

# Waterbird census at Nadabet wetland, Greater Rann of Kachchh

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## Introduction:

The Greater Rann of Kachchh area, north of Suigam, near the Indo-Pak border, forms a large seasonal wetland of roughly about 1000 sq km. The fact that this is not known to the public is because of its inaccessible and sensitive location near the Indo-Pak border. People are allowed to visit only up to Nadabet (24° 14' N, 71° 11' E), where there is a famous temple called 'Nadeshwari Temple'. The wetland, which is adjoining Nadabet (towards the eastern and northern side), falls partly in the jurisdiction of Banaskantha Forest Division and also in Kachchh Desert Sanctuary.

Though regularly monitored and protected by the forest department, this wetland was not explored for its biodiversity and bird population until recently. A team of forest officials, along with the second author, visited this site during the winter of 2015-16. The team was surprised by the number of birds present in this seasonal wetland. They instructed the local forest office at Banaskantha Forest Division to carry out systematic documentation of the bird population of this wetland. The Banaskantha Forest Division approached us for assisting them in conducting a waterbird census and to properly document the bird population.

## Methods:

We carried out the census in two phases: a preliminary survey on 15-16 January 2016 and a final count from 12 to 14 February 2016. We used standard Asian Waterbird Census (AWC) protocol for total count of waterbirds, using various equipments such as binoculars and high end still and video cameras. Photography and videography was helpful in estimating the number of birds, particularly those in large flocks. The most conservative round figure estimates were taken as final counts. The final figures were cross verified again by the first and second authors.

Our team included a biologist (Virag Vyas), forest officials and local staff (D. S. Solanki and Govindbhai Patel, local foresters & chowkidars), birdwatchers and bird photographers (Kartik Patel, Rupal Vidya, Dhaivat Andhariya, Jubin Asara, Mihir Patel and Tejal Shah).



Map-1: Area covered during bird count

During the census, a total of 60% area of the wetland was covered by water, which was visited by two teams (Map-1) using the border roads network. Apart from the main wetland, we also covered two small wetlands located on Jagmal bet. These wetlands were included because the waterbird populations between these wetlands were interacting.

We covered as much area as possible in a single day, dividing ourselves into two teams. We traversed 25 kms along the international border and another 25 kms between the border and Nadabet using vehicles to cover the maximum area

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of the wetland. Due permissions were obtained from the Forest Department and the Border Security Force office at Gandhinagar.

### Observations:

During this survey, we observed a total of 6,36,449 waterbirds in Nadabet main wetland. The two smaller wetlands

accounted for a total of 5,446 and 17,011 waterbirds respectively. The total number of waterbirds was 6,58,906. This is by far one of the largest waterbird count carried out in Gujarat till date. However, it is believed that in the winter of 2011-12, approximately 8,00,000 - 10,00,000 Flamingos (*Phoenicopterus* sp.) were reported near Khadir bet in Greater Rann of Kachchh. Even during the present count, we found that 76% of waterbirds were two species of Flamingo. However, other groups such as waders (5%), Pelicans (4%), Gulls (4%), Ibis & Spoonbill (4%), Ducks & Pochards (3%), and other birds (3%), contributed to the total count.

During our survey, we observed nesting activity of Greater Flamingo (*Phoenicopterus roseus*) in Nadabet wetland. About 500 nests were present there. Several females were seen sitting on the nests. However, follow up on the nesting activity suggested that nesting had completely failed as the nests were built on the edge of the wetland and the water constantly receded, due to which the Flamingos had to leave the nests. The nesting of Greater Flamingo was reported in Nadabet earlier by the second author in the winter of 2012. According to him, the nesting was unsuccessful at that time due to drying up of the wetland.

### Species-wise bird count for three wetlands – 12 to 14 February 2016.

No	Species	Main wetland (Nadabet)	Jagmal Bet wetland1	Jagmal Bet wetland 2	Total
1	Great White Pelican	25500			25500
2	Dalmatian Pelican	1475	10	5	1490
3	Lesser Flamingo	200000	200		200200
4	Greater Flamingo	300000	50		300050
5	Black Stork	63			63
6	White Stork	4			4
7	Painted Stork	100	100		200
8	Eurasian Spoonbill	21000	1000	1000	23000
9	Slender-billed Gull	2600			2600
10	Black-headed Gull	5000	150		5150
11	Brown-headed Gull	6300	50		6350
12	Heuglin's Gull	15			
13	Pied Avocet	4100			4100
14	Common Crane	10000	15		10015
15	Eastern Imperial Eagle	12			12
16	Peregrine Falcon	4			4
17	Common Pochard		50	12000	12050
18	Black-winged Stilt	9000	200	500	9700
19	Ruff	6780	250		7030

