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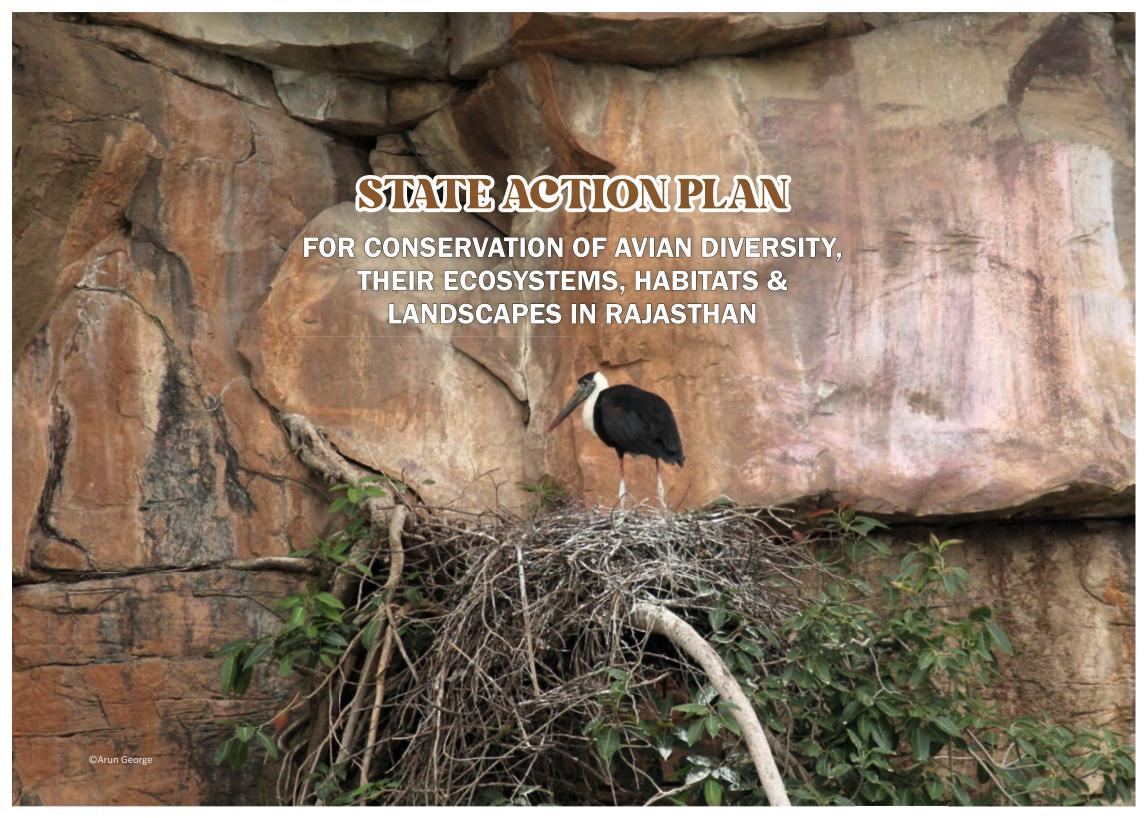
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प्रधान मुख्य वन संरक्षक एवं मुख्य वन्य जीव प्रतिपालक, राजस्थान Principal Chief conservator of Forests & Chief wildlife warden, Rajasthan

Rajasthan, with its diverse and rich biodiversity, has always been a treasure trove of natural wonders. Our state boasts a unique tapestry of landscapes, from the arid expanses of the Thar Desert to the lush, biodiverse forests of the Aravalli Range. Our culture and heritage are deeply intertwined with our natural surroundings, and the presence of a vibrant avian population in our midst adds to the charm of our land. The cultural tapestry of Rajasthan is woven with threads of folklore, art, and traditions inspired by our diverse avian companions. From the graceful Sarus Cranes in the wetlands to the magnificent Indian Peafowl that adorns our stories and art, our birds are an integral part of our cultural heritage. Rajasthan's landscape is equally awe-inspiring, providing a home to a remarkable variety of bird species. From the iconic Great Indian Bustard to the elusive Indian Spotted Eagle, our state is a sanctuary for both resident and migratory birds. These landscapes are not just a source of visual delight but are also essential for the ecological balance of our region.

