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CRANE CONSTITUENCIES

Important Sarus Wetland Sites in the Agricultural Landscape of Eastern Uttar Pradesh

2016

B.C. Choudhury, Samir Kumar Sinha, Arshad Hussain

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Wildlife Trust of India (WTI) is a leading Indian nature conservation organisation committed to the service of nature. Its mission is to conserve wildlife and its habitat and to work for the welfare of individual wild animals, in partnership with communities and governments. WTI's team of 150 dedicated professionals work towards achieving its vision of a secure natural heritage of India, in six priority landscapes, knit holistically together by seven key strategies or Big Ideas.

Tata Trusts are amongst India's oldest, non-sectarian philanthropic organisations that work in several areas of community development. Tata Trusts seek to be catalysts in development through giving grants to institutions in the areas of Natural Resources Management, Rural Livelihoods, Urban Livelihoods & Poverty, Education, Enhancing Civil Society and Governance, Health and Media Arts, Crafts and Culture.

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Preface

One of the Big Ideas of WTI is simple in its statement but extraordinarily ambitious in its vision. The idea is to secure critical habitats outside the traditional protected area system, especially habitat linkages, wetlands, grasslands, community reserves, important bird areas and sacred groves, thereby increasing the effective protected area of India by 1%. Currently India protects nearly 6% of its land under its protected area system. Increasing this by 1% is no small feat. Of the 3,287,263 sq. km. of land under the Indian flag, we would need to bring under protection nearly 33,000 sq. km. The elephant corridors of India came under the first category of habitat linkages, the Garo green spine under the community reserves category and then WTI has helped the government in declaring new tiger reserves and create new montane reserves. We have only once helped the government of Jammu and Kashmir in declaring new wetland reserves and in fact touched the whole freshwater aquatic regime only once earlier in saving the habitat of the tallest Indian bird, the sarus crane in Etawah and Mainpuri through litigation. That was when it was about to be drained for a housing project. The Uttar Pradesh government acted promptly to save its State Bird and withdrew the project, proactively formed the Sarus Protection Society of Uttar Pradesh and started conservation of the bird in western UP, its stronghold.

The vision of WTI slowly then crept eastward. Nobody was talking of the sarus in eastern Uttar Pradesh; not the conservation community in India, not the crane conservation community globally, not even the UP Forest Department. The critical catalyst in the game was a trusted friend, partner and donor, Abhay Gandhe of the Tata Trusts. The Trusts funded a large number of agricultural development projects in eastern UP and they gave us a clue on the significant numbers of cranes that existed on the farmlands. It is well known that destruction of wetlands pushes the species into rice paddies which resemble the near natural habitat of the crane. Here, it seeks the farmers' support in protection of their nests, eggs and chicks against damage and poaching. Could we not help protect the species with the help of the NGOs working with Tata Trusts on agriculture, asked Abhay. WTI and Tata Trusts chalked out a conservation plan for the species in the region by documenting its presence, protecting nests and organizing communities to volunteer for sarus conservation. We found that although sarus uses agricultural lands extensively, they nest preferably near or inside a wetland. Herein came the need to identify such wetlands, hitherto unprotected perhaps but critical for the sarus. The result of this two year project is here - 30 such important wetlands spread across 16 districts in the region have been identified as Important Sarus Wetland Sites. It is clear that this wetland mosaic— some natural, others man made agricultural ones needs to be maintained with the active involvement of farmers and other stakeholders. This publication is the first step towards ensuring the existence of these wetlands. We hope it will further pave out a road towards improving, maintaining and conserving the constituencies of the crane.

In addition, the protection of these wetlands will drive us towards the habitat securement goal of ours. The 30 wetlands occupy an area of about 100 sq km (9561 ha). Of this about 75% is hitherto unprotected. If the government of UP protects them, WTI would have moved that much closer to its aim of protecting 1% of India.

Vivek Menon
Executive Director, WTI

Acknowledgements

Wildlife Trust of India (WTI) is grateful to Dr. Rupak De, Principal Chief Conservator of Forests (Wildlife) and Chief Wildlife Warden, Uttar Pradesh, for granting necessary permissions for implementation of the project. WTI also wishes to place on record the information and field support provided to the organization's staff by the various Divisional Forest Office staff in Eastern Uttar Pradesh.

WTI is thankful to all the grassroots-level non-governmental organizations and partners of Tata Trusts for their active support and participation in the project, as also the active involvement of various volunteers in the districts that helped complete the work.

We owe much to the Gram Pradhans and other knowledgeable people in the villages for the information provided by them regarding the seasonal use of the wetlands by sarus and agriculturist, fishers and others.

