



Driving Sustainable Biodiversity Conservation
through Science, Restoration and Ecosystem-based Solutions.

Srushti Conservation Foundation

Central Asian Flyway: Migratory Waterbird Conservation

Driving Biodiversity Conservation through Science and Action.
Srushti Conservation Foundation



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Srushti Conservation Foundation

The Srushti Conservation Foundation (SCF) is a Section 8 not-for-profit organisation established in January 2021, dedicated to advancing biodiversity conservation through science-based research and action. SCF undertakes cutting-edge research on critical species, landscapes, and marinescapes, while promoting restoration of degraded habitats and ecosystem-based solutions. Its work integrates climate change adaptation, community-based conservation, and outreach, alongside providing scientific inputs for environmentally sustainable development.

What We Do:

Undertake cutting edge conservation research for critical species, landscapes and marinescapes.

Restoration of degraded habitats

Promote ecosystem-based adaptation

Focus on climate change adaptation and outreach

Provide sound scientific services for environmentally sustainable economic development

Mission:

Conduct cutting-edge research, habitat restoration, and climate change adaptation initiatives.

Vision:

Promote sustainable development through ecosystem-based approaches and scientific decision-making.

Core Verticals:

Research | Policy | Outreach & Communication.

Scope:

Terrestrial, marine, and community-based conservation, including business-biodiversity integration.

Expertise:

Biodiversity assessment of natural, agricultural, urban and industrial complexes, biodiversity management plan, conservation action plan, ecological monitoring, capacity building of communities and conservation education.

