





STATE ACTION PLAN

for Conservation of Avian Diversity, their Ecosystems, Habitats & Landscapes in Andaman and Nicobar Islands



Submitted by
Sálim Ali Centre for Ornithology and Natural History
South India Centre of Wildlife Institute of India

© Sálim Ali Centre for Ornithology and Natural History, South India Centre of Wildlife Institute of India, Ministry of Environment, Forest and Climate Change, Government of India

Funded By

Ministry of Environment, Forest and Climate Change.

Website: www.moef.nic.in

Published By

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

Website: www.sacon.in

Team:

Dr. Manchi Shirish S.

Mr. Reuben Kurian Paul

Ms. Dhanusha Kawalkar

Cover Page Photo Front: Dhritiman Mukherjee, Manchi Shirish S, Amrit Raha, Padumma Gohain Cover Page Photo Back: Dhritiman Mukherjee

Layout & Design: Mr. S. Vigneshwaran

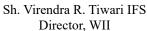
Citation:

Manchi, S. S., Paul, K. R., Kawalkar, D. (2023). State Action Plan for Conservation of Avian Diversity, their Ecosystems, Habitats & Landscapes in Andaman and Nicobar Islands. Sálim Ali Centre for Ornithology and Natural History, South India Centre of Wildlife Institute of India, Coimbatore, MoEFCC, Government of India (PR 257). XV +165 pp.

Reproduction:

The material in the Publication may be reproduced in whole or in part in any form for education or non-profit purposes, provided acknowledgement is made to the copyright holder. This publication can be used for commercial purposes only with permission from the Ministry of Environment, Forest and Climate Change











FOREWORD

I am pleased to introduce you to the State Action Plan (SAP) for conserving avian biodiversity in the Andaman and Nicobar Islands. This document results from years of hard work by many people passionate about protecting the avifauna of the Andaman and Nicobar Islands.

Andaman and Nicobar Islands, a Union Territory of India, consists of two groups of islands in the Bay of Bengal's southern rim. The Andaman Islands are part of the Indo-Burma global biodiversity hotspot, while the Nicobar Islands are part of the Sunda land hotspot. The Ten Degree Channel divides these island groups. These tropical islands feature a diverse flora and fauna, including several rare and indigenous species. The state's rich avifaunal diversity is represented by 371 species (and counting), including 29 endemics.

I am sure that this State Action Plan for the Andaman and Nicobar Islands will help protect and conserve the islands' avian diversity. This state action plan is divided into two parts. Part-A describes the overall geography, state administration, protected areas, non-protected areas, the flora and fauna of the islands, an overview of the avifauna of the islands, a literature review of bird ecology, conservation, recommendations and management constraints. Part-B is divided into 15 programs, each dedicated to a different theme related to the research, conservation and protection of avian diversity and habitats. This document is a collection of information about the avifaunal diversity in the Andaman and Nicobar Islands and various ways of assisting in their conservation at various levels in the face of challenges such as climate change, pollution, land-use change, hunting/poaching, and habitat degradation and loss.

Without a doubt, this State Action Plan is a road map that will contribute in strategizing, managing, and implementing various programs related to the conservation of avian diversity in the islands.

This collaborative effort demonstrates the dedication and commitment of each individual and organization involved in developing the State Action Plan to ensure a sustainable future for avian diversity and their habitats in these tropical islands of India.

(Virendra R. Tiwari)

ACKNOWLEDGEMENTS

We would like to express our heartfelt appreciation to the Ministry of Environment, Forests, and Climate Change (MoEFCC) for its generous funding and unwavering support in developing the State Action Plan (SAP) for the conservation of birds and their habitats in the Andaman and Nicobar Islands. This critical initiative of developing the State Action Plans across the country reflects a shared commitment to preserve and conserve India's avifaunal diversity and habitats.

We are thankful to the Shir. T. S. Ashok Kumar, IFS, Principal Chief Conservator of Forests (PCCF) & Chief Wildlife Warden (CWLW) of the Department of Environment and Forests, Andaman and Nicobar Islands and Shri. P. Subramanyam, IFS, Formar PCCF and CWLW, A & N Islands, whose invaluable support has significantly influenced the shaping of this document. We are grateful to Shri. Kamal Datta, IFS, Assistant Principal Chief Conservator of Forests (APCCF), for his input and support. We are also grateful to the stakeholders, including various state forest department officials, local governmental and non-governmental organisations, island residents, and several passionate bird enthusiasts, for their active participation in sharing experiences and ideas about the various programs of this document. We also thank Shri. Virendra R. Tiwari, IFS, Director of the Wildlife Institute of India, Dr. S. Muralidharan, Formar Director (In-charge) of SACON (Sálim Ali Centre for Ornithology and Natural History) and the dedicated Finance and Administration staff at SACON for their managerial and organizational support during the project. We extend our special thanks to Dr Rajah Jaypal (Senior Principal Scientist, SACON), whose expertise and assistance were instrumental in designing the species scoring system to prioritize the RET species which has added a scientific and methodical dimension to this action plan.