The project on conservation of sarus cranes in eastern Uttar Pradesh was supported by Tata Trusts and UP Forest Department.

Executive Summary

The sarus crane (*Antigone antigone*), the only resident breeding crane in India, is chiefly distributed in few northern states of the country. The north Indian state of Uttar Pradesh remains the key occurrence site with a population estimated at over 6,000 individuals (Sundar, 2008) and sarus holds the status of State Bird of Uttar Pradesh. A survey by Wildlife Institute of India has recorded 73.04% of the sarus population of Uttar Pradesh only in four districts namely Mainpuri, Etawah, Etah and Aligarh. In other 35 districts of the state, the species is sparsely distributed and the density is low. The sarus crane is increasingly being forced into agricultural fields because of the deterioration and destruction of its natural wetland habitat all over its distribution range in India (Mukherjee, 1999, Sundar *et al.,* 2000).

The flooded paddies would provide conditions that are somewhat similar to certain natural wetland habitats preferred by sarus. Inland wetlands amid croplands or agricultural wetlands – not including croplands such as flooded rice paddies, but only discrete wetlands recognised as lakes, ponds, and oxbow lakes – tend to be small and isolated, but can provide a range of ecological services such as groundwater recharge, and also ensure the preservation of biodiversity (Semlitsch and Bodie, 1998; Leibowitz, 2003). Though such small wetlands are critical for species like sarus, who prefer either wetland-agriculture land margin or wetlands for nesting, these wetlands hardly get any focus as far as their preservation for biodiversity conservation is concerned. These small wetlands are neither part of larger landscape level conservation nor given the status of Protected Area due to various reasons.

Keeping in mind the importance of such embedded wetlands in agricultural landscape, WTI conducted a study in selected districts of eastern Uttar Pradesh. The study was aimed at:

a. Identifying and documenting the wetlands as important sarus habitat in the region;

b. Identifying the socio-economic values of wetlands in the area;

c. Understanding the key conservation issues of the wetlands;

Findings of WTI's project on conservation of sarus cranes in agriculture dominated landscape in eastern Uttar Pradesh revealed that though these birds use agriculture lands for several activities in their life-cycle, 80% of their nesting sites were within four to five kms from wetlands. The fact highlights the importance of Agriculture Land-Wetland Matrix for the tallest flying bird of the world.

The study will help in conserving the wetlands for sarus cranes.

Introduction

B.C. Choudhury

Wetlands, the primary habitat of the sarus crane, are facing various forms of anthropogenic pressure – primarily, reclamation of wetlands for urbanization and agriculture expansion, and intense use of agrochemicals throughout their distribution range. Damage of sarus nests and stealing of eggs as well as electrocutions further add to the threats that the tallest flying bird of the world faces. Its population is largely outside the protected areas, primarily in agriculture dominated landscape dotted with wetlands. Though the rice paddies provide the sarus a near-natural habitat, changing cropping patterns such as shifting from rice to cash crops like sugarcane and mentha have further reduced their habitat. Sarus therefore, are now localized to areas where there is a mosaic of rice cultivation and natural wetlands.

Uttar Pradesh has given the sarus an esteemed position by declaring it as the 'State Bird'. Its abundance is high in Etawah and Mainpuri districts. Though some information is available about the population and status in western Uttar Pradesh and Terai region, such information is lacking in the districts of eastern Uttar Pradesh. This information gap necessitated implementation of a project by the WTI in 2013 with support from Tata Trusts in this region. The project was implemented intensively in 10 districts, of eastern Uttar Pradesh while in eight more districts the activities were limited to surveying the wetlands and identifying the nesting sites of the bird.

A vast tract in the eastern part of the state supports highly diversified agriculture and also suffers from floods in monsoon, resulting in submergence of lands for a significant period which attracts sarus cranes. However, the species still needs wetlands and other water bodies, where they either roost, nest or congregate in drier months just before onset of breeding season. These small wetlands are neither part of the larger landscape level conservation priority nor given the status of protected area due to various reasons leading to lack of impetus for conservation of their biodiversity values. Identification, documentation and protection of such critical water bodies are crucial for conservation of the wetland biodiversity in general and sarus in particular in this region.

