

POTENTIAL AND EXISTING RAMSAR SITES IN INDIA

M. ZAFAR-UL ISLAM AND ASAD R. RAHMANI

Team Members

Noor Khan, V. Gopi Naidu, J.P.K. Menon

Maps prepared by
Sham Devande

Additional maps by
Joseph Irwin

Significant Contributors

(in alphabetical order)

Anwaruddin Choudhury, Arvind Mishra, Bitapi Sinha, Kushal Mukherjee, Kulojyoti Lahkar, Mohd. Shafi Bacha, Neeraj Srivastava, Pankaj Chandan, Parikshit Gautam, P.O. Nameer, Ranjit Manakadan, S. Balachandran, S. Subramanya, S.P. Sinha, Siraj Taher, Usha Lachungpa, V. Kannan, V.P. Singh, V. Shantaram, Wetlands Division of WWF-India.

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RANGANATHITTU BIRD SANCTUARY

Site Code	: KA-10
State	: Karnataka
District	: Mysore
Coordinates	: 12° 22' N, 76° 39' E
Ownership	: State
Area	: 67.5 ha
Altitude	: 690 - 715 m
Rainfall	: 800 mm
Temperature	: 15 °C to 35 °C
Biogeographic Zone	: Deccan

RAMSAR CRITERIA

2 (Wetland supports threatened ecological communities), 4 (Wetland provides refuge during adverse conditions to threatened species), 6 (Wetland regularly supports 1% of the individuals in a population of one species or subspecies)

IBA CRITERIA

A1 (Threatened Species), A4i ($\geq 1\%$ biogeographic population)

PROTECTION STATUS

Wildlife Sanctuary, established in July 1940

RAMSAR WETLAND TYPE

M (Permanent river)

SITE DESCRIPTION

Ranganathittu is one of the oldest bird sanctuaries of India, having been established in 1940 by the Maharaja of Mysore on the suggestion of Dr. Sálím Ali. In Independent India, it was officially declared only in 1980. It is situated about 16 km from Mysore, just off the Mysore-Srirangapatnam road. A weir built in the 17th century by the ruler of Mysore across the River Kaveri has impounded water that is carried through an aqueduct to Srirangapatnam. The impounded water forms a large and deep reservoir with a number of islets, which provide good nesting habitat for birds. The Sanctuary is surrounded by irrigated agricultural fields where many birds forage. The flora is mainly riverine vegetation with *Salix* sp., *Terminalia arjuna*, *Vitex* sp., *Pongamia pinnata*, *Ficus* sp., *Pithecolobium dulce*, *Pandanus tectorius*, *Caesalpinia bonducella*, bamboos and sedges.

AVIFAUNA

The Sanctuary has a spectacular congregation of waterfowl and waders. At least 16 waterbirds breed at Ranganathittu: Asian Openbill *Anastomus oscitans*, Painted Stork *Mycteria leucocephala*, Large Egret *Ardea alba*, Median Egret *Egretta intermedia*, Little Egret *E. garzetta*, Cattle Egret *Bubulcus ibis*, Oriental White Ibis or Black-headed Ibis *Threskiornis melanocephala*, Large Cormorant *Phalacrocorax carbo*, Indian Shag *P. fuscicollis*, Little Cormorant *P. niger*, Darter *Anhinga melanogaster*,

Black-crowned Night Heron *Nycticorax nycticorax*, Pond Heron *Ardeola grayii*, Purple Heron *Ardea purpurea*, Great Stone Plover *Esacus magnirostris*, and the Indian River Tern *Sterna aurantia*.

Neginhal (1983) reported that about 200 pairs of Asian Openbill nest in Ranganathittu. The Painted Stork commenced breeding at the site in 1989, with about 75 nests were noted (S. Subramanya, *pers. comm.*, 2008). By 2000, about 2,300 breeding pairs had taken over the colony (Thejaswi, undated), which is perhaps the largest nesting colony of Painted Stork in south India. Owing to its density and diversity of birds, this IBA has been listed as one of the top heronries in India by Subramanya (1996).

Ranganathittu does not have records of many threatened species, except for some sightings of the Greater Spotted Eagle *Aquila clanga* in winter, and an occasional Oriental White-backed vulture *Gyps bengalensis*. The selection of this IBA is based on A4i criterion (A site known or thought to hold, on a regular basis, $\geq 1\%$ of a biogeographic population of a congregatory waterbird species) (Islam & Rahmani 2004). Nesting of more than 2,300 pairs of the Painted Stork is much above the 1% threshold (100) of this species determined by Wetlands International (2002).