We acknowledge Dhritiman Mukherjee, P. D. Prasad, Padumma Gohain, Gyana Sounder, Amrit Raha, Arun Singh, Prathamesh Gurjarpadhye, Roundglass Sustain, and ebird for the photographs whose visual documentation has drawn attention to the islands' avian diversity and ecology. The photographs added to the document's aesthetic value and highlighted bird behaviour and habitats. We are also grateful to Mr. Gaurav Singh (JRB, SACON) for assisting us with the species distribution maps and Mr. Vigneshwaran S. for his timely, invaluable, and creative contribution to the layout and design of this wonderful document.

We thank one and all who contributed in any way to the preparation of this document. Without the contributions from all, it would have been difficult to complete this document successfully.

CONTEXT AND BACKGROUND

Birds play a pivotal role in maintaining the ecological balance. Given that their contribution as an indicator in various environmental assessments, there is an urgent need to protect and conserve the avifaunal diversity and their habitats. Globally, one in eight of the world's bird species is deemed threatened, and the 222 Critically Endangered species are now at risk of imminent extinction. IUCN RedList of Endangered Species lists 182 species of Indian birds as Critically Endangered, Endangered, Vulnerable, and Near Threatened. These species are threatened with global extinction. Many of these species are endemic to the Indian Subcontinent, which has special significance for India's bird conservation efforts. Recognising the urgency to protect the country's avifauna and their habitats, a Visionary Perspective Plan for the conservation of avian diversity, their ecosystems, habitats & landscapes in the country (VPP) was released by the Ministry of Environment Forest and Climate Change (MoEFCC), Government of India in 2020 that envisions a comprehensive strategy for the conservation of birds in India over the next ten years. As the nodal agency, the Sálim Ali Centre for Ornithology and Natural History (SACON) prepared this policy document in consultation with several stakeholders. The objective of the VPP was to develop a strategic plan for a decade (2020-2030), prioritising the preservation of avifaunal diversity, ecosystems, and landscapes. To address various aspects of avifaunal conservation issues, a total of 15 significant programs were identified in the VPP document. These programs include a wide range of conservation efforts, including preserving Rare, endangered and threatened (RET) bird species.

The State Level Action Plan (SAP) is the initial stage in the execution of the VPP. During the initial phase, the SACON, functioning as the nodal agency, formulated the State Action Plan (SAP) for 17 states and Union territories, including the Andaman and Nicobar Islands (ANI). The ANI are the peaks of a mountain range extending from the Arakan–Yoma ranges of Western Myanmar (Burma) in the north to Sumatra in the south. The Andaman Sea flanks the archipelago in the east and the Bay of Bengal in the west. The islands have a coastline of 1962 km² and diversity of forest types inhabiting numerous endemic, endangered and threatened flora and fauna. A total of 371 bird species are documented from the Andaman and Nicobar Islands, out of which 29 are endemic to the islands. The rich bird fauna of the islands include Narcondam Hornbill, Nicobar Megapode, Andaman Serpent-eagle, Andaman Wood Pigeon, and Nicobar Flycatcher. The avian diversity of the Andaman and Nicobar Islands spans a range of ecosystems, each with its own set of challenges and opportunities. For instance, the islands are in the middle of the Sunda zone where natural calamities such as tsunamis, cyclones, and earthquakes are frequent. This poses a serious threat to the overall biodiversity of the islands. Additionally, increasing tourism, pollution and land reclamation are the biggest threats to the wetland and migratory birds. Despite the wealth of avian biodiversity, Andaman and Nicobar Islands birds face an array of threats that require immediate conservation attention. Habitat loss due to habitat degradation, pollution, land reclamation, land-

use change, and infrastructure development. Furthermore, the human population growth and its increasing needs directly and indirectly affect the avian life on the islands.

This document outlines a visionary roadmap for the conservation of birds in Andaman and Nicobar Islands over the next ten years. Our vision is built on sustainability, community engagement, and scientific research. It aims to review the work conducted in the ornithological field for the islands, identify the ongoing issues and threats to bird diversity, and plan and strategize steps for different themes related to the conservation action.

We have identified the priority issues in 15 VPP programmes relevant to the island birds.