With this background, WTI-Tata Trusts' project surveyed 18 districts in eastern Uttar Pradesh namely; Pilibhit, Shahjahanpur, Lakhimpur-Kheri, Sitapur, Bahraich, Brabanki, Faizabad, Gonda, Balrampur, Siddharthnagar, Basti, Sant Kabirnagar, Maharajganj, Kushinagar, Deoria, Shrawasti, Sultanpur and Pratapgarh, and identified 30 such wetlands across 16 districts, which are primarily congregation and breeding sites of sarus and has named them as Important Sarus Wetland Site (ISWS) of eastern Uttar Pradesh. The ISWS report, prepared after field surveys in consultation with the local forest department staff, grassroots-level NGOs, Panchayati Raj institutions– includes a basic fact-sheet on each wetland site. The Tata Trusts are investing significantly on sustainable agriculture development and overall conservation of the agricultural ecosystems of northern flood plains. The report will help in highlighting the importance of these wetlands for sarus cranes in the landscape and help the Forest and Wildlife Department of the state to provide appropriate conservation measures.

Methods

WTI is working in eastern Uttar Pradesh in close association with 26 grassroots organizations (partners of Tata Trusts) working for livelihood improvement of farmers through agriculture interventions. The organizations working in 10 districts with about 14,000 farmers gave first hand information about wetlands being used by sarus crane in their area of operation. Such wetlands were also surveyed in 2013 as part of sarus population estimation at congregation sites in the districts.

Local Forest Department officials were consulted in many districts to procure information about the presence of such wetlands in their respective areas. All such enlisted wetland sites were visited by the WTI team and desired information in a pre-designed data sheet was collected from locals through focused group discussions. Information on the location and area of the wetland, expanse of the wetland during the lean season, socio-economic activities in and around the wetland, use of the wetland by sarus and threats to the wetlands were collected during the survey. Information regarding land ownership was also collected from the *Gram Pradhan* (Village Head)

or other members of gram panchayats from respective villages.

Wetland use by sarus cranes was categorized as:

a) Congregation site: the site actively used by sarus round the year and during the lean season;
b) Roosting site: the site primarily used as roosting ground by the crane;
c) Foraging site: the site primarily used as foraging ground by the species; and
d) Nesting site: the site used for nesting by the species.

The districts covered in the survey were Pilibhit, Shahjahanpur, Lakhimpur-Kheri, Sitapur, Bahraich, Barabanki, Faizabad, Gonda, Balrampur, Siddharthnagar, Basti, Sant Kabir Nagar, Maharajganj, Kushinagar, Deoria, Shrawasti, Sultanpur and Pratapgarh (see map in Figure 1).

The wetlands in the study did not include water bodies in terrestial wildlife Protected Areas. Total area and number of wetlands in these 18 districts have been depicted in Figure 2.