No	Species	Main wetland (Nadabet)	Jagmal Bet wetland 1	Jagmal Bet wetland 2	Total
20	Red-wattled Lapwing	0	54	9	63
21	Little Stint	450	20		470
22	Common Greenshank	50	2		52
23	Common Redshank	2300	7	1	2308
24	Little Ringed Plover	50			50
25	Grey Heron	1578	16	21	1615
26	Black-tailed Godwit	4750	20		4770
27	Northern Pintail		700	1650	2350
28	Northern Shoveler		800	680	1480
29	Common Teal		500	100	600
30	Gadwall		25	165	190
31	Eurasian Wigeon		50	325	375
32	Indian Spot-billed Duck		10	12	22
33	Garganey		5	50	55
34	Little Grebe		4	7	11
35	Black-headed Ibis		15	5	20
36	Glossy Ibis	500			500
37	Great Cormorant	1000	200		1200
38	Indian Pond Heron		25	15	40
39	Cattle Egret		250	20	270
40	Great Egret	400	100	20	520
41	Intermediate Egret	100	2	3	105
42	Little Egret	500	40	12	552
43	Western Reef Egret	350			350
44	Little Cormorant	2500	150	100	2750
45	Eurasian Marsh Harrier	2	2	6	10
48	Eurasian Curlew	61	1		62
49	Marsh Sandpiper	100	2		102
50	Green Sandpiper		3	4	7
51	Wood Sandpiper		3	2	5
52	Caspian Tern	150	10	2	162
53	Gull-billed Tern	375	30	0	405
54	White Wagtail	200	10	10	220
55	Yellow Wagtail	70	12	15	97
56	Barn Swallow	1000			1000
57	White-throated Kingfisher	10	3	2	15
58	Unidentified Terns	1000			1000
59	Unidentified Gulls	12000	100	120	12220
60	Unidentified Waders	15000	200	150	15350
	<b>Total Birds</b>	<b>636449</b>	<b>5446</b>	<b>17011</b>	<b>658906</b>

(Names are as per Grimmett *et al.* 2011)

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This site should be considered as one of the nationally and globally most important large wetlands as it supports not only large populations of waterbirds, but also 1% population of 11 species; Great White Pelican (*P. onocrotalus*), Dalmatian Pelican (*P. crispus*), Greater Flamingo, Lesser Flamingo (*P. minor*), Painted Stork (*M. leucocephala*), Eurasian Spoonbill (*P. leucorodia*), Slender-billed Gull (*C. genei*), Black-headed Gull (*C. ridibundus*), Brown-headed Gull (*C. brunnicephalus*), Pied Avocet (*R. avocetta*) and Common Crane (*G. grus*). This wetland also qualifies as 'Ramsar' site as it supports more than 20,000 birds and 1% population of 11 species. The site acts as one of the most important stopover and feeding site for large populations of migratory waterbirds on the Central Asian Flyway.

Some of the other important observations include sighting of 63 Black Storks (*C. nigra*). Also we could photograph

Black Stork and White Storks (*C. ciconia*) together. A good population of Eastern Imperial Eagles (*A. heliaca*) and Peregrine Falcons (*F. peregrinus*) was a great sight. This wetland had good number of juveniles of Lesser Flamingo, though it does not breed there. Lastly, spending time with our brave BSF jawans on the border was a memorable event for all the team members.

### Acknowledgements:

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### References:

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## Red-billed Tropicbird in Porbandar

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The Red-billed Tropicbird (*Phaethon aethereus*) is a pelagic bird and is usually seen off the western coast of India, from Mekran Coast (SW Pakistan) to SW coast of Sri Lanka, with isolated records from the Arabian Sea (Grimmett *et al.* 2011).

On 4 November 2016, late in the evening, a Red-billed Tropicbird was rescued from the Bandar road (21° 38' 25" N 69° 35' 46" E), situated on the coastal area of Porbandar city, by the third author. It was a normal early winter evening, without any cyclonic conditions in the sea. The bird was fed with small fish but it survived for only one day. It was identified as a juvenile Red-billed Tropicbird based on the barring on mantle, yellow bill with black tip, diffuse black band across

the nape, and extensive black primaries and primary coverts.

The Red-billed Tropicbird is vagrant to Gujarat. The first sighting of a sub-adult Red-billed Tropicbird was reported 50 kms offshore between Jakhau and Okha (22° 36' N 68° 28' E) in the Gulf of Kachchh on 20 December 2013 (Gandhe 2014). The second sighting was a windblown bird rescued from Punagam, near Surat, in the monsoon season on 25 June 2015 (Patel 2015). Hence, this further sighting of this species is noteworthy.



### Acknowledgements:

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