I would like to extend my heartfelt appreciation to the Sálim Ali Centre for Ornithology and Natural History (SACON) for the tremendous efforts and dedication put into developing Rajasthan's State Action Plan for the conservation of avian diversity, their ecosystems, habitats & landscapes. The State Action Plan, driven by the principles of sustainability, community engagement, and scientific research, is a visionary roadmap that holds the promise of a harmonious coexistence between human development and avian conservation. The goals outlined within the document, including habitat conservation, community involvement, research and monitoring, legislation and enforcement, and climate resilience, reflect a comprehensive approach that is essential for the well-being of our avian companions and the prosperity of our state.

I believe that this State Action Plan is a significant milestone in our ongoing efforts to safeguard Rajasthan's avian biodiversity. It will guide policymakers, conservationists, and the community, underlining our avian friends' importance in the broader ecosystem. I understand that several initiatives undertaken by Rajasthan Forest Department and all others Line Departments are already supporting the prescriptions given in this document – few of which find mention here in. While it is admitted that the implementations of a plan of such magnitude and spread requires a large amount of resources, careful consideration of ground situation, continuous monitoring and intensive review. I hope that the state government will provide the desired support in implementing the vision enshrined in this plan, working hand in hand with SACON and other stakeholders.

I look forward to witnessing the positive impact of the plan on avian biodiversity conservation in our state. Thank you for your dedication and for involving me in this crucial endeavour.

Date: 23.11.2023

Arindam Tomar
Principal Chief Conservator of Forest
& Chief Wildlife Warden,
Rajasthan

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FOREWORD

With immense pleasure and a profound sense of responsibility, I present this State Action Plan for the conservation of avian biodiversity in the enchanting state of Rajasthan. This document is a compilation of years of rigorous research, passionate advocacy, and dedicated collaboration, reflecting the unwavering commitment to preserving the avifaunal heritage of Rajasthan.

Rajasthan, with its kaleidoscope of landscapes and cultures, has always held a special place in the hearts of nature enthusiasts and conservationists. From the mystical deserts to the lush forests, from the traditional art forms to the vibrant festivals, Rajasthan's richness lies not only in its cultural tapestry but also in its astounding biodiversity. This State Action Plan underscores the intrinsic connection between the vibrant avian life and this land's cultural and ecological tapestry.

Our vision for avian conservation in Rajasthan is firmly grounded in the principles of sustainability, community involvement, and scientific inquiry. We recognise that the well-being of birds is intrinsically linked to the state's prosperity and our ecosystems' health. The goals outlined in this plan, which include habitat conservation, community engagement, research and monitoring, legislation and enforcement, and climate resilience, are carefully crafted to address the multifaceted challenges facing avian biodiversity in Rajasthan. As we navigate an era marked by environmental changes, it is imperative that we chart a course that ensures the survival of our avian companions. Their well-being is an indicator of the overall health of our ecosystems. By conserving their habitats and engaging with local communities, we not only protect our feathered friends but also promote sustainable livelihoods and raise awareness about the invaluable avian biodiversity that graces the state of Rajasthan.

I wish to express my profound gratitude to all the individuals, organisations, government agencies, stakeholders, and reviewers who have contributed to the formulation of this plan. Our collective dedication to the cause of avian conservation has made this document possible, and I believe that together, we can bring about a positive transformation for Rajasthan's avian biodiversity. I call upon the government, policymakers, environmentalists, and the wider community to embrace this visionary roadmap. Let us work together to secure the future of Rajasthan's avian treasures and create a legacy that will endure for generations to come. This State Action Plan is not just a document but a promise to our avian friends and the incredible state of Rajasthan.

With the spirit of unity towards avian conservation.

Signed by Virendra Rambahal Tiwari Date: 29-11-2023 11:08:56

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(South India Centre of Wildlife Institute of India, Ministry of Environment, Forest and Climate Change)
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We extend our sincere gratitude to the Ministry of Environment, Forest and Climate Change (MoEFCC) for their generous funding and unwavering support in the preparation of the State Action Plan (SAP) for the conservation of birds and their habitat in Rajasthan. This crucial initiative encompasses 17 states across the country, reflecting a collective commitment to preserving our diverse biodiversity and promoting sustainable environmental practices.

A special expression of appreciation goes to Mr. Arindam Tomar, Principal Chief Conservator of Forests (PCCF) & Chief Wildlife Warden (CWLW) of Rajasthan, whose invaluable support and critical review significantly influenced the shaping of this document. His profound understanding and dedication to conservation have played a pivotal role in formulating a robust plan to address the unique challenges faced by avian species in the state. Our heartfelt appreciation also goes to the key officials of the Rajasthan Forest Department, including Mr. P. Kathirvil (CCF), Mr. Sharada Pratap Singh (CF), Mr. Nandlal Prajapat (DCF Plan WL CWLW), and G.P. Mangal (ACF). Their collaborative efforts, inputs and commitment to the cause have been fundamental to the successful formulation of the action plan. Our thanks also go to Mr. Mohit Gupta, DCF WL Keoladeo National Park, Bharatpur, for his on-ground perspective and valuable inputs. The collaborative efforts of the entire staff at the Rajasthan Forest Department headquarters in Jaipur, have significantly contributed to the depth and effectiveness of the action plan.

