



STATE ACTION PLAN FOR CONSERVATION OF AVIAN DIVERSITY, THEIR ECOSYSTEMS, HABITATS & LANDSCAPES IN ANDHRA PRADESH



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

Submitted by

Sálim Ali Centre for Ornithology and Natural History
(South India Centre of Wildlife Institute of India)
Anaikatty (Post), Coimbatore-641108
Tamil Nadu, India; www.sacon.in

Funded by

Ministry of Environment, Forest and Climate Change, Government of India

Research team

Dr. Riddhika Kalle - Senior Scientist, SACON
Ms. Athira Saleevan - Junior Research Biologist, SACON

Recommended citation: Kalle, R & Saleevan A. (2023). State Action Plan for Conservation of Avian Diversity, their Ecosystems, Habitats & Landscapes in Andhra Pradesh. Sálim Ali Centre for Ornithology and Natural History (South India Centre of Wildlife Institute of India), Coimbatore, MoEFCC, Government of India (PR #251), 216pp.

Reproduction

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

Photo Credits: Front cover - Jerdon's courser (adapted from © EaGh Project eBird S46812999 Macaulay Library ML 105636831), Indian Skimmer (adapted from © Prashant Tewari Macaulay Library ML 135689971), Great Knot (adapted from © Geoffrey Groom eBird S44139566 Macaulay Library ML 92334011), Black-bellied Tern (adapted from © Prashant Tewari Macaulay Library ML 135689921), Lesser Frigatebird (adapted from © Manish Panchal Macaulay Library ML 305995541), Yellow-throated bulbul (adapted from © Amarendra Konda eBird S50563481 Macaulay Library ML 127817171), Pale-capped pigeon (adapted from © Chaiyan Kasornrorkbua eBird S49664848 Macaulay Library ML 121941491), White-naped Tit (adapted from © Kannan AS eBird S37259059 Macaulay Library ML 92694131)

Back cover - Srikanth Manneपुरi




Y. Madhusudhana Reddy, IFS
Principal Chief Conservator of Forests
Head of Forest Force
Chief Wildlife Warden
Government of Andhra Pradesh



FOREWORD

Andhra Pradesh is the fourth largest state in India with a record of 486 bird species. The state has six Critically Endangered, five Endangered, thirteen Vulnerable and twenty-two Near Threatened bird species according to the IUCN categorisation. The coastal wetlands of Andhra Pradesh are important winter foraging grounds for several migratory bird species using the Central Asian Flyway (CAF) and the East Asian-Australasian Flyway (EAF). The endemism of Jerdon's Courser and the distribution of the Great Indian Bustard in its southern range in Andhra Pradesh, highlights the need to develop effective conservation plans to protect critical avian habitats for long-term sustainability of avian diversity in the state. The research team of Salim Ali Centre for Ornithology and Natural History (SACON), has provided a holistic approach to avian conservation in Andhra Pradesh through the development of State Action Plan (SAP). The SAP involved exhaustive review of the ornithological literature and database, meetings and consultations with nearly 40 stakeholders, representing 26 organizations (government and non-government) including societies. For each conservation issue, the team has identified key bird species, avian communities, and the associated anthropogenic threats, with brief comparisons of historic and current scenarios. Each issue also briefs the management interventions needed through various actionable approaches such as habitat restoration, land allocation for biodiversity protection, changes, or modifications in existing government policies, involvement of industrial partners and transforming their industrialization and developmental approaches using the traditional ecological knowledge of local communities in avian conservation practices. I congratulate the SACON team for preparing this detailed plan which will certainly help the state towards achieving biodiversity conservation goals.

Dated: 07/09/2023


(Y. Madhusudhana Reddy)