Project Portfolio Overview

Completed Projects: 19

Ongoing Projects: 10

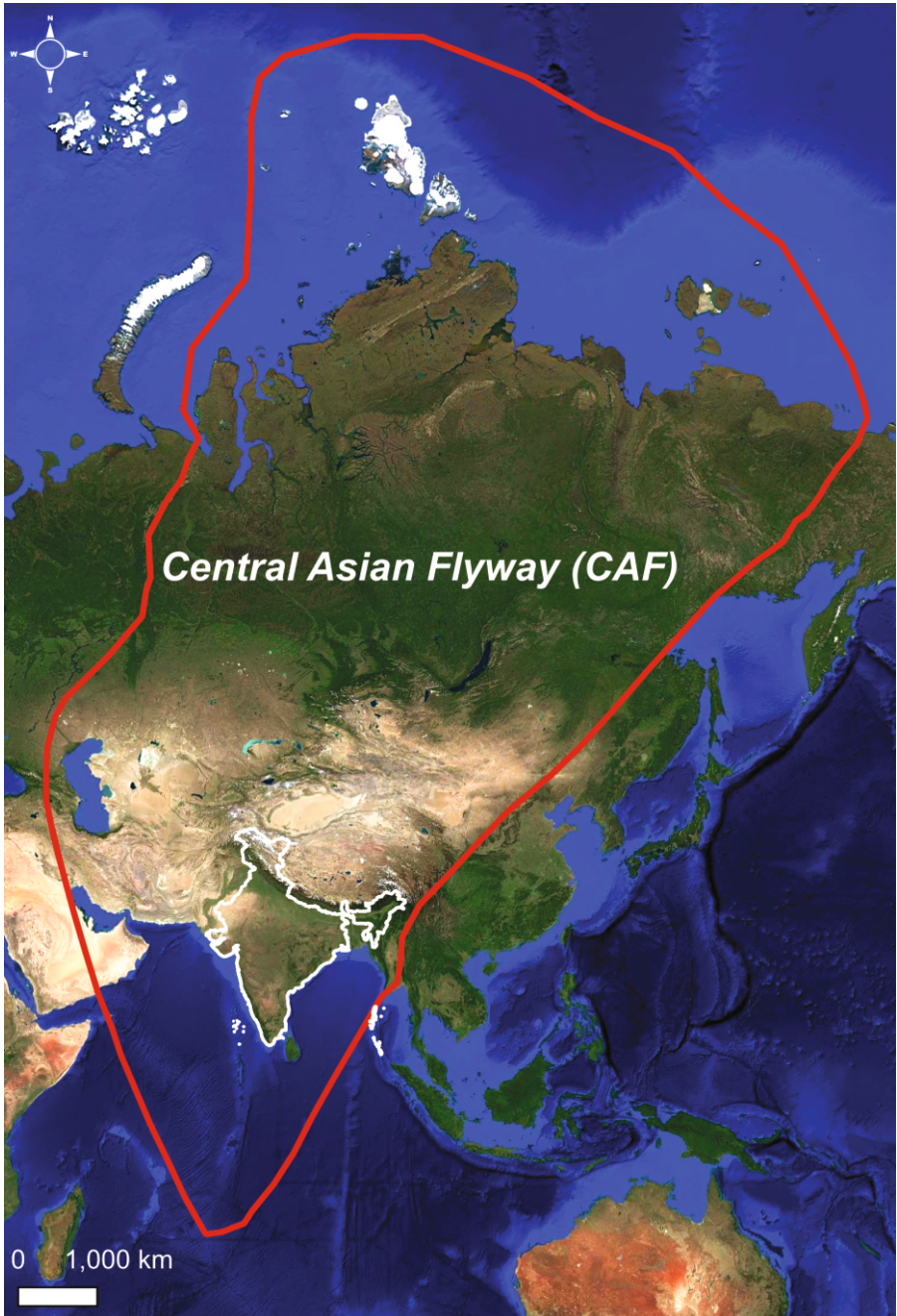
Training Programmes: 5

Projects:

- Community conservation coral reefs in the Lakshadweep archipelago supported by centre for sustainable conservation action and protection of ecosystems of the seas (c-scapes)
- A corporate-community model of biodiversity conservation through rejuvenation of ecosystem
- Assessing impact of cyclone Nisarga and Tauktae on mangrove and non-mangrove areas
- Developing biodiversity strategy for Tata Motors
- Prevalence of pesticides in agrarian landscape and documentation of agrobiodiversity in and around Desert National Park, Rajasthan
- Conducting environmental & social impact assessment (ESIA) site in Arni, Yavatmal, Maharashtra
- Comparative Study of impact caused by Nisarg cyclone along the coast of Maharashtra in mangrove and non-mangrove areas with special focus on Raigad and Ratnagiri districts
- Assessment of status of biodiversity at TATA Motors plant in India
- Assessment of biodiversity in and around cotton fields under Primark's Sustainable Cotton Program (PSCP) in India
- Forest resource collection in Tadoba Tiger Reserve range villages

- Developing nature exhibition for connecting youths and children to nature
- Assessment of status of biodiversity at TATA Communications in Dighi, Pune, India
- Assessment of status of biodiversity at TATA Motors - TML EV
- Building climate change resilient communities - role of youths and children in understanding climate change
- Kokan's coastal treasures: building coastal community resilience through ocean literacy in the Jaigad for JSW foundation
- Identification and conservation of important wetlands along the central Asian flyway around Tata Motors Limited facilities
- Lagoon reef biodiversity documentation of Kadmat and Suheli Island, Lakshdweep
- Evaluation of impact of proposed link road on habitat of shorebirds and recommendations on mitigation
- Understanding current biodiversity status of the Amalner city, Dist. Jalgaon, Maharashtra
- Documenting sargassum forests from Ratnagiri and Sindhudurg District of coastal Konkan
- Evaluation of impact of proposed link road (Ghansoli to Airoli) on habitat of shorebirds and recommendations on mitigation
- Terrestrial, Marine and Mangrove Biodiversity at Raigad dist., Maharashtra





Central Asian Flyway Overview

(Source: BirdLife International, 2026)

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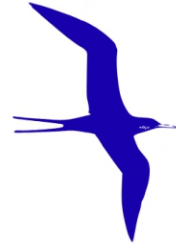
216