We express our gratitude to the National Biodiversity Authority (NBA) and its dedicated staff members who contributed their expertise to this endeavor. Special recognition is extended to Mr. Chanakya, NBA Intern & Scientific Consultant, Mr. Bhardwaj, Technical Advisor, Mrs. Prerna Sharma, and Mr. Radheshyam, both serving as Scientific Consultants. Their profound insights and commitment to biodiversity conservation have enriched the content of the action plan.

We extend our appreciation to Mr. Joey Joseph Gardner, Chairman and founder of the NGO Hope and Beyond for all his inputs and all the esteemed reviewers, Dr. Satish Kumar Sharma (Retired ACF, Rajasthan Forest Department), Dr. Satya Prakash Mehra (State Coordinator at World Agroforestry (ICRAF) and Ex-Director & Member at Rajputana Society of Natural History), and Dr. Sumit Dookia (Chief Honorary Scientist at ERDS and Assistant Professor at Guru Gobind Singh Indraprastha University, Delhi., whose expertise and constructive feedback have been instrumental in ensuring the scientific rigor and quality of the action plan.

We also extend our appreciation to the Director of SACON (Sálim Ali Centre for Ornithology and Natural History) and the dedicated staff for all the logistics and their collective efforts. We acknowledge the pivotal role played by Dr. Rajah Jayapal (Senior Principal Scientist, SACON), whose expertise and assistance were instrumental throughout the preparation of the State Action Plan. Dr. Jayapal's contributions in finalizing the State Bird-checklist and in designing the species scoring system to prioritize the RET species have added a scientific and methodical dimension to our approach. His dedication and guidance have been indispensable in ensuring the effectiveness and precision of our conservation strategies. Special acknowledgment goes to Dr. Shomita Mukherjee, Senior Principal Scientist at SACON, for her crucial role as the Coordinator of the West Zone (Rajasthan, Gujarat, and Maharashtra). Her efforts in providing periodic updates and coordination have significantly contributed to the smooth progress of the project, ensuring that the action plan aligns with the dynamic needs of the region.

Finally, we acknowledge all the photographers whose visual documentation has brought attention to the beauty and importance of avian species in Rajasthan. Their images have not only enhanced the appeal of the action plan but have also served as a powerful tool for advocacy. Special appreciation is extended to Ms. Julffia Begam A. for her invaluable help in preparing the design template for the State Action Plan. Her expertise and creativity have played a crucial role in presenting the document in a visually engaging manner.

This collaborative effort reflects the dedication and commitment of each individual and organisation involved in the preparation of the State Action Plan for the conservation of birds and their habitat in Rajasthan. Together, we strive towards a sustainable future for our avian companions and the ecosystems they inhabit.

BACKGROUND

Conserving Rajasthan's Avian Treasures: A Vision for the Next Decade



Birds are considered to be dependable indicators of the overall health of any ecosystem. These indicators are helpful due to their capacity to effectively respond to alterations in both land use patterns and climatic conditions. Given the widespread nature of development operations throughout the country, comprehending and conserving the diversity and habitats of avifauna is of utmost importance. 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 Center 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 the next decade (2020-2030), prioritising the preservation of avifaunal variety, ecosystems, and landscapes. In order 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 the preservation of 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 Rajasthan, Rajasthan, the land of contrasts and vibrant cultures, is home to an astonishing diversity of avian species. From the arid Thar Desert to the lush wetlands and deciduous forests, this northwestern state of India serves as a crucial habitat for a myriad of bird species. The state's rich avifauna is not only a testament to its ecological significance but also a source of immense cultural and economic value. Rajasthan boasts a remarkable avian diversity, with over 530 documented species. This rich tapestry includes both resident and migratory birds, some of which are globally threatened or endangered. Iconic species such as the Great Indian Bustard, Lesser Florican, and Sarus Crane find refuge in Rajasthan's unique ecosystems. These magnificent birds, among others, are emblematic of Rajasthan's natural heritage and serve as flagship species, drawing attention to the broader conservation needs of their habitats. The avian diversity of Rajasthan spans a range of ecosystems, each with its own set of challenges and opportunities. The Thar Desert, for instance, harbours specialised species like the Whitebrowed Bushchat, Indian Courser and Desert Warbler, uniquely adapted to its harsh, arid conditions. The wetlands and lakes, such as the Keoladeo National Park and the numerous water bodies across the state, serve as vital stopovers for migratory birds along the Central Asian Flyway, making Rajasthan an indispensable link in international bird migration routes. Additionally, the deciduous forests of the Aravalli Range shelter species like the Indian Pitta and Plum-headed Parakeet.

