

Wetland Ecosystems and Their Conservation: Case Study of Therthangal Bird Sanctuary, Tamil Nadu

Wetlands are vital ecosystems that support diverse life forms, including humans. The Therthangal Bird Sanctuary, located in Ramanathapuram district, Tamil Nadu, exemplifies this importance by hosting a rich variety of bird species. Recent studies reveal that this rainfed wetland, despite facing threats from human activities, plays a crucial role in biodiversity conservation, especially as a breeding ground for waterbirds.

Key Study Insights

A two-year study (April 2021–March 2023) at the sanctuary recorded 96 bird species across 44 families and 18 orders. Notably, 40 waterbird species were observed, with 23 breeding on-site. The study also documented four ‘Near Threatened’ species like Oriental Darter, Black-headed Ibis, Asian Woolly-necked Stork, and Spot-billed Pelican. Improved rainfall in the second year led to a rise in nesting activities.

The sanctuary supports ecological balance by aiding processes like nutrient cycling, seed dispersal, and pest control, benefiting both wildlife and local communities.

Conservation Challenges

The Sanctuary faces significant threats. Invasive plants like *Prosopis juliflora* and *Ipomoea carnea* are displacing native vegetation. Irregular rainfall causes tree wilting, reducing nesting options, while nearby agricultural practices, including pesticide use and cattle grazing, add pressure. Conflicts over water usage and poorly defined boundaries between

the sanctuary and villages further complicate conservation efforts.

The Path Forward

The Sanctuary's role as a haven for birds and provider of ecosystem services emphasizes the need for urgent conservation measures. Strategies like removing invasive species, restoring habitats, managing water resources sustainably, and engaging local communities are critical. Collaboration among stakeholders will ensure the Sanctuary's long-term preservation, benefiting both biodiversity and human well-being.



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