Virendra R. Tiwari, IFS

Director

Wildlife Institute of India

Ministry of Environment, Forest and Climate Change

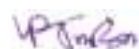
Government of India



FOREWORD

The incredible avian diversity of Andhra Pradesh is accredited to varied ecosystems and habitats of the Eastern Ghats, Southern Deccan Plateau and South-Eastern coastline. The state holds the second largest brackish water lagoon (Pulicat Bird Sanctuary), the second largest mangrove forest (Coringa Wildlife Sanctuary) and one of the largest freshwater lakes (Kolleru Bird Sanctuary) in India. The state has 15 Important Bird and Biodiversity areas (IBAs), a Ramsar Wetland, 16 Protected Areas, and 13 Key Biodiversity Areas. Andhra Pradesh is one of the important states in India that needs an effective conservation plan for bird species, as it supports nearly 26% (46 species) of IUCN Red Listed threatened birds of India. The research team at Sálim Ali Centre for Ornithology and Natural History (SACON) has prepared the State Action Plan (SAP) for conservation of birds, their habitats, ecosystems, and landscapes, which originated from the Visionary Perspective Plan (VPP 2020-2030). Under the Phase I stage of VPP, the SAP provides a road-map for bird conservation in Andhra Pradesh. The research team has identified 38 bird conservation issues that are of high, medium, and low priority, across 14 VPP programmes. Each issue clearly highlights the conservation gaps, future strategic actions to be taken, policy level changes required and the funding sources that could be tapped to address the issues. The SAP document is a much-needed initiative that will aid in strengthening avian conservation in Andhra Pradesh. I congratulate SACON for bringing together this important document that needs to further transform into conservation actions at the local scale. I appreciate all the efforts taken by the research team and the involvement of all the stakeholders from the State Forest Department, Andhra Pradesh State Biodiversity Board, NGOs, Societies, Institutions, Zoo authorities and individual experts for sparing their valuable time in providing necessary inputs to the SAP document.

Dated: 02/08/2023


(Virendra R. Tiwari)

ACKNOWLEDGEMENTS

We thank Sri Y. Madhusudhana Reddy, IFS (Principal Chief Conservator of Forests (PCCF) & Head of Forest Force (HoFF) and Chief Wildlife Warden (CWLW) and Sri N. Prateep Kumar (former PCCF, HoFF & CWLW) of Andhra Pradesh Forest Department for providing necessary support in facilitating the SAP stakeholders meeting with forest department officials at Guntur head office and regional offices. We sincerely thank Mrs. Shanthi Priya Pandey (Additional PCCF, Wildlife) for having read through the entire SAP and for providing us with useful suggestions and inputs for improving the plan. We also thank M. Babitha (Deputy Conservator of Forest, Wildlife) for extending necessary support in the completion of the SAP document. We thank T. Nagamaneswari, SFS (Deputy Conservator of Forest (Wildlife), Andhra Pradesh Forest Department)) for coordinating the entire stakeholder meeting at the Guntur office of Andhra Pradesh Forest Department. We are grateful to C. Selvam (Divisional Forest Officer, WLM, Rajahmundry Division, APFD) and Venkatesh Sambangi (Deputy Conservator & Divisional Forest Officer, Vizianagaram), for their valuable inputs especially related to the wetland conservation issues for promoting sustainable agricultural practices to reduce the anthropogenic threats on avifauna in agro-ecosystems. We thank P. Ram Mohan Rao (Chief Conservator of Forest, Visakhapatnam, Andhra Pradesh Forest Department), Anant Sankar (Divisional Forest Officer, Visakhapatnam, Andhra Pradesh Forest Department) and Dr. Nandini Salaria, IFS (Curator, Indira Gandhi Zoological Park IGZP, Andhra Pradesh Forest Department) for their fruitful discussions on the avian conservation issues centred in Visakhapatnam and coastal regions in the state. We thank Dr. Nandini for elaborating on the citizen science-based nature conservation initiatives executed in IGZP.

We thank M. Hima Sailaja (Curator, Sri Venkateswara Zoological Park, Andhra Pradesh Forest Department) for her valuable suggestions on the recovery of endangered bird species, her views on waste management outside Important Bird and Biodiversity Areas in the state and the need to develop an Integrated Management Plan for Pulicat Bird Sanctuary and Nelapattu Bird Sanctuary. We thank all the Divisional Forest Officers for their active participation in the stakeholder interactions during the discussions on avian conservation issues prevalent in the state. We extend our sincere gratitude to Dr. D. Nalini Mohan (former PCCF of Andhra Pradesh Forest Department & Member Secretary, Andhra Pradesh State Biodiversity Board) and Dr. B. M. K. Reddy, Agricultural Research Service (Retd.) (Chairman, Andhra Pradesh State Biodiversity Board) for their valuable discussions on the recovery of Rare, Endangered and Threatened species in the state, the need to improve technical expertise in captive breeding programmes and for discussing the overall threats to fish-eating birds from aquaculture expansion. We express our sincere gratitude to Farida Tampal (WWF-Hyderabad) for the fruitful discussions on the role of capacity building, outreach and education awareness programs in the sensitization of avian conservation as well as prioritization of wetlands in Andhra Pradesh. We thank Aasheesh Pittie (Editor of Indian Birds) for raising pressing concerns on avian habitat restoration, highlighting some important and rare bird species in the state and the need to involve local communities in conservation actions on the ground. He also provided information on various stakeholders, NGOs and photographers in Andhra Pradesh. We are grateful to Vivek N. Rathod (Vizag Bird Watchers Society) and V. Bhagyasree (Wildlife Conservation through Research and Education) for their extensive contribution to the SAP document. They spent several hours with us discussing every point to be addressed under VPP programmes. We sincerely thank Dr. J. Praveen (Scientist, Nature Conservation Foundation) for providing critical comments and suggestions on the final draft of the SAP. We thank Prof. Trevor Price (Emeritus Professor, University of Chicago) for fruitful discussions on

