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Sarus Census 2010

Objective:

To collect the information about the demography of Indian Sarus Crane and formulate the possible strategy for their conservation in the state

Background:

Out of fifteen living species of cranes three are found in India, the Eurasian crane, Demoiselle crane and Sarus crane. One of the subspecies (*Grus antigone antigone*) has its stronghold in Uttar Pradesh. The habitats are so favourable that this part of the country is known as “Shangrila” of Indian sarus crane. However, status of the distribution and the population of ISC is considered to be on decline in the country and in turn in the world. Therefore, immediate assessment of the situation and possible conservation strategy is of utmost importance. The present census, 2010, was one of the efforts in this direction.

Census methodology: historically known potential sites for sarus habitation were selected for head counting. Thus the canals, the rivers, the ponds, the lakes, the agriculture field and barren land with water stagnation were the target sites for counting. The forest officials, primarily the front line staff who had basic training were engaged for the job. The NGOs and nature lovers were also associated. A basic protocol was developed and data were collected in predesigned proforma. June 20, 2010 was fixed for counting in whole of the state. Early morning (6.00 h – 7.30 h) and late afternoon (17.00 h – 19.30 h) was the counting period on this date. Highest number of sarus, adult and juveniles both separately, during these periods were taken as the number of sarus at particular sites. These numbers were compiled to find out the number in the forest divisions and the revenue districts and finally the state.

Results:

The number of adult and juvenile sarus is presented in Table 1. Perusal of the data shows that it had varied density in different districts. Therefore, they were categorized into absent very low, low, high and very high density districts on the basis of artificial classification <1, 1-50, 51-100, 101-500 and >500, respectively. Density class wise district grouping and adult juvenile ratio are given in Table 2 followed by a Figure.

Table 1. Sarus counting in different districts. (Districts not mentioned in the table are included in their respective parent district)

District	Adult	Juvenile	Total
Agra	48	1	49
Aligarh	243	54	297
Allahabad	0	0	0
Ambedkarnagar	0	0	0
Auraiya	585	67	652
Azamgarh	2	0	2
Badaun	25	5	30
Bagpat	0	0	0
Bahraich	46	12	58
Ballia	83	0	83
Balrampur	56	0	56
Banda	71	0	71
Barabanki	202	12	214
Bareilly	66	42	108
Basti	96	11	107
Bhadohi	0	0	0
Bijnor	46	3	49
Bulandshahar	178	2	180
Chandauli	0	0	0
chitrakut	40	10	50
Deoria	18	2	20
Etah	437	391	828
Etawah	1396	116	1512
Faizabad	6	0	6
Farrukhabad	108	0	108
Fatehpur	161	11	172
Firozabad	212	13	225
Gautambudhnagar	6	0	6
Ghaziabad	34	34	68
Ghazipur	0	0	0
Gonda	25	1	26
Gorakhpur	94	14	108
Hamirpur	45	0	45
Hardoi	316	25	341
Jalaun	6	0	6
Jaunpur	0	0	0
Jhansi	8	2	10
Jyotibaphulenagar	0	0	0
Kannauj	109	7	116
Kanpur	67	10	77
Kanpurdehat	535	45	580
Kashiramnagar	116	216	332
Khirilakhimpur	219	18	237
Kushinagar	27	0	27
Lalitpur	4	0	4
Lucknow	8	0	8

Mahamayanagar	270	5	275
Maharajganj	280	40	320
Mahoba	4	0	4
Mainpuri	2060	120	2180
Mathura	183	3	186
Mau	0	0	0
Merrut	15	0	15
Mirzapur	0	0	0
Muradabad	38	10	48
Muzaffarnagar	0	0	0
Pilibhit	210	14	224
Pratapgarh	31	0	31
Raibereilly	251	5	256
Rampur	21	5	26
Saharanpur	0	0	0
Santkabirnagar	171	40	211
Shajehanpur	436	46	482
Sidharthnagar	193	31	224
Sitapur	253	17	270
Sonbhadra	0	0	0
Sultanpur	44	3	47
Unnao	190	48	238
Varansi	0	0	0
Total	10394	1511	11905

Table 2. density wise grouping of the districts and adult juvenile ratio in the districts

Density class	District	Total sarus	A:J ratio
absent	Allahabad	0	0
absent	Ambedkarnagar	0	0
absent	Bagpat	0	0
absent	Bhadohi	0	0
absent	Chandauli	0	0
absent	Ghazipur	0	0
absent	Jaunpur	0	0
absent	Jyotibaphulenagar	0	0
absent	Mau	0	0
absent	Muzaffarnagar	0	0
absent	Saharanpur	0	0
absent	Sonbhadra	0	0
absent	Varansi	0	0
absent	Mirzapur	0	0

very low	Azamgarh	2	0
very low	Mahoba	4	0
very low	Lalitpur	4	0
very low	Faizabad	6	0
very low	Gautambudhnagar	6	0
very low	Jalaun	6	0
very low	Lucknow	8	0
very low	Jhansi	10	20
very low	Merrut	15	0
very low	Deoria	20	10
very low	Gonda	26	4
very low	Rampur	26	19
very low	Kushinagar	27	0
very low	Badaun	30	17
very low	Pratapgarh	31	0
very low	Hamirpur	45	0
very low	Sultanpur	47	6
very low	Muradabad	48	21
very low	Bijnor	49	6
very low	Agra	49	2
very low	chitrakut	50	20
low	Balrampur	56	0
low	Bahraich	58	21
low	Ghaziabad	68	50
low	Banda	71	0
low	Kanpur	77	13
low	Ballia	83	0
high	Basti	107	10
high	Bareilly	108	39
high	Farrukhabad	108	0
high	Gorakhpur	108	13
high	Kannauj	116	6
high	Fatehpur	172	6
high	Bulandshahar	180	1
high	Mathura	186	2
high	Santkabirnagar	211	19
high	Barbanki	214	6
high	Sidharthnagar	224	14
high	Pilibhit	224	6
high	Firozabad	225	6
high	Khirilakhimpur	237	8
high	Unnao	238	20
high	Raibereilly	256	2

