

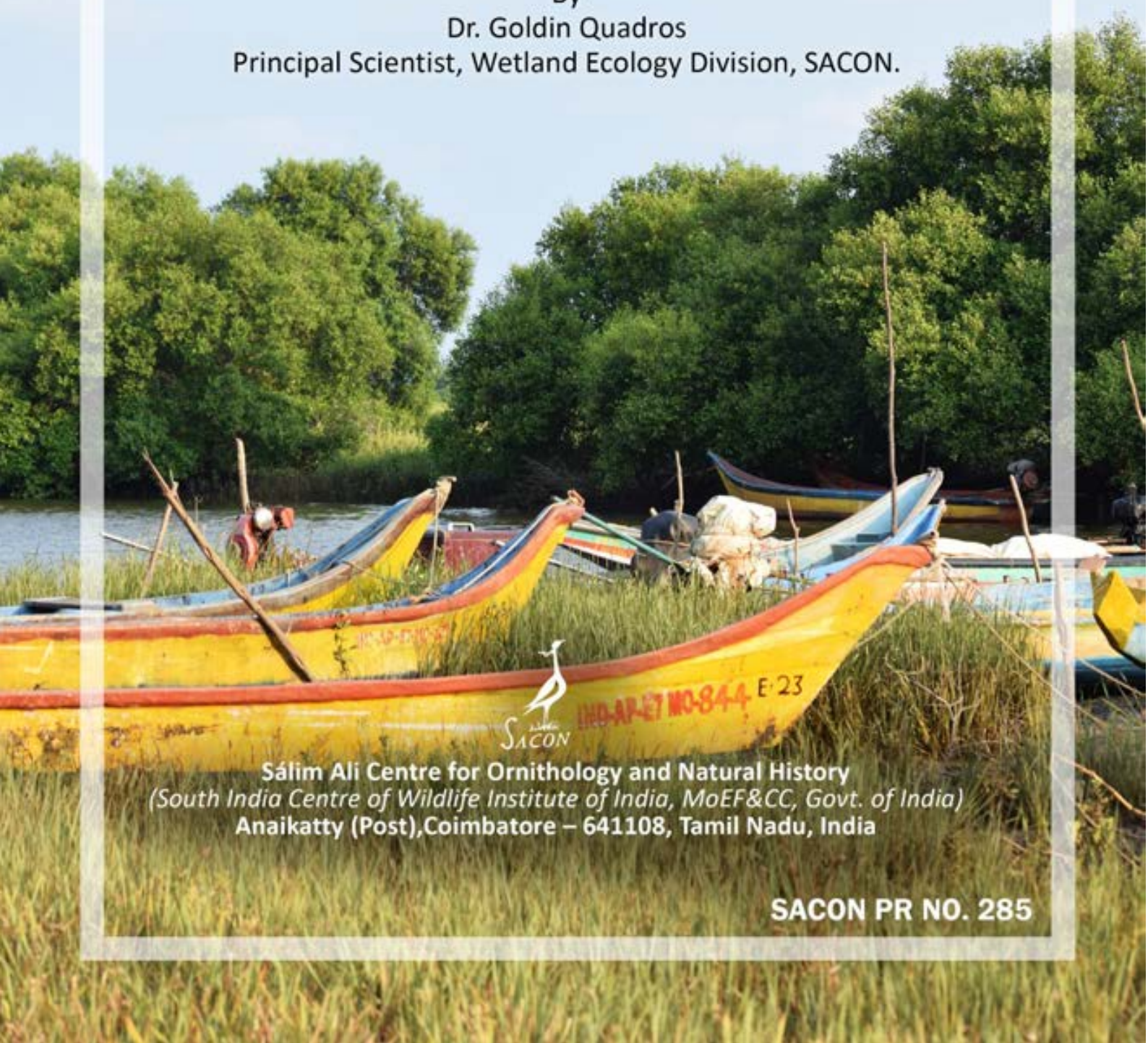


भारतीय वन्यजीव संस्थान
Wildlife Institute of India

Preparation of Brief Documents, Health Cards and Wetland Management Plans for select 115 Wetlands in the Union Territory of Puducherry

Report Submitted to
Department of Forests and Wildlife, Puducherry

By
Dr. Goldin Quadros
Principal Scientist, Wetland Ecology Division, SACON.



Sálim Ali Centre for Ornithology and Natural History
(South India Centre of Wildlife Institute of India, MoEF&CC, Govt. of India)
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Research Team

Dr. Goldin Quadros
Ms. R Santhosini
Mr. Basu SS Nair
Dr. Swapna Devi Ray (05/03/2024 to 09/02/2025)

Volunteer: Mr. Manikantha V. Trinath

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Department of Forests and Wildlife,
Government of Puducherry.