Despite the wealth of avian biodiversity, Rajasthan's birds face an array of threats that require immediate and sustained attention. Habitat loss due to the expansion of human population, urbanisation, agriculture expansion, and infrastructure development is a primary concern. Furthermore, water scarcity, dried water bodies, altered natural water sources, and altered habitat due to unsuitable mining pose significant challenges to the survival of both resident and migratory species. Pollution, including water contamination and air pollution, is an emerging threat that affects both birds and their ecosystems. Additionally, climate change is altering the timing of migratory patterns and impacting the availability of resources for resident birds. Illegal wildlife trade and poaching remain persistent threats, with species like the Indian Bustard facing severe risks. Moreover, lack of public awareness and inadequate enforcement of existing conservation laws exacerbate these problems. Sustainable land use practices and habitat restoration are essential to mitigating these threats and ensuring the long-term survival of Rajasthan's avian





This document outlines a visionary roadmap for the conservation of birds in Rajasthan over the next ten years. Our vision is built on the principles of sustainability, community engagement, and scientific research. It aims to foster a harmonious coexistence between human development and avian conservation, recognising that the well-being of birds is intimately connected to the health and prosperity of our state. The goals of this document include:

- 1. <u>Habitat Conservation:</u> Prioritising the protection and restoration of critical bird habitats, ensuring that they are ecologically resilient and can support a diverse range of species.
- Community Involvement: Engaging local communities in bird conservation efforts, promoting sustainable livelihoods, and raising awareness about the importance of avian biodiversity.
- Research and Monitoring: Investing in scientific research to better understand bird
 populations, their behaviour, and their ecological needs, which will guide
 conservation strategies.
- <u>Legislation and Enforcement:</u> Strengthening and enforcing wildlife protection laws, implementing stringent measures against poaching, and promoting responsible tourism practices.
- 5. <u>Climate Resilience:</u> Developing strategies to mitigate the impact of climate change on birds and their habitats, ensuring their continued survival.

We have identified the major, moderate and minor issues in 14 programmes of VPP. The VPP was used as a baseline for preparing Rajasthan SAP, and all the programmes included in SAP are mentioned below:

- 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 Migratory Birds
- 7. Impacts of Developmental Projects and Other Anthropogenic Activities on Avian Diversity and Habitats
- 8. Curbing Illegal Trafficking of Birds
- 9. Conservation of Avian Diversity in Urban Areas

- 10. Surveillance and Monitoring of Avian Diseases
- 11. National Plan for Nature Education and Awareness for Conservation of Avian Diversity, Their Ecosystems, Habitats & Landscapes
- 12. National Capacity Building Programme for Protection and Monitoring of Avian Diversity, their Ecosystems, Habitats & Landscapes
- 13. Mainstreaming Conservation of Avian Diversity with Other Government of India Schemes and Programmes
- 14. Implementation of International Protocols and Conventions in Bird Conservation

Rajasthan SAP has been developed to comprehensively analyse the prevailing avian concerns inside the state. Additionally, it will serve as an outline for devising forthcoming strategies to mitigate these difficulties, ultimately contributing to preserving avian species and their respective habitats within the state. The report discusses the concerns that have been found pertaining to the species-specific factors, habitat-specific factors, and landscape-specific considerations. This document is a call to action, a commitment to the preservation of Rajasthan's avian wonders. It acknowledges that the conservation of birds is not just a responsibility but also an opportunity to protect the state's ecological balance, promote sustainable development, and celebrate the cultural significance of these feathered inhabitants. Together, we can ensure that Rajasthan remains a sanctuary for birds for generations to come.

The document has been partitioned into two distinct sections, 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 Rajasthan's Avifauna and their habitats and the necessary measures to be implemented to preserve and manage the avian species and their habitat within the state.



MESSAGE (PCCF & CWLW, Rajasthan) **ACKNOWLEDGEMENTS** iii FOREWORD (Director, SACON-WII) **BACKGROUND** iv-vii

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