the habitat loss in the Eastern Ghats, its effects on Warblers and for highlighting important issues pertaining to the long-term avian monitoring sites in Lambasingi. We thank Sureka Aitabathula (Deccan Birders) for her inputs in the SAP document. We thank Dr. Ashish Jha (IISER, Mohali) for sharing records and publications on the Yellow-throated Bulbul and Dr. Sathiyaselvam (Assistant Director, BNHS Wetlands Programme BNHS) for sharing his current knowledge on waterbird species and wetlands of the state. We thank Dr. G. Umapathy (Senior Principal Scientist, Centre for Cellular & Molecular Biology) for sharing useful information on the vulture restaurants near Hyderabad and historic records of vultures in Andhra Pradesh.

We are grateful to K. Mrutyumjaya Rao (Environmentalist, retired sub-divisional Engineer of BSNL) for providing detailed information on the issues related to the Kakinada mudflats and the Bapatla region, and the population status of Indian Skimmer and Great Knot in these mudflats. We thank Ramana Kumar Garu (Environmentalist), Raja Bandi (Indian Institute of Science Education and Research, Tirupati), Pradeep Nair (Animal Warriors Conservation Society), Srichakra Pranav (East Coast Conservation Trust) and Deepak Ramaiyan (Singareni Collieries Company Limited) for highlighting important conservation sites and issues in the state. We thank Sriram Reddy (Hyderabad Birding Pals), and Srikanth Manneperi (Wildlife Conservationist, Photographer) for their valuable contribution to the bird conservation issues and for sharing their amazing photographs which have greatly enriched the SAP document. We are grateful to Dr. Rajah Jayapal (Senior Principal Scientist, SACON) for providing the necessary guidelines at all stages during the preparation of SAP. We also appreciate the efforts by Dr. R. Nagarajan (Principal and Head, PG and Research Dept of Zoology and Wildlife Biology, A. V. C. College), Dr. Goldin Quadros (Principal Scientist, SACON), Dr. Vidyadhar Atkore (Scientist, SACON), Gourav Sonawane (Research Scholar, SACON) and Priya Prajapati (Project Assistant, Wildlife Institute of India) for their participation in the questionnaire survey.

CONTEXT AND BACKGROUND

The Ministry of Environment, Forest and Climate Change (MoEFCC), Government of India has recognised the need for a focussed approach to conserve the avian diversity in the country and entrusted Sálím Ali Centre for Ornithology and Natural History (SACON), Coimbatore, for the preparation of Visionary Perspective Plan (VPP 2020-2030) for avian conservation. Upon preparation of VPP, SACON as a nodal agency has planned to prepare the State Action Plan (SAP) for 17 states in India during Phase I of implementation of VPP. The VPP is used as a guideline to prepare this document on the State Action Plan for Andhra Pradesh.

The State Action Plan (SAP) is prepared to:-

- Identify and prioritize the conservation and management issues on birds and their habitats in the state.
- Follow the timelines of national VPP for thematic/thrust areas but identify “SPECIFIC” issues and priorities with regards to bird taxa, avian communities, habitats, protected areas, ecosystems, or landscapes.
- Prepare a Roadmap for the State to plan their bird conservation initiatives.

The main objectives for the preparation of this SAP are as follows:

- To collate published and unpublished information on the conservation of avian diversity in Andhra Pradesh under each of the thematic areas as outlined in the VPP.
- To develop State Action Plans for the conservation of birds, their habitats, ecosystems, and landscapes for Andhra Pradesh through widespread consultations and questionnaires with various stakeholders.

Stakeholder consultations in Andhra Pradesh were held for qualitative identification of avian conservation issues and management priorities described under 14 VPP programmes. Meetings were held at Andhra Pradesh State Biodiversity Board, Andhra Pradesh Forest Department in Guntur and Forest Circle Office, Visakhapatnam. Apart from these meetings, we also had one-on-one interactions and discussions, physically and online with other major stakeholders, eminent ornithologists, scientists, research scholars, photographers, from government and non-government organizations who are actively working in Andhra Pradesh.