high	Sitapur	270	6
high	Mahamayanagar	275	2
high	Aligarh	297	18
high	Maharajganj	320	13
high	Kashiramnagar	332	65
high	Hardoi	341	7
high	Shajehanpur	482	10
very high	Kanpurdehat	580	8
very high	Auraiya	652	10
very high	Etah	828	47
very high	Etawah	1512	8
very high	Mainpuri	2180	6
Total		11905	13

Perusal of adult and juvenile ratio indicates that the state average is 13. This could be considered as a healthy indicator of growth in the state at overall scenario since one of the findings states that adult juvenile ratio in sarus between 10 and 15 is an indication of good growth rate. However, district wise fragmented picture needs a serious consideration since adult juvenile ratio varied from 1 to 65. There are certain districts which fall outside the lower range of this ratio.

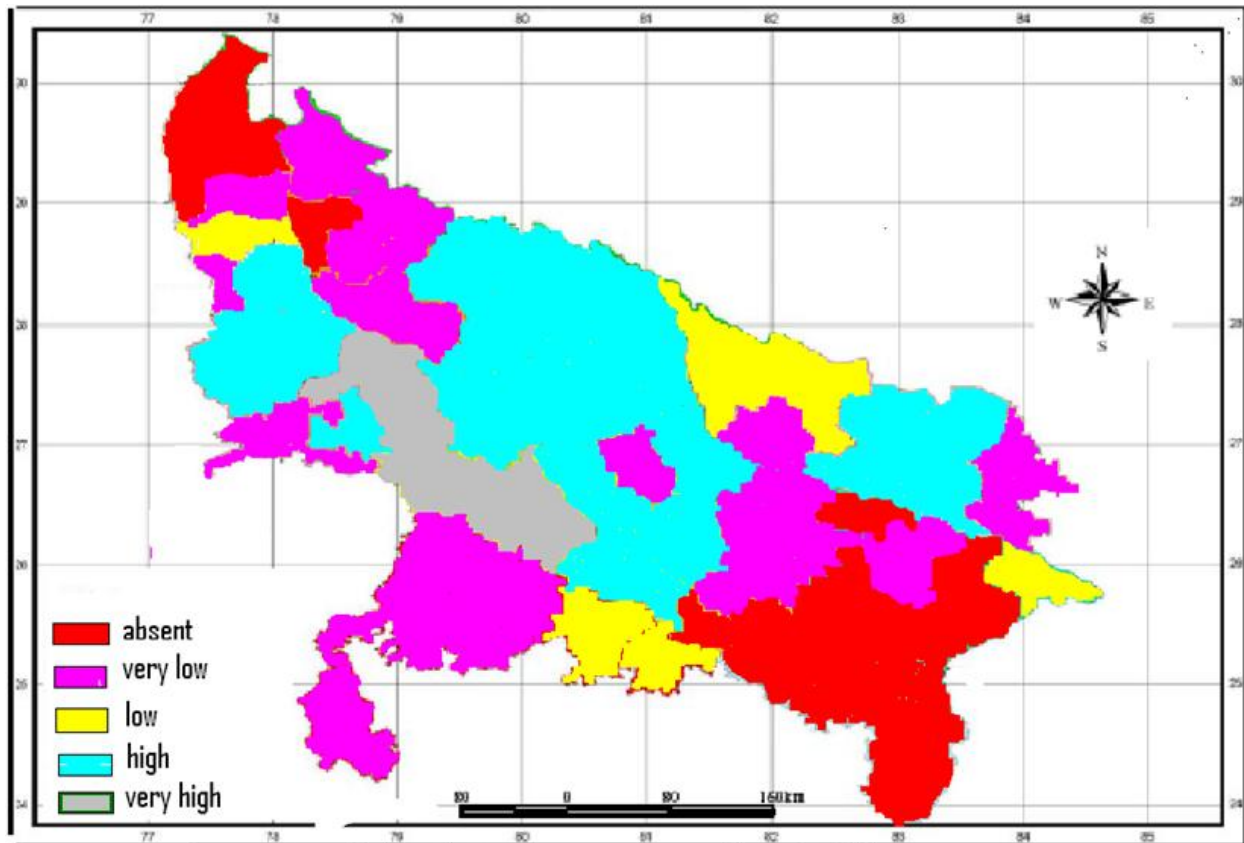


Figure 3 : Distribution of sarus in the state by artificial class

Conclusion:

Although further data need to be collected on temporal basis and robust conclusion needs to be drawn, there is some initial indication which should be looked into from the management point of view. The districts which have lower than 10 adult juvenile ratio should be taken up on top priority basis for curative as well as preventive measures to increase in sarus number, the districts which have this ratio between 10 and 15 should be taken up for preventive measures to stop decline in sarus number and those having the ratio more than 15 lighter prevention measures should be taken up at least to maintain the number.