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Project Investigator
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Research Team
Ms. R. Santhosini, Mr. Basu SS Nair, Dr. Swapna Devi Ray

Final Report
March 2025



Sálim Ali Centre for Ornithology and Natural History
South India Centre of Wildlife Institute of India
Ministry of Environment, Forest and Climate Change
Anaikatty (Post), Coimbatore – 641108, Tamil Nadu, India

Preface

The Union Territory of Puducherry is home to a rich and diverse network of wetlands that play a vital role in maintaining ecological balance and supporting local communities. These wetlands provide essential ecosystem services, including flood control, groundwater recharge, and critical habitats for a wide range of flora and fauna.

Recognizing their significance, the "Preparation of Brief Documents, Health Cards, and Wetland Management Plans" project was launched to support the conservation and sustainable management of 115 selected wetlands across Puducherry. These ecosystems are crucial for sustaining biodiversity and directly contribute to local livelihoods through agriculture, fisheries, and eco-tourism. Additionally, they serve as important stopover sites for migratory birds and support numerous aquatic species.

However, these wetlands face growing threats from pollution, encroachment, and climate change, making conservation efforts more urgent than ever. This project aims to assess their ecological health through comprehensive field surveys and scientific evaluations. The development of Health Cards will provide a clear snapshot of each wetland's condition, highlighting key environmental indicators such as water quality, biodiversity, and human impact. Furthermore, tailored Wetland Management Plans will outline targeted strategies for restoration, pollution control, and sustainable resource use.

Community involvement remains at the heart of this initiative. By actively engaging with local stakeholders—including fishermen, farmers, and residents—the project seeks to build awareness and foster long-term stewardship of these valuable ecosystems. Collaboration with government agencies, conservation organizations, and research institutions will ensure that management plans are both practical and effective.

This initiative marks a significant step toward the long-term conservation of Puducherry's wetlands. I extend my sincere gratitude to all those who have contributed to this effort, including local communities, field researchers, and government authorities. Their dedication and commitment are essential to preserving these precious ecosystems for future generations.

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VIRENDRA RAMBAHAL TIWARI
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Virendra R. Tiwari
Director - WII

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Department of Forest and Wildlife

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Mr. S. Kalaiselvan, Agrl. officer (Forests).

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Karaikal

Mr. S. Kandamoorthy, Agrl. Officer.

Yanam

Dr. Subramaniam, Regional Administrator

Mr. Jogiraju, Agrl. officer

Mr. Mubarak Khan

Mahe

Ms. Flossy Manuel E, DD.

Mr. Rosh K, Agrl. Officer

Mr. Sunilkumar. E. V, Field Man

Community

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Mr. Selvakumar, Karaikal

Mr. Mahesh Babu, Biologist, Kakkinada

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Wildlife Institute of India (Dehradun)

Mr. V.R. Tiwari IFS., Director WII

Dr. S. Sathyakumar Registrar WII

Dr. Ruchi Badola Dean WII

Salim Ali Centre for Ornithology and Natural history (SACON)

Scientific Staff: Dr. P.R. Arun; Dr. Shomita Mukherjee; Dr. Rajah Jayapal; Dr. P.V. Karunakaran; Dr. P. Pramod; Dr. Shirish S. Manchi; Dr. H. N. Kumara; Dr. S. Babu; Dr. Mahendiran M.; Dr. Ramesh T.; Dr. Riddhika R.; Dr. Aditi Mukherjee; Dr. Ashutosh Singh; Dr. Vidhyadhar Atkore

Finance division: Mr. Aneesh K. Abraham; Mr. Mareshwaran; Mrs. Pavithra; Mrs. S. Bhoopathy

Administration division: Mr. R. Jayakumar; Mr. Eanamuthu; Mrs. Jayageeta; Mrs. Rajlakshmi; Mr. Patturaj, Mr. A. Srinivasan, Mr. Vigneshwaran S,

Director Office: Mr. P. A. Vaidyanathan.

Library: Mr. Manoharan

All Office Staff and Research Scholars

SACON EIACP

Ms. Julfia A. Begum, Mr. Mohammed Ibrahim, Ms. Devika Mardachalam

Wetland Ecology Division

Dr. Prathamesh Hemant Gurjarpadhye, Mr. Manikantha V. Trinath, Ms. Santhwana A

*Dr. Goldin Quadros
Ms. R. Santhosini
Mr. Basu SS Nair
Dr. Swapna Devi Ray*

Executive Summary

Wetlands are essential ecosystems that provide critical ecological services, supporting food, water, and climate security. They stabilize water supplies, purify pollutants, protect shorelines, recharge groundwater, store carbon, and buffer extreme weather events. However, these ecosystems face increasing threats from human activities, leading to their degradation and loss.