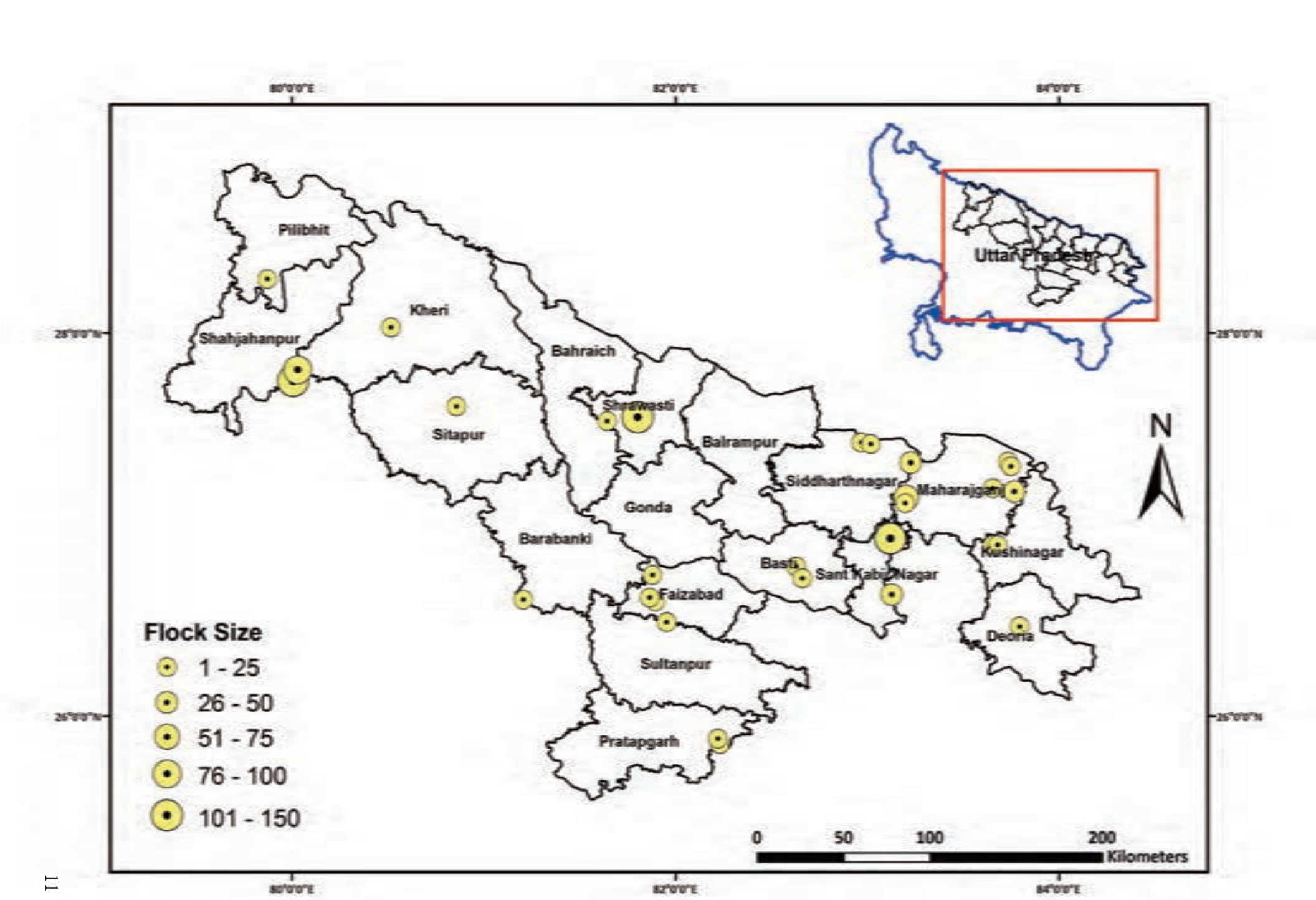

Figure 1: Study area map with sarus crane flock size in important wetlands

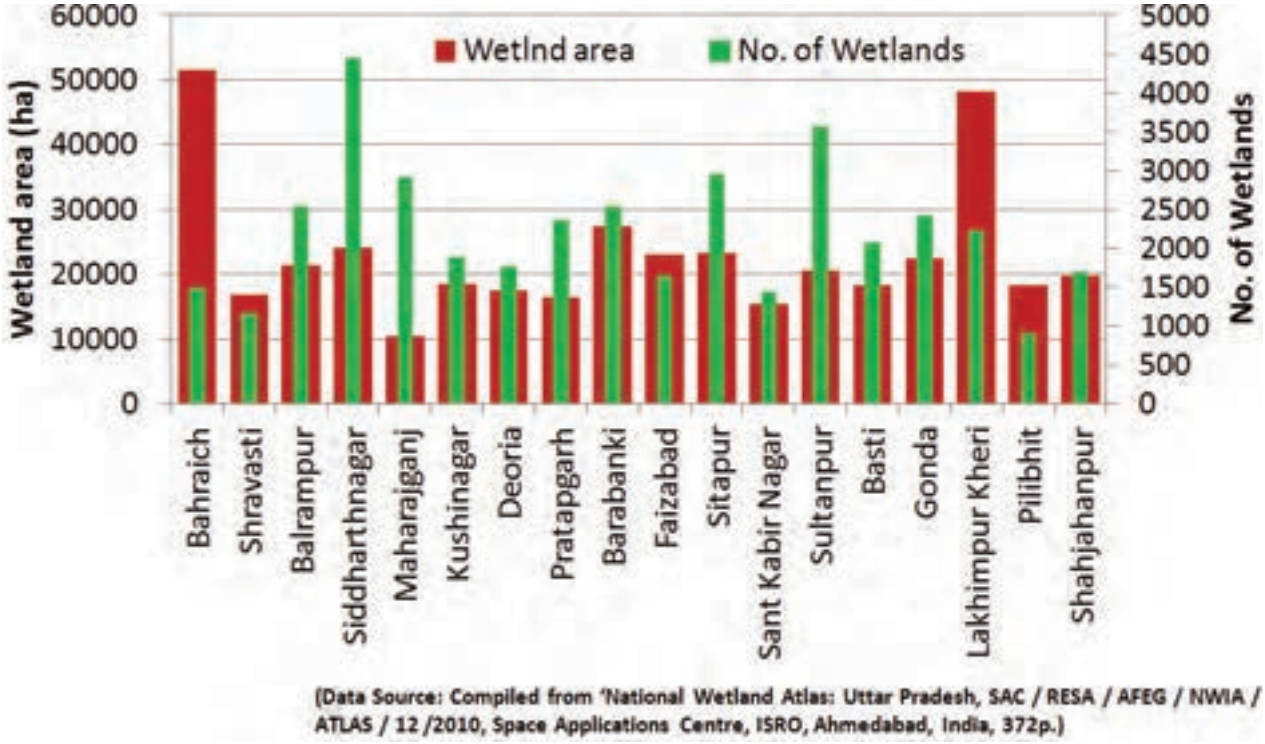

Figure 2: Area and number of wetlands in the surveyed districts in eastern Uttar Pradesh