There are several state-level and national action plans to address various environmental concerns linked with climate change, health, biodiversity conservation, water, land use practices and economic growth. The State Annual Action Plan (2015-16) mission involves adopting approaches to improve the basic infrastructure services in cities. Improvement of green spaces and parks ensured through this mission can be linked to birds in urban environment. The Clean Air Action Plan for Non-attainment of Andhra Pradesh (2019), aims at source-wise and city-wise comprehensive planning to meet air pollution reduction targets. Meeting clean air standards will also help the avian community, indirectly as birds have higher breathing rates and spend considerable time in open air and thus exposed to air pollutants and particulate matter more than humans. Responsibilities mentioned under the Heat Wave Action Plan, Andhra Pradesh (2020) mentions about prevention, preparedness, and mitigation of significant heat stress on livestock and not on biodiversity and natural

ecosystems. The Agricultural Action Plan for the year 2018-19 focuses on increasing productivity and doubling the net returns of farmers. The national level conservation action plans such as the National Wildlife Action Plan (NWAP), National Biodiversity Action Plan (NBAP) and National Plan for Conservation of Aquatic Ecosystem (NPCA) are some of the significant steps towards identifying conservation issues on India's wildlife species, biodiversity and natural ecosystems. Therefore, the State Action plan for Conservation of Avian Diversity, their Ecosystems, Habitats and Landscapes (SAP) is an extremely important document by SACON that aims to provide a detailed comprehensive roadmap to conserve the avifaunal diversity in India through identification and prioritization of avian conservation issues that are crucial to address in respective states.



© Jen Walsh Fisher

| | |
|---------------------------|----------|
| Foreword..... | I - III |
| Acknowledgements..... | V - VI |
| Context & Background..... | VII-VIII |

TABLE OF CONTENTS

PART A: DESCRIPTION OF BIRDS AND THEIR HABITATS

An Introduction to Biogeography and Biodiversity of Andhra Pradesh

| | |
|--|----|
| Basic geography..... | 1 |
| Biogeographic zones and provinces | 15 |
| Protected area statistics | 18 |
| Summary of floral and faunal diversity | 19 |
| Information on key local NGOs and other Organizations..... | 21 |

An Overview of Avifauna of the state

| | |
|---|----|
| History of State Ornithology | 23 |
| Description of bird diversity | 24 |
| Major bird species of conservation significance in Andhra Pradesh | 27 |
| Review of avian ecological studies | 37 |

PART B: BIRD CONSERVATION ISSUES & MANAGEMENT PRIORITIES

| | | |
|---------------------|--|-----|
| Programme 1 | Conservation of Rare, Endangered & Threatened (RET) bird species in Andhra Pradesh and implementation of Species Recovery Plans (SRPs) | 53 |
| Programme 2 | Conservation of Important Bird and Biodiversity Areas (IBAs) outside Protected Area (PA) Network | 69 |
| Programme 3 | Conservation of Protected Areas (PAs) with High Avian Diversity | 79 |
| Programme 4 | Conservation of Avian Diversity at the Landscape Level | 87 |
| Programme 5 | Conservation of Inland Aquatic Ecosystems with High Avian Diversity | 95 |
| Programme 6 | Conservation of Coastal and Marine Ecosystems with High Avian Diversity | 105 |
| Programme 7 | Conservation of Migratory Birds | 115 |
| Programme 8 | Impacts of Developmental Projects and other Anthropogenic Activities on Avian Diversity and Habitats | 123 |
| Programme 9 | Curbing Illegal Trafficking of Birds | 147 |
| Programme 10 | Conservation of Avian Diversity in Urban Areas | 153 |
| Programme 11 | Surveillance and Monitoring of Avian Diseases | 161 |
| Programme 12 | Nature education and awareness for conservation of Avian Diversity, their Ecosystems, Habitats & Landscapes | 165 |
| Programme 13 | Capacity building programme for Protection and Monitoring of Avian diversity, their Ecosystems, Habitats & Landscapes | 169 |
| Programme 14 | Mainstreaming conservation of Avian diversity with other Government of India Schemes and Programmes | 171 |
| References | | 174 |
| Appendices | | 192 |



Submitted by :
Sálim Ali Centre for Ornithology and Natural History
(South India Centre of Wildlife Institute of India)
Anaikatty (Post), Coimbatore-641108
Tamil Nadu, India. www.sacon.in