

# ANTHROPOGENIC IMPACTS AND CONSERVATION STRATEGIES FOR THE SPARROW JUNGLE WETLAND ECOSYSTEM IN JAFFNA, SRI LANKA

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The Sparrow Jungle Ecosystem in Jaffna, Sri Lanka, is located between approximately 9.7213° to 9.7392° N latitude and 80.1705° to 80.2030° E longitude. This critical habitat supports diverse flora and fauna, including endemic and migratory bird species and various aquatic species. Due to these unique habitats and species, the Sparrow Jungle Wetland is a popular recreational site, attracting educational trips and tourists across Jaffna. However, wetland ecosystems and sanctuaries are underrepresented in the Jaffna Peninsula despite its ecological importance. Anthropogenic pressures have disrupted the ecosystem's balance and compromised its essential services. This case study aims to identify these critical threats and propose effective conservation strategies to preserve the ecosystem's integrity and ensure long-term sustainability. The study was conducted over three months, from March to May 2024, in the designated study area. Primary data were collected through direct field observations, structured questionnaires administered to 50 randomly selected households, five face-to-face interviews with residents from the surrounding area, and discussions with relevant government agencies, including the local council, Environmental Authority, Department of Wildlife Conservation, and Northern Province Tourism Board. The secondary data were gathered from books, research papers, statistics, annual reports of relevant departments, and authorized websites. This data was analyzed using SPSS Statistics Computer software. Descriptive statistics was used to determine the percentages. The results indicate that 33% of respondents identified illegal waste dumping as the primary threat, followed by agricultural expansion (20%), development projects (17%), and livestock grazing (15%). Additional activities, such as hunting, firewood harvesting, and sand mining, were also observed. These human activities contribute to habitat loss, the reduction of mangrove forests, and wetland contamination. Urgent conservation actions are needed to protect the Sparrow Jungle Wetland Ecosystem from human-induced threats. A holistic approach, integrating local knowledge, sustainable practices, and strict regulations, is key to preserving its ecological integrity. Designating protected zones will reduce habitat destruction, while community involvement enhances stewardship. Stricter waste and pollution controls are vital for water quality. Collaboration between national and local councils is essential to declare the area a wetland sanctuary and promote eco-tourism.

**Keywords:** Migratory birds, wetland sanctuary, endemic species, eco-tourism