Sarus cranes in a wetland in Basti District of eastern Uttar Pradesh

SALIENT FINDINGS

This publication reports 30 important wetlands for sarus conservation i.e. Important Sarus Wetland Site (ISWS). These wetlands are distributed in 16 districts of eastern Uttar Pradesh. Locations of the wetlands have been shown in Google Earth image (Figure 3). Salient characteristics of the wetlands are given in Table 1. Size of the wetland varied from 10 to 2900 ha. Highest number of ISWS was recorded in Maharajganj district.

Number of sarus cranes and their nests during 2013-2015 in these ISWS has been given in Table 2 following the fact sheets of the wetlands.

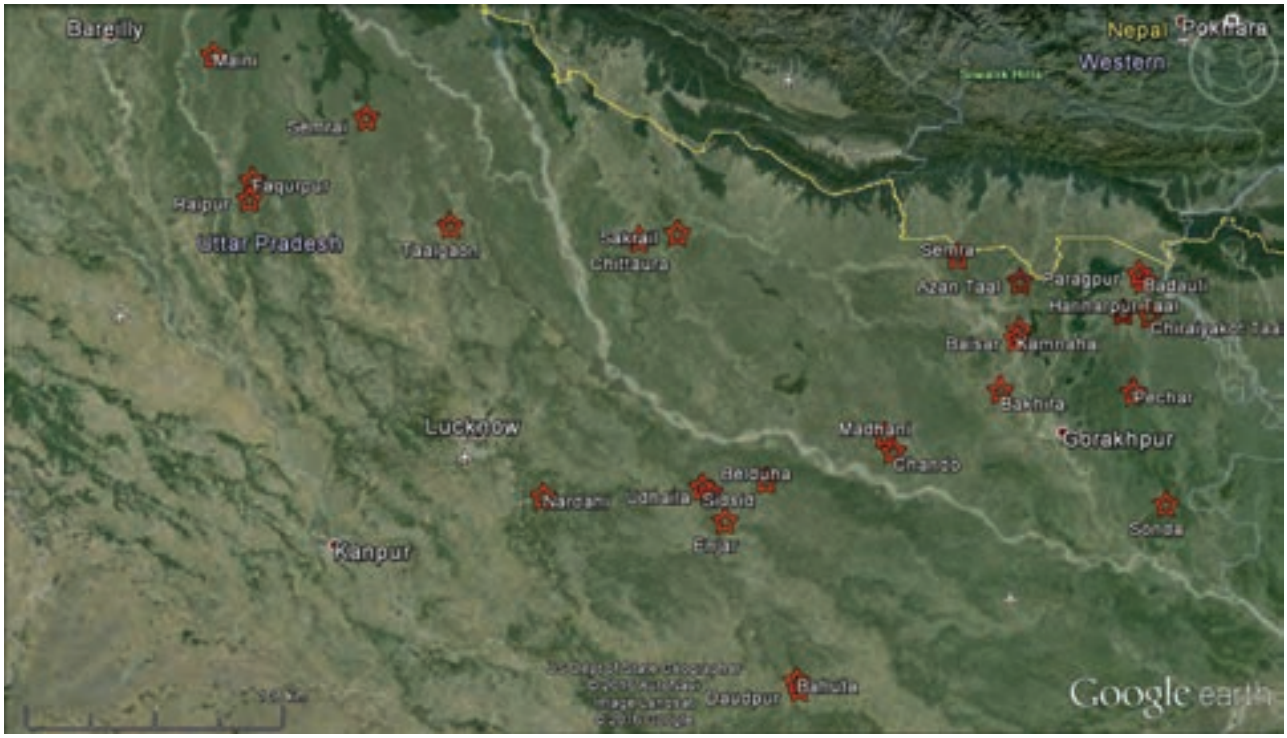

Figure 3: Location of Important Sarus Wetland Sites (ISWS) shown on Google Earth image of eastern Uttar Pradesh