The VPP was a baseline for preparing the Andaman and Nicobar Islands State Action Plan, including the following programmes:

- 1. Conservation of Rare, Endangered & Threatened (RET) Bird Species and Implementation of Species Recovery Plans (SRPs)
- 2. Conservation of Important Bird & Biodiversity Areas (IBAs) Outside the PAs Network
- 3. Conservation of Protected Areas (PAs) With High Avian Diversity
- 4. Conservation of Avian Diversity at the Landscape Level
- 5. Conservation of Inland Aquatic Ecosystems with High Avian Diversity
- 6. Conservation of Coastal and Marine Ecosystems with High Avian Diversity
- 7. Conservation of Migratory Birds
- 8. Impacts of Developmental Projects and Other Anthropogenic Activities on Avian Diversity and Habitats
- 9. Curbing Illegal Trafficking of Birds
- 10. Conservation of Avian Diversity in Urban Areas
- 11. Surveillance and Monitoring of Avian Diseases
- 12. Conservation Plan for Nature Education and Awareness for Conservation of Avian Diversity, Their Ecosystems, Habitats & Landscapes

- 13. National Capacity Building Programme for Protection and Monitoring of Avian Diversity, their Ecosystems, Habitats & Landscapes
- 14. Mainstreaming Conservation of Avian Diversity with Other Government of India Schemes and Programmes
- 15. Implementation of International Protocols and Conventions in Bird Conservation

The document has been partitioned into two distinct selections, namely Part A and Part B. Part A provides comprehensive details about the state's Geography, Physiography, Climate, Demography, Ecoregions, PAs, IBAs, Land Use Land Cover (LULC), Flora, Fauna, the historical context of ornithology within the state, as well as an extensive collection of literature on the subjects of ecology, conservation, and the management of avian species within the state. Part B focuses on various issues concerning the islands' avifauna and their habitats and the necessary measures to be implemented to preserve and manage the avian species and their habitat within the state.



Foreword V

Acknowledgement VII

Context & Background IX

Abbreviations XV



PART A: DESCRIPTION OF BIRDS & THEIR HABITAT

An Introduction to Biogeography and Biodiversity of the State

| Geography and State Administration of the ANI | 2 | | |
|--|----|--|--|
| Biogeographic Zones and Provinces and Ecoclimatic Zones | 8 | | |
| Protected Area statistics and list, forest administrative units, and other significant conservation units in the state | 15 | | |
| Summary of floral and faunal diversity | 17 | | |
| Key bird researchers and conservationists involved in the bird conservation in the Andaman and Vicobar Islands | | | |
| An Overview of Avifauna of the State | | | |
| Ornithological history of the Andaman and Nicobar Islands | | | |
| Description of Bird Diversity in Andaman & Nicobar Islands | | | |
| Major bird species of conservation in the Andaman and Nicobar Islands | | | |
| A literature review of bird ecology and conservation in Andaman and Nicobar Islands | 46 | | |

PART - B

BIRD CONSERVATION ISSUES & MANAGEMENT PRIORITIES

| PROGRAMME 1 | | PROGRAMME 8 | OF | |
|---|------------|---|-------------|----------|
| Conservation of rare, endangered & threatened (RET) bird species of state and implementation of species recovery plans (SRPS) | 50 | Curbing illegal trafficking of birds in assam | 85 | |
| PROGRAMME 2 | ! | PROGRAMME 9 | $\cap \cap$ | |
| Conservation of important bird & biodiversity areas (IBA's) of the country outside protected | 57 | Conservation of avian diversity in urban areas | 90 | |
| area (PA) network. | 1 | PROGRAMME 10 | 00 | |
| PROGRAMME 3 | 61 | Surveillance and monitoring of avian diseases | 92 | |
| Conservation of protected areas (pas) with high avian diversity | OI | · | | Р |
| , | 1 | PROGRAMME 11 | | |
| PROGRAMME 4 | | National plan for nature education and awareness for conservation of avian diversity, | 98 | In Co |
| Conservation of avian diversity at the landscape level | | their ecosystems | | |
| PROGRAMME 5 | | PROGRAMME 12 | | |
| | | National capacity building programme for the protection and monitoring of the avian diversity, | 100 | |
| Conservation of inland aquatic ecosystems with high avian diversity | | their ecosystem, habitats & landscapes | | |
| PROGRAMME 6 | | PROGRAMME 13 | | |
| Conservation of migratory birds | | Capacity Building Programme for Protection and Monitoring of Avian Diversity, their Ecosystems, Habitats & Landscapes | 102 | |
| PROGRAMME 7 | | PROGRAMME 14 | | |
| Impacts of developmental projects and other anthropogenic activities on avian diversity and habitats | O T | Mainstreaming conservation of avian diversity with other Government of India Schemes and Programmes | 104 | |



PROGRAMME 15

Implementation of International Protocols and Conventions in Bird Conservation

106

| Appendix I | 107 |
|--------------|-----|
| Appendix II | 113 |
| Appendix III | 118 |
| Appendix IV | 124 |
| Appendix V | 139 |
| Bibliography | 145 |