In India, wetlands cover approximately 18.4% of the total area and are classified into inland and coastal categories, both under continuous threat. The Union Territory of Puducherry, comprising Puducherry, Karaikal, Mahe, and Yanam, recognizes the significance of wetland conservation. The Space Application Centre has identified 139 wetlands in Puducherry alone, however, during the study we could confirm the presence of 115 wetlands only.

To mitigate these threats, the National Wetland Committee, under the Ministry of Environment, Forest and Climate Change (MoEFCC), has recommended proactive measures such as defining wetlands, establishing conservation rules, and creating state wetland authorities. This Wetland Management Plan follows the "wise use" approach of the Ramsar Convention, emphasizing ecological character preservation within sustainable development frameworks.

The plan outlines strategic objectives for integrated management, including biodiversity conservation, sustaining ecosystem services, promoting sustainable practices, and enhancing institutional frameworks. Key objectives involve maintaining wetland areas, preserving natural hydrological patterns, ensuring water quality, fostering eco-tourism, and engaging stakeholders.

Challenges to wetland ecosystems include water availability, encroachment, pollution, invasive species, and socioeconomic changes. The management plan incorporates measures such as wetland boundary delineation, catchment conservation, water and biodiversity management, sustainable resource development, and institutional strengthening.

Institutional arrangements define roles for government agencies, NGOs, and community stakeholders to ensure effective implementation. The plan aligns with national policies, including the Wildlife Protection Act, the National Biodiversity Action Plan, and the Wetlands (Conservation and Management) Rules, 2017.

A robust monitoring framework assesses wetland health and management effectiveness through parameters such as wetland extent, land use, connectivity, and water quality. Reporting and review mechanisms are established to enable adaptive management.

Management and Evaluation Framework

The plan emphasizes the need for continuous monitoring and evaluation to track ecological changes and the effectiveness of conservation efforts. This involves:

- **Monitoring Strategy and Performance Indicators:** Defining objectives, tracking progress through key indicators, and ensuring alignment with management goals.
- **Parameters for Monitoring:** Assessing wetland extent, land use, connectivity, water quality, and biodiversity through remote sensing and field assessments.
- **Institutional Design:** Assigning responsibilities among government bodies, research institutions, and local communities.

- **Infrastructure and Human Resources:** Ensuring adequate facilities, equipment, and trained personnel for effective monitoring.
- **Reporting and Review Mechanisms:** Facilitating communication of findings and adapting management strategies based on emerging challenges.

Implementation and Conservation Strategies

The management plan includes key strategies such as:

- **Boundary Delineation and Protection:** Mapping and demarcating wetlands to prevent encroachment.
- **Catchment Conservation:** Implementing shoreline management, afforestation, pollution control, and water quality monitoring.
- **Water Management:** Maintaining hydrological connectivity, regulating water flow, and addressing siltation and pollution through desilting and treatment plants.
- **Biodiversity Conservation:** Restoring habitats, managing invasive species, and monitoring biodiversity.
- **Sustainable Resource Development:** Encouraging eco-tourism, alternative livelihoods, and community awareness programs.
- **Institutional Strengthening:** Enhancing regulatory frameworks, capacity-building initiatives, and stakeholder collaboration.

The plan aligns with national conservation policies and requires collaboration among government agencies, research institutions, NGOs, and local communities.

This comprehensive Wetlands Management framework aims to ensure the long-term conservation and sustainable management of Puducherry's wetlands by integrating ecological, social, and economic considerations. Through a combination of policy integration, community engagement, and adaptive monitoring, the plan seeks to preserve these vital ecosystems for future generations.

The total budget for Conservation and Management of Wetlands in the UT of Pondicherry is ₹ 330 crores 89 lakhs spread over 5 years for Puducherry, Karikal, Yanam and Mahe. The total funds include the 65.66% of regular funding and 34.34% of Convergence funding that can be generated from several line departments and allied schemes and programs in the Union Territory.

	Overall Budget						
S.No	IMP Component	2025-26	2026-27	2027-28	2028-29	2029-30	Total for 5 years
1	Wetland Boundary Delineation and Demarcation	510.00	85.00	85.00	145.00	90.00	915.00
2	Catchment Conservation	1142.00	158.00	158.00	138.00	141.00	1837.00
3	Water Management	4340.00	506.00	506.00	536.00	536.00	6424.00
4	Biodiversity Conservation and Habitat Management	1796.00	979.00	1007.00	1111.00	1070.00	5963.00
5	Sustainable Resource Development and Livelihood Improvement	1322.00	659.00	677.50	708.00	723.50	4034.00
6	Institutional Development	4189.00	1835.00	1834.50	1883.50	1888.00	13916.00
	Grand Total	13299.00	4222.00	4268.00	4521.50	4448.50	33089.00

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Sálim Ali Centre for Ornithology and Natural History
South India Centre of Wildlife Institute of India
Ministry of Environment, Forest and Climate Change
Anaikatty (Post), Coimbatore - 641108, Tamil Nadu, India