Table 1: Salient features of the surveyed wetlands

S. No.	District	Name of wetland	Area in hectare	Geographical locations	Importance for sarus
1	Maharajganj	Baisar Jheel	230	$27^0$08.505' N $83^0$12.316' E	Congregation and nesting
2	Maharajganj	Kamnaha Jheel	210	$27^0$06.749' N $87^0$11.975' E	Congregation and nesting
3	Maharajganj	Paragpur Jheel	100	$27^0$19.851' N 83^0.44.071' E	Congregation and nesting
4	Maharajganj	Badauli Bankatti Jheel	110	$27^0$18.300' N 83^0 45.048' E	Congregation and nesting
5	Maharajganj	Chiraiyakot Taal	48	$27^0$10.444' N $83^0$46.210' E	Congregation and nesting
6	Maharajganj	Hariharpur Taal	81	$27^0$11.445' N 83^0 39.412' E	Congregation and nesting
7	Faizabad	Bisauli Jheel	250	$26^0$44.328' N $81^0$52.815' E	Roosting, foraging and nesting
8	Faizabad	Udhaila Jheel	75	$26^0$36.001' N $81^0$53.754' E	Roosting, foraging and nesting
9	Faizabad	Sidsid Jheel	85	$26^0$37.230' N $81^0$51.877' E	Congregation and nesting
10	Pratapgarh	Daudpur Jheel	50	$25^0$51.345' N $87^0$13.911' E	Occasional use, nesting
11	Pratapgarh	Bahuta Taal	30	$25^0$53.057' N $82^0$13.348' E	Occasional use, nesting
12	Sultanpur	Enjar Taal	118	$26^0$29.526' N $81^0$57.229' E	Congregation
13	Basti	Madhani Taal	10	$26^0$46.929' N $82^0$37.843' E	Congregation
14	Basti	Chando Taal	650	$26^0$43.331 N $82^0$39.769' E	Congregation
15	Sant Kabir Nagar	Bakhira Jheel	2900	$26^0$55.678' N $83^0$07.324' E	Congregation and occassional nesting

16	Sant Kabir Nagar	Belduha Taal	110	26^{0}38.143' N 83^{0}07.812' E	Congregation and nesting
17	Siddharthnagar	Semra Taal	108	27^{0}25.763' N 82^{0}58.215' E	Congregation and occassional nesting
18	Siddharthnagar	Masai Sagar Jheel	42	27^{0}25.332' N 83^{0}01.199' E	Congregation and nesting
19	Siddharthagar	Banaliya Taal (Azane Taal)	61	27^{0}19.310' N 83^0 13.430' E	Congregation and nesting
20	Deoria	Sonda Taal	26	26^{0}28.233' N 83^{0}47.723' E	Congregation and occassional nesting
21	Bahraich	Chittaura Jheel	1039	27^{0}32.574' N 81^{0}38.628' E	Congregation and nesting
22	Shrawasti	Sakrail Taal	90	27^{0}33.622' N 81^{0}48.243' E	Congregation and nesting
23	Shahjahanpur	Raipur Jhaber Jheel	100	27^{0}44.984' N 80^{0}00.421' E	Congregation
24	Shahjahanpur	Faqurganj Jheel	199	27^{0}48.571' N 80^{0}01.716' E	Congregation and nesting
25	Pilibhit	Maini Jhaber Jheel	49	28^{0}16.982' N 79^{0}52.251' E	Congregation and nesting
26	Lakhimpur-Kheri	Semrai Taal	150	28^{0}01.826' N 80^{0}30.957' E	Congregation and nesting
27	Sitapur	Taalgaon Taal	90	27^{0}37.103' N 80^0 51.408' E	Congregation and occassional nesting
28	Barabanki	Nardahi Taal	35	26^{0}36.552' N 81^{0}12.381' E	Roosting and nesting
29	Kushinagar	Berhara Taal	15	26^{0}53.717' N 83^{0}39.251' E	Congregation and nesting
30	Kushinagar	Pachar Taal	2500	26^{0}53.678' N 83^{0}40.902' E	Congregation and nesting

Fact Sheets: Important Sarus Wetland Sites (ISWS)

Wetlands amidst agricultural land-use have a critical role in sustaining wetland dependent species like sarus crane, which is forced to move towards agricultural fields that provide near-habitat like ecological set-up, such as rice fields. However, these agricultural lands are not substitutes to wetlands and they rather supplement the wetlands as sarus habitat. Thus, conservation of such wetlands is important for conserving the aquatic biodiversity, and at the same time existence and maintenance of these water bodies is critical for water security for farmers and other stakeholders.

This study has:

1. Identified such wetlands and compiled relevant information highlighting their extent and use by farmers as well as sarus cranes;

2. Identified threats that each studied wetland faces;

3. Identified importance of conservation of these wetlands.

The report has been prepared with an angle to foster sarus conservation through securing and conserving their natural habitat in agriculture dominated landscape. Participation of primary stakeholders was ensured in the process of compiling the document.

The study and compilation would help in strengthening conservation efforts for wetlands and sarus. Some of these ISWS are strong contenders for being declared as 'Conservation or Community Reserves' within the scope of Wild Life (Protection) Act, 1972. However, many ISWS can be conserved by involving local farmers/ villagers by making them aware about the values of these sites and the detrimental effects of unsustainable utilization of the wetlands on their livelihood and ecological conditions.

Thus, the document would help in conserving the State Bird of Uttar Pradesh in eastern part of the State, which has never been considered as a stronghold of sarus crane population.

CHAPTER I
Maharajganj District

Baisar Jheel

1. **Name and size of the wetland:** Baisar Jheel is an oxbow lake spread across about 230 ha.

2. **Location details**

a. Administrative location:

District: Maharajganj
Block: Pharenda
Panchayat: Baisar
Village: Baisar
Forest Division: Gorakhpur
Forest Range: Pharenda

b. Geographical coordinates:

$27^0$08.505' N / $83^0$12.316' E

3. **Water spread:** During the lean season, the Baisar wetland shrinks by almost 90% of the total expanse.

4. **Status of the land (ownership):** About nine ha of the wetland belongs to the government while the rest is under private ownership.

5. Wetland use by sarus: It is an important sarus congregation and nesting site. The birds use the wetland round the year. During the survey, 67 birds were sighted in the wetland. Locals reported 6-7 nests in 2013. In 2014 and 2015 there were three and one sarus nests respectively.

6. Socio-economic values: Farming and cattle grazing is practiced by villagers in the wetland during lean season.

7. Cropping pattern around the wetland: Wheat and rice are the main crops grown around the wetland.

8. Other values of the wetland: Apart from biodiversity and economic values, there is little other value associated with the wetland.

9. Anthropogenic activities in and around the wetland: Farming is the main activity around the wetland.

10. Threats: There is no direct threat to sarus in the wetland but discussion with villagers revealed that they use chemical pesticide and fertilizer in large quantities. This may have indirect adverse effects on the species.

11. Necessity for wetland conservation: It is one of the most important wetlands in the region considering its usage by sarus cranes. This area sees intense farming practices and therefore it is important to protect the wetland from adverse farming activities and wetland use.

Figure 4: Google Earth image of Baisar Jheel, Maharajganj District


Sarus cranes in Baisar Jheel

Kamnaha Jheel

1. Name and size of the wetland: Kamnaha Jheel is spread across 210 ha.

2. Location details:

a. Administrative location

District: Maharajganj
Block: Pharenda
Panchayat: Kanapar
Village: Kamnaha
Forest Division: Gorakhpur
Forest Range: Pharenda

b. Geographical coordinates:

$27^0$06.749' N / $87^0$11.975' E

3. Water spread: In lean season, the Kamnaha wetland shrinks by about 90% of the total area.

4. Status of the land (ownership): About 81 ha is owned by the state government (Gram Samaj land) while remaining portion of the wetland is under private ownership.

5. Wetland use by sarus: The wetland is used by sarus cranes throughout the year, but their number increases during rainy season. During field visit, the team recorded 19 sarus. No nests were recorded in 2015,

6. Socio-economic values: The wetland is used for fishing, *Kamalgatta* (lotus stem) collection, grazing and farming.

7. Cropping pattern around the wetland: The villagers mainly grow rice and wheat around the wetland.

8. Other values of the wetland: Other than biodiversity, ecological and economic values of the wetland, there is no other striking value of the wetland for the villagers.

9. Anthropogenic activities in and around the wetland: Farming, fishing and *Kamlagatta* (lotus stem) collection are the key activities in and around the wetland.

10. Threats: There is no report of eggs stealing or poaching of sarus cranes or other bird species, but high-tension power line passing through to the wetland is a major threat. Farming and fishing activities during the rainy season disturb breeding.

11. Conservation importance of the wetland: The wetland is a sarus congregation as well as nesting site and needs to be protected from anthropogenic threats.

Figure 5: Google Earth image of Kamnaha Jheel, Maharajganj District


Sarus cranes near Kamnaha Jheel, Maharajganj District

Paragpur Jheel

1. Name and size of the wetland: Paragpur Jheel is spread across 100 ha.

2. Location details

a. Administrative location:
District: Maharajganj
Block: Nichlol
Panchayat: Paragpur
Village: Tikulahiyan and Paragpur
Forest Division: Maharajganj
Forest Range: Nichlol

b. Geographical coordinates:
$27^0$19.851' N / 83^0.44.071' E

3. Water spread: Paragpur Jheel shrinks by almost 10% during the lean season.

4. Status of the land (ownership): About 60 ha is under the private ownership while rest of the 40 ha wetland area is owned by the state government.

5. Wetland use by sarus: It is a sarus congregation as well as nesting site. During field survey, 20 sarus were recorded from the wetland. Villagers reported the presence of seven sarus nests in 2013, while in 2014 and 2015 eight and three nests, respectively were recorded.

6. Socio-economic values: The wetland is used for farming, cattle grazing, and aquaculture. On the government owned land, water chestnut is cultivated by farmers.

7. Cropping pattern around the wetland: Wheat and rice are the main crops cultivated around the wetland. Mustard, peas, sugarcane and pearl millet are also cultivated in the region.

8. Others values of the wetland: Apart from ecological, economic and biodiversity values, there is no other important value associated with the wetland.

9. Anthropogenic activities in and around the wetland: Farming, aquaculture and grazing are the main activities in and around the wetland.

10. Threats: There is no direct threat to sarus cranes, but round the year fishing causes disturbance in the wetland.

11. Conservation importance of the wetland: It is a sarus congregation and nesting site and needs to be conserved.

Figure 6: Google Earth image of Paragpur Jheel, Maharajganj District


View of Paragpur Jheel

Badauli Bankatti Jheel

1. Name and size of the wetland: Badauli Bankatti Jheel is spread across 110 ha.

2. Location details:

a. Administrative location

District: Maharajganj
Block: Nichlol
Panchayat: Badauli
Village: Bankatti
Forest Division: Maharajganj
Forest Range: Nichlol

b. Geographical coordinates:

$27^0$18.300' N / $83^0$45.048' E

3. Water spread: Badauli Bankatti wetland shrinks by about 10% in the lean season.

4. Status of the land (ownership): Of the entire wetland area, 62 ha is under private ownership while rest of the land (48 ha) is owned by the state government.

5. Wetland use by sarus: The wetland is used by sarus throughout the year, however, their numbers go down during the lean season. At the time of survey, 10 sarus were sighted, while villagers reported two nests in 2013. In 2014 and 2015 two nests in each year were recorded.

6. Socio-economic values: The wetland is used for fishing and fodder collection. *Kamalgatta* (lotus stem) is also collected from the wetland.

7. Cropping pattern around the wetland: Wheat and rice are the main crops cultivated around the wetland. Sugarcane is also being cultivated by some farmers, but area under sugarcane cultivation is very less.

8. Other values of the wetland: There are no striking values of the wetland other than ecological and economic values.

9. Anthropogenic activities in and around the wetland: Farming, fishing, aquaculture and fodder collection are key activities in and around the wetland.

10. Threats: There is no direct threat to sarus cranes, but *Kamalgatta* (lotus stem) collection and fishing cause disturbance in the habitat.

11. Conservation importance of the wetland: Since the wetland is a sarus nesting and congregation site, it needs to be conserved. Also, it is of immense ecological and economic significance for the villagers.

Figure 7: Google Earth image of Badauli Bankatti Jheel, Maharajganj District

Sarus cranes near Badauli Bankatti Jheel

Chiraiyakot Taal

1. Name and size of the wetland: Chiraiyakot Taal is spread across 48 ha area.

2. Location details

a. Administrative location

District: Maharajganj
Block: Siswa Bazar
Panchayat: Sabeya
Village: Chiraiyakot
Forest Division: Maharajganj
Forest Range: Nichlol

b. Geographical coordinates:
$27^0$10.444' N / 83^0 46.210' E

3. Water spread: Chiraiyakot wetland shrinks to about 10% of the total area in summer.

4. Status of the land (ownership): The entire wetland area is owned by villagers.

5. Wetland use by sarus: The bird uses the wetland round the year, however in dry season their number is reduced. At the time of survey, 30 sarus were sighted in the wetland. It is also a nesting site. In 2014 there were two nests in the wetland. Villagers reported seven nests in 2015.

6. Socio-economic values: The entire wetland area is used for aquaculture and agriculture activities.

7. Cropping pattern around the wetland: Crops around the wetland primarily include wheat and rice. Some farmers have also started sugarcane cultivation but area under sugarcane is very less.

8. Other values of the wetland: There are no striking values of the wetland other than ecological and economic values.

9. Anthropogenic activities in and around the wetland: Farming, fishing, aquaculture and fodder collection are some of the important human activities in and around the wetland. Grazing is done when water dries up.

10. Threats: There is no direct threat to sarus cranes but aquaculture and other anthropogenic activities cause disturbance in the habitat. Disturbance during nesting season has also been reported.

11. Conservation importance of wetland: It is a good habitat for the crane species, and is an important sarus congregation and breeding site in the region. However, the threats need to be addressed through appropriate conservation measures. Awareness among the villagers to protect the nests