

**NAGAR KOVIL AREA AS AN ENVIRONMENTAL SENSITIVE AREA IN THE  
JAFFNA DISTRICT, SRI LANKA**

**Packiyathan Rajkumar<sup>1\*</sup> and Chaminda S. Wijesundara<sup>2</sup>**

<sup>1</sup>*Wetland Conservation Society, Jaffna, Sri Lanka*

<sup>2</sup>*Department of Zoology, Faculty of Science, University of Peradeniya, Sri Lanka*

\**vpkuma82@gmail.com*

Environmentally sensitive areas (ESAs) are landscape elements or places that are vital to the long-term maintenance of biological diversity, soil, water, and other natural resources both on-site and in a regional context. Nagar Kovil area includes Kudaththanai, Ampan, Nagar Kovil, Kudarappu, Mamunai Chempianpattu, and Maruthankeney, which are located in the Vadamarachchi East Division in the Jaffna District. These areas are covered by Thondamanaru Lagoon, which is associated with significant extents of mangroves that are notable for their bird diversity compared with other parts of the Jaffna peninsula. The objective of the present study was to identify potential ecological characteristics to determine the environmental sensitivity of the Nagar Kovil area. The point-count method was used to determine bird diversity, while the random quadrat method was used to assess the abundance of mangrove species in the area from 2013 to 2018. A total of 38 species of resident birds from Nagar Kovil and 27 species from Mamunai were recorded. The resident bird fauna of Nagar Kovil had a Shannon Index value of 1.418 and an Evenness value of 0.390, whereas those values were 0.911 and 0.276, respectively, for Mamunai. More than 2000 Greater flamingos visit this region from May to August of each year. Among the 21 recorded mangrove species in Sri Lanka, five species; *Excoecaria agallocha*, *Rhizophora mucronata*, *Aegiceras corniculatum*, *Lumnitzera racemosa* and *Avicenna marina*, were recorded, and the two species, *Avicenna marina* and *Aegiceras corniculatum* are rare species. *Rhizophora mucronata*, with a height of more than 25 m, had a relatively high density. A marsh crocodile was also identified, and fish and shellfish, including crabs, were also found in these areas. The study revealed that Nagar Kovil areas sufficient physical and ecological characteristics, to be considered as an environmental sensitive area for conservation point of view.

**Keywords:** Environmental sensitive area, Nagar Kovil, Mangroves, Thondamanaru lagoon