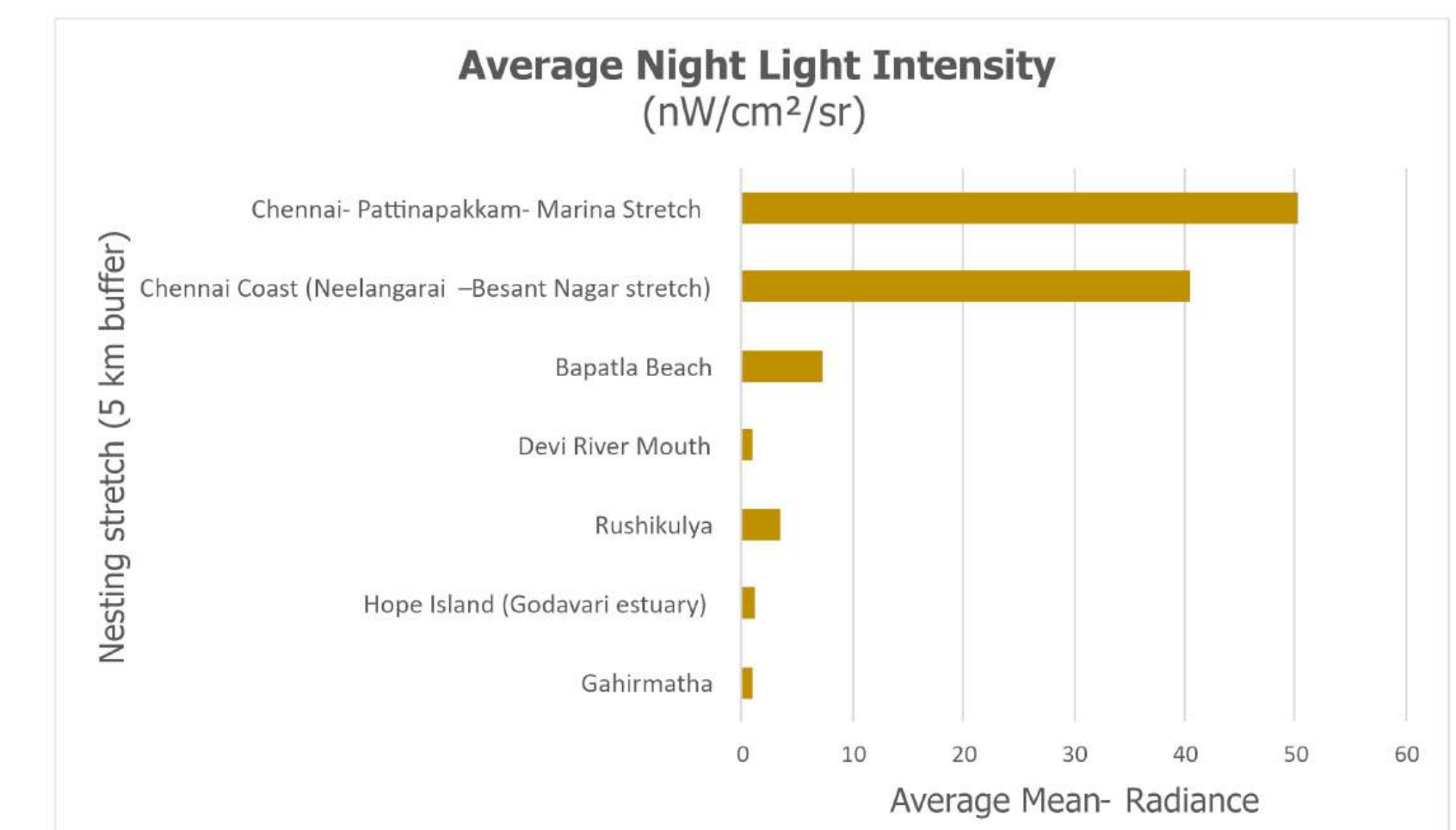
Scientific Name: *Lepidochelys olivacea*

IUCN Status: Vulnerable

Navigation: Olive Ridley turtles navigate using the Earth's magnetic field and natural light cues to return to their nesting beaches.

Light Pollution: Artificial coastal lighting can disrupt nesting behavior and disorient hatchlings, reducing their chances of reaching the sea.

MEAN value from Zonal Statistics as Table represents the average night-light intensity within each buffer around a nesting site.



Bapatla beach is noted for its moderate Night-light intensity.

Higher mean night-light values indicate greater artificial illumination surrounding Olive Ridley nesting sites.

Nesting beaches with elevated light exposure may require targeted lighting management to reduce potential impacts on turtle nesting and hatchling orientation.

Data Sources:

Esri Living Atlas of the World – VIIRS Nighttime Lights Monthly Cloud-Free Composite (March 2025); Analysis in ArcGIS Pro.

Olive Ridley Nesting Locations: State Forest Departments, Published Literatures

Base map: Dark Gray Canvas- India

Software Used: ArcGIS Pro 3.7.0, Google Earth Pro, Canva Pro

Author: Sivanesan K
Organization: Care Earth Trust
Date: July 2026