Landbirds



108

Waterbirds

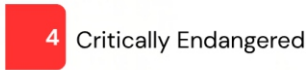


17

Seabirds

324 Migratory Bird Species

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44%

*(143 species)
have declining
global
populations*



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Agriculture & aquaculture



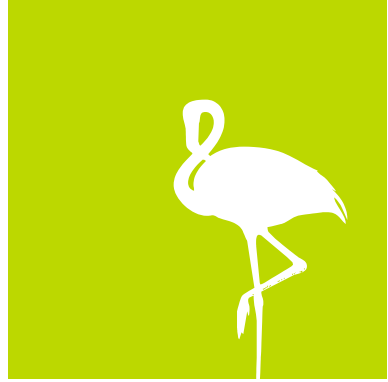
Hunting & trapping terrestrial animals



Residential & commercial development



Pollution



Conservation of Migratory Waterbirds in the Central Asian Flyway along India's West Coast

The Central Asian Flyway (CAF) supports large numbers of migratory waterbirds that depend on coastal mudflats and wetlands along India's west coast for wintering, staging and stopover. However, these habitats are increasingly threatened by urbanisation, wetland reclamation, infrastructure development, and climate change, leading to loss and degradation of critical sites. Despite their importance, many of these habitats remain poorly documented. This project aims to identify, assess, and prioritise key mudflats to support evidence-based conservation and management.

Objectives:

- Identify and prioritize mudflats and associated habitats for migratory birds in coastal Gujarat and Maharashtra
- Assess ecological characteristics and carbon sequestration potential of selected sites
- Develop integrated management plans for coastal habitat conservation
- Strengthen capacity building and stakeholder engagement

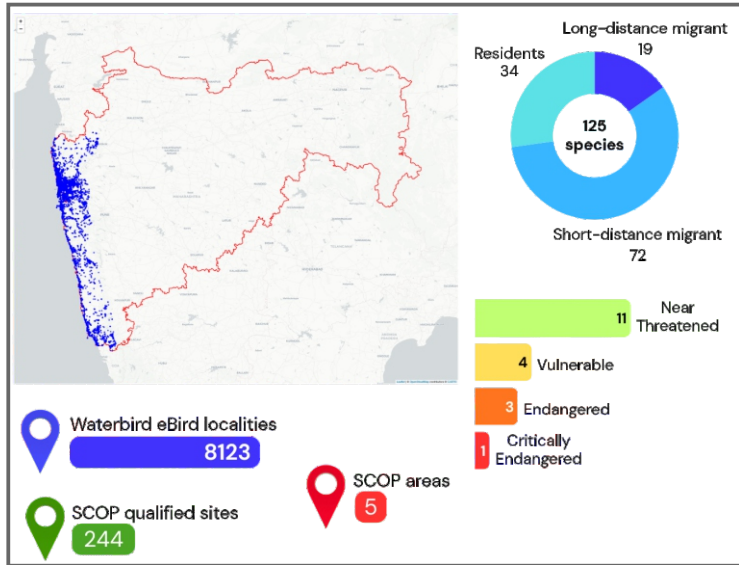
Methodology:

- Compiled eBird Basic Dataset (2014–2024) including complete checklists for Maharashtra and Gujarat
- Generated site-level scores based on criteria such as waterbird richness, abundance, threatened species and geographic population size in R software
- Selected top 25th percentile scoring sites, further supplemented with movement data (e.g., flamingos and Black-tailed Godwit)
- Grouped nearby sites within a 10 km radius based on their proximity and contiguous coastal/wetland habitats, identified as Shorebird/Waterbird Conservation Priority Areas (SCOPs)
- Waterbird count surveys were conducted (November 2025 to February 2026) to assess and validate the potential of these sites

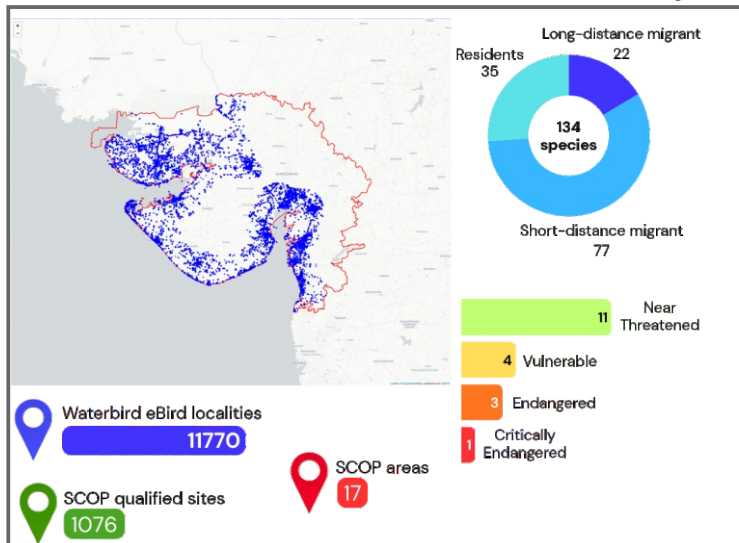


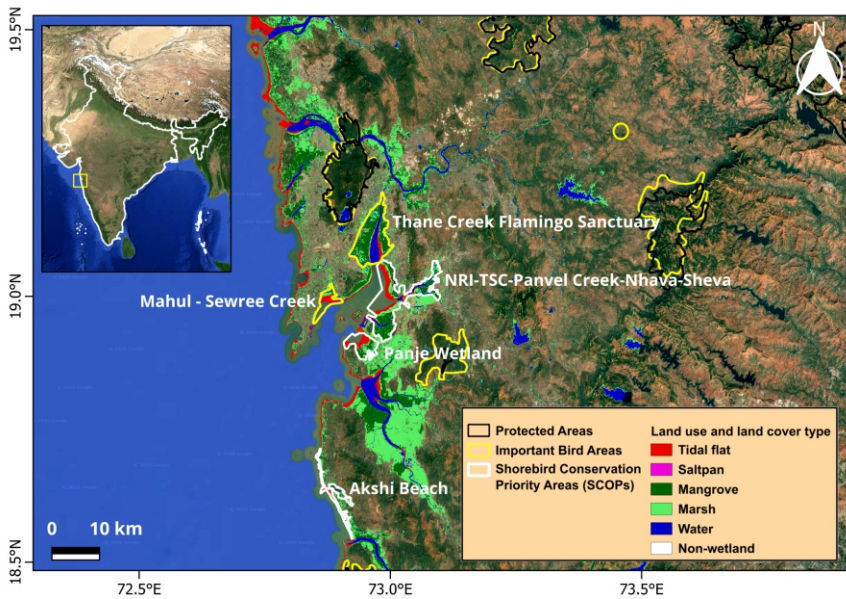
Findings:

eBird Profile of Waterbirds of Maharashtra

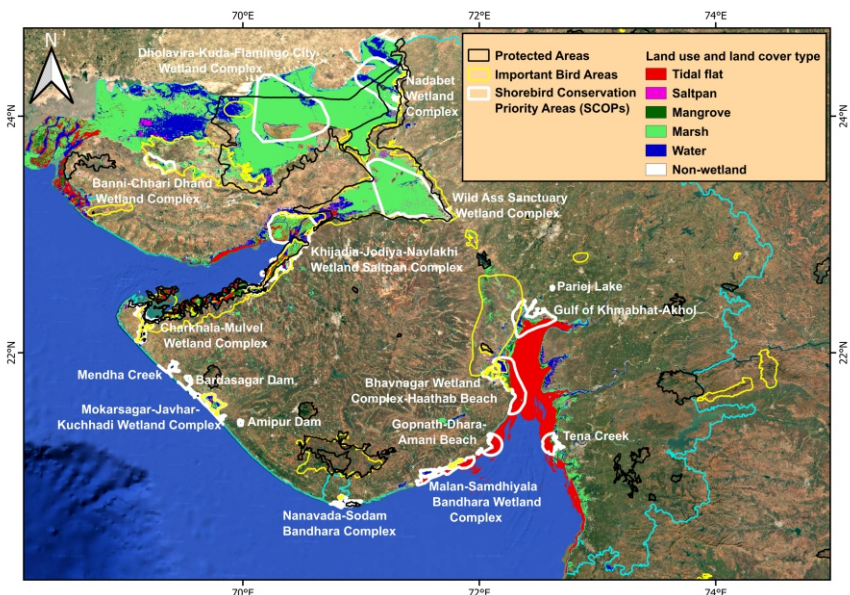


eBird Profile of Waterbirds of Gujarat



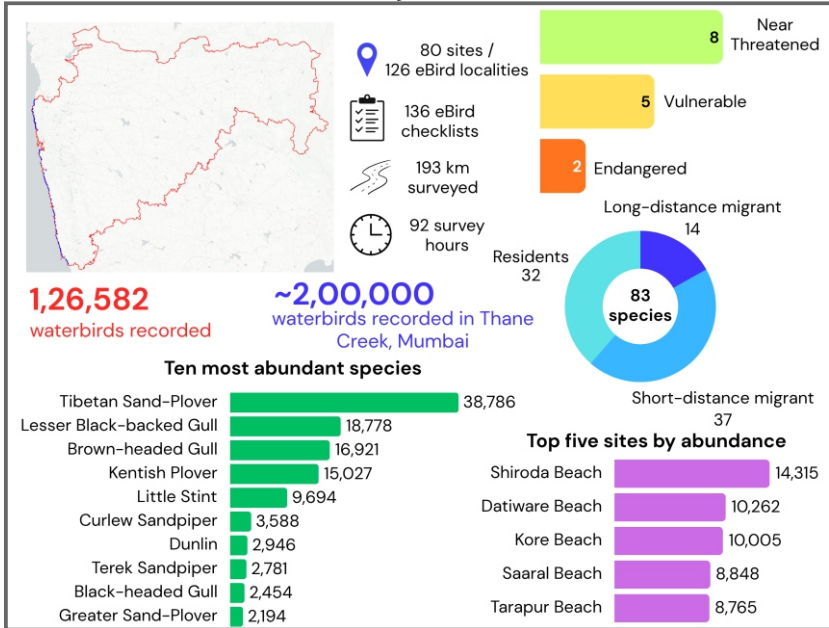


Shorebird/Waterbird Conservation Priority Areas (SCOPs) of Maharashtra

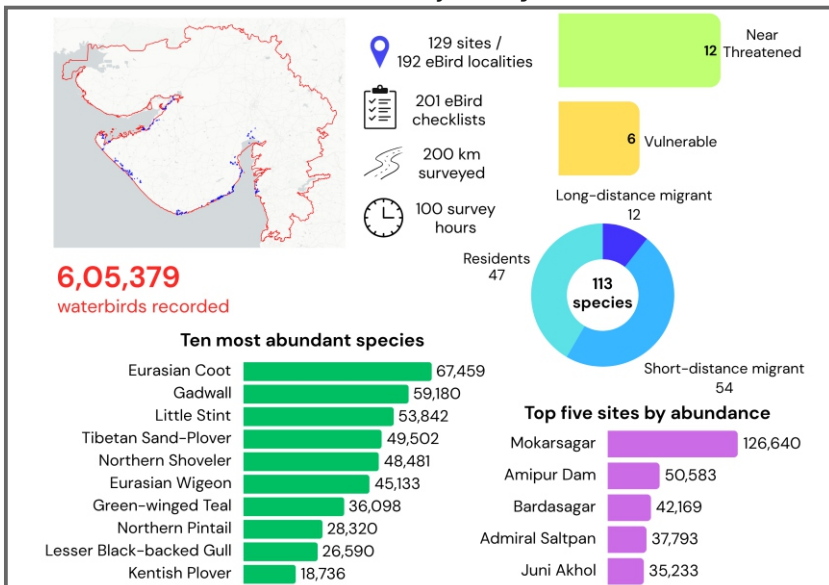


Shorebird/Waterbird Conservation Priority Areas (SCOPs) of Gujarat

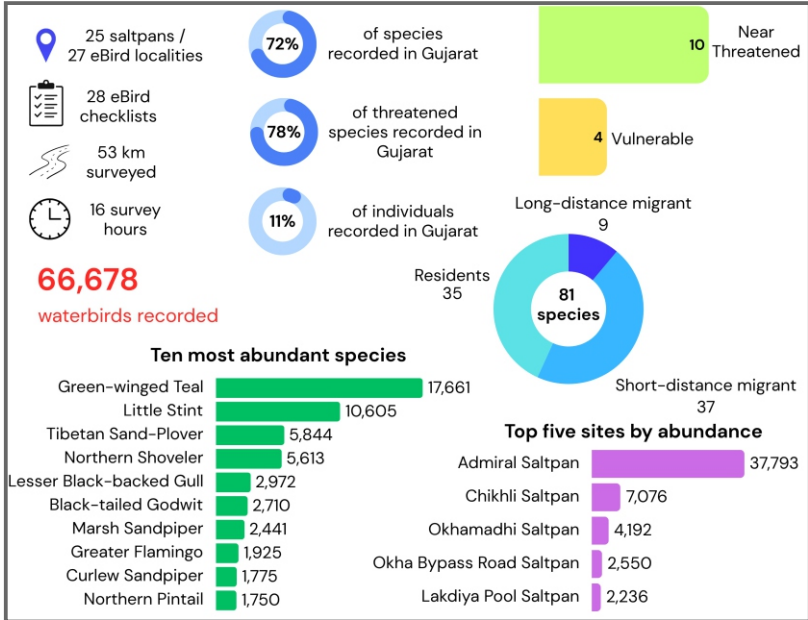
SCF Waterbird Surveys: Maharashtra Overview



SCF Waterbird Surveys: Gujarat Overview



SCF Waterbird Surveys: Gujarat Salt pans Overview





Key Habitats of Migratory Waterbirds



Flamingos feeding on Thane Creek mudflats, a SCOP area supporting ~200,000 waterbirds annually, including flamingos and migratory shorebirds.

Sandy Shoreline



Rocky Shoreline



Muddy Shoreline



Salt Pans



Seasonally Flooded Flat



Marsh



Most Abundant Migratory Shorebirds of India's West Coast



Threatened Migratory Shorebirds/waders of India's West Coast





Key Actions for Migratory Waterbird Conservation

- Strengthen protection of unprotected SCOPs and expand coverage of IBA/KBA sites
- Facilitate corporate adoption of key sites for ecological restoration, biodiversity offsetting, and achieving net biodiversity gain
- Recognise and conserve tidal flats as critical wetland habitats; avoid their loss and degradation
- Manage saltpans as key high-tide roosting and feeding sites by maintaining optimal water levels (10–20 cm)
- Monitor coastal wetlands for mangrove intrusion and invasive species; implement early control measures
- Apply decision-based frameworks to balance mangrove restoration with tidal flat conservation
- Enhance long-term monitoring using fine-scale spatio-temporal mapping, regular shorebird surveys, and satellite telemetry
- Use data-driven insights to guide adaptive management and policy interventions



Policy and Legal Instruments for Migratory Waterbird and Habitat Conservation

International Frameworks

Convention on Biological Diversity (**CBD**)

Convention on Migratory Species (**CMS**)

Ramsar Convention on Wetlands

Convention on International Trade in Endangered Species (**CITES**)

National Laws and Regulations (India)

Wildlife (Protection) Act, 1972

Forest (Conservation) Act, 1980

Environment (Protection) Act, 1986

Wetland and Coastal Governance

Wetlands (Conservation and Management) Rules, 2017

Coastal Regulation Zone (**CRZ**) Notification (2011/2019 updates)

Integrated Coastal Zone Management (**ICZM**)

Policies and Programmes

National Biodiversity Action Plan (**NBAP**)

National Plan for Conservation of Aquatic Ecosystems (**NPCA**)

Central Asian Flyway (**CAF**) Action Plan

Area-based Conservation Approaches

Protected Areas (National Parks, Wildlife Sanctuaries)

Important Bird and Biodiversity Areas (**IBAs**) / Key Biodiversity Areas (**KBAs**)

Other Effective Area-based Conservation Measures (**OECMs**)

Conservation Reserves (CR)

Community Reserves

Supporting Institutions and Mechanisms

Ministry of Environment, Forest and Climate Change (**MoEFCC**)

State Forest Departments

National Biodiversity Authority (**NBA**)

State Biodiversity Boards (**SBBs**)

State Wetland Authorities (**SWAs**)