A total of 127 species has been identified from this IBA site, including 18 species listed in Biome-11 but none of them are presently of much conservation concern.

Wetland-dependent Globally Threatened Species

Vulnerable

Greater Spotted Eagle *Aquila clanga*

Near Threatened

Darter *Anhinga melanogaster*
Painted Stork *Mycteria leucocephala*
Oriental White Ibis *Threskiornis melanocephalus*

OTHER KEY FAUNA

The terrestrial and arboreal fauna of the Sanctuary includes Mongoose *Herpestes edwardsi*, Monitor Lizard *Varanus bengalensis*, Jungle Cat *Felis chaus*, Indian Flying Fox (Fruit Bats) *Pteropus giganteus*, Bonnet Macaque *Macaca radiata* and Palm Civets *Paradoxurus hermaphroditus*, whereas the aquatic fauna includes Marsh Crocodile *Crocodylus palustris*, and Common Otter *Lutra lutra*.

CONSERVATION ISSUES

- Floods
- Tourism
- Pollution
- Pollution load of fertilizers and pesticides drained from the surrounding agricultural land is a major concern.
- Tourism seems to be the major problem here.
- Increase in the number of the Flying Fox

Restricting the recreation and tourism activities in the nesting area of the Sanctuary would help to prevent degradation of the habitat, as well as biodiversity.

The growing population of crows and monkeys in the Ranganathittu Bird Sanctuary is becoming a menace for the other birds and the tourists that visit here. There are some reports that the crows and monkeys have been scaring away the birds and also destroying their eggs. They have to be controlled, and if necessary even eliminated.

During the monsoon each year, floods owing to the release of excess water from the Krishnarajasagar Reservoir located upstream, and close to Mysore, causes considerable havoc at the Sanctuary. In 1991, floods during July raised the water-level by about 5 m and washed away almost all the nests built at low level over water with the nesting population of the Oriental White Ibis *Threskiornis melanocephalus* being severely affected (Subramanya *et al.* 1991). During these floods the tree covered islands do get damaged. In recent years, efforts are being made towards stabilisation and replantation on the islands.

Nearly 2,00,000 tourists visit this Sanctuary every year (Neginhal 1993). The breeding birds are disturbed

when tourists go very near to the birds, attracting crows to pillage eggs and chicks. In fact the crows follow the boats!

During the floods of August 2005, the water level at Ranganathittu (Subramanya and Naveein 2005) was raised by 3m. As a consequence all the nests within 3m level above the water were washed away. Among the 12 large waterbirds found nesting at the sanctuary, the Oriental White Ibis was the most affected species with an estimated loss of over 1,200 nests. This pattern of nest, loss was strikingly similar to the 1991 floods when over 1,500 nests were washed away (Subramanya *et al.* 1991). There has been extensive clogging of the island vegetation by debris brought-in by the flood waters. The bird species that habitually nest at higher levels have not been affected by the floods. Despite the calamity, all the affected birds were observed to have commenced re-nesting as soon as the flood waters had receded.

The vegetation on the islands was affected to various degrees. While the large islands have been least affected, the smaller islands have been much affected with their vegetation being uprooted during the floods. The islands that had a dense overgrowth of *Combretum latifolium* creepers were found to have resisted the flood impact, although the stand of this vegetation was found to be extensively clogged by the debris. After an assessment of flood damage (Subramanya and Naveein 2005), the following recommendations were made:

Trees on islands where the soil was exposed were to be planted. *Pandanus* clumps that had been uprooted by flood water was to be left, as *Pandanus* has the habit of regenerating and growing into dense clumps. Wherever the islands were affected by erosion of their soil, efforts were to be made to stabilize the islands by heaping mud and small boulders and planting such island with *Combretum* along the slopes, sides and top of the islands. No efforts should be made to remove the debris that choke the vegetation on the islands, as it would serve as an important source of nesting material to the birds breeding at Ranganathittu.

As a great majority of the nesting species that nest at Ranganathittu forage in the vast stretches of surrounding paddy fields created under the Cauvery command area, the effect of pesticides used in these fields on nesting birds needs to be taken seriously into consideration. Farmers should be encouraged to use organic pesticides. Over the years, the numbers of Flying Foxes have increased. This increased population is seen occupying additional trees on some of the islands, thus depriving nesting birds of potential nesting substrate and reducing the carrying capacity of the heronry area.