

Baseline data creation of avifauna and their conservation

1. **Background:**

Coastal habitats are among the most productive and threatened habitats in the world. Around 60% of global human populations live in coastal ecosystems. Most of the arctic and temperate coastal birds are migratory in nature they breed in temperate and winter in tropical countries, but tropical residents move in response to precipitation. Many of the coastal birds migrate over a 1000 miles between breeding and wintering grounds using similar pathways every year. Considering the importance of these pathways, Convention on the Conservation of Migratory species has identified few pathways across the work and two of them come under Indian Territory viz., Central Asian Flyway and East Asian-Australasian Flyway. Large portion of Indian Territory falls over the Central Asian Flyway and East Asian Australasian Flyway. Indian coast (7159 km) supports nearly 60 species of migratory shorebirds, through Central Asian flyway, which are reported to decline globally with degradation of habitats. Although large share of globally threatened water-birds are found in India, reasons for the population decline of shorebirds remains unclear because of little understanding about their ecology in the wintering grounds. District Sindhudurg is one of the famous destinations in India for pristine beaches and sea food, insignificant year it is observed that number of tourist are increasing day by day. One of the potential reasons for decline of shorebirds is alteration of coastal habitats for tourism. Under Gol UNDP GEF Sindhudurg project "Assessing the status and distribution of avifauna within the coastal Talukas of Sindhudurg District" study was conducted by Salim Ali Centre for Ornithology and Natural History (SACON) which had objectives:

- a) Explore the relationships between environmental variables, habitat structure and impacts of human activities influencing the abundance of avian communities within the coastal areas of Devgad, Malvan and Vengurla talukas of Sindhudurg District,
- b) Spatial and temporal patterns of avifaunal diversity and density of avifauna.
- c) Breeding and nesting success of birds at Burnt Island and White-bellied sea-eagle
- d) Establish a long term monitoring protocol for breeding birds at Burnt Island and for avian population at Sindhudurg coastal and marine.
- e) Identification of nature trails from ornithological significance and bird watching point of view.
- f) Training of representatives from local communities as guide for nature trails.

Linking conservation with tourism for sustainable tourism practices was important role in this project.

2. **Technical parameters:**

Detailed avifauna survey was conducted with proper technique of sampling methods like transect walk, bird census, benthos sampling, breeding bird count, bird ringing, etc.. throughout the district. Survey was conducted for two breeding seasons.

To link conservation and tourism Nature trails were identified within the coastal talukas. Village level meetings were conducted in the villages where nature trail was identified and candidates were selected as nature guide. Nature guide trainings were conducted

3. **Impact:**

A total of 296 species belonging to 74 families and 21 orders were collated from Sindhudurg coast. Among them, 280 species were recorded in our survey and 16 species were compiled from secondary sources. Species richness was high in Vengurla taluka (249 species) subsequent to Malvan (218) and Devgad (194) taluka. Out 296 species, 207 (~70%) and 89 (~30%) were resident and migratory birds respectively. Among the 207 resident species, 145 full resident, 31 resident local migrant, four resident vagrants and 27 resident winter migrant were recorded. Within 89 non-resident migrants, 77 winter migrants, seven passage migrant and five vagrants were recorded. Sindhudurg is reported to have five globally threatened species (Red-headed Vulture (CR), White-rumped Vulture (CR), Indian Vulture (CR), Great Knot (EN), Wolly-necked Stork (VU)) but during survey only two species viz., Great Knot and Wolly-necked Stork were sighted. In addition, 14 more species fall under Near-Threatened category. Malabar Lark, Grey-headed Bulbul, Grey-fronted Green Pigeon, Malabar Grey Hornbill, White-cheeked Barbet, Nilgiri Flower pecker and Vigor's Sunbird are the endemics recorded from Sindhudurg. Grey-headed Bulbul was reported to occur till Goa (Grimmet et al., 2005; Rasmussen and Anderton, 2012; Table 1.2) but during study species was frequently sighted in the wooded tracts along the Sindhudurg coasts (for instance: Karli, Vengurla Taluka).

Nest site selection of white-bellied sea eagle (*Haliaeetus leucogaster*) and breeding success of white-bellied sea eagles (WBSE) and terns in the Sindhudurg coast was also carried out. 46 nests of WBSE were studied within the District to know the nesting behaviour and nestling success.

Special study was conducted on Vengurla rock to know breeding success of terns. Tern species recorded during study were viz., Greater Crested Tern, Common Tern, Lesser Crested Tern and Roseate Tern. Around 6000 terns, two masked boobies and 10 brown headed gulls were recorded on the island. Study also reflected that Greater Crested Terns and Roseate Tern found on Vengurla Rocks during breeding season.

5 Nature trails were identified within the coastal talukas two in Devgad Taluka (Wadatar and Mithbav), one in Malvan Taluka and two in Vengurla Taluka (Karli, Vengurla). 82 individuals were trained as nature guides.

4. **Potential for replication:**

Such activity can be one of the examples wherein conservation and tourism goes hand in hand.

5. **Lessons learnt:**

Assessment has helped us to create a baseline of Avifauna present within the District. Plantation along the coast should be retained for as nesting tree for WBSE. Study on Vengurla rock was delayed since permission required for survey was obtained late.

Coastal tourism near Vengurla rocks may be curtailed as it is one of the important breeding ground for the Greater-crested and bridled tern in Indian coasts. Nearly 2-3 thousand terns are expected to breed here annually. Declaring Important Bird areas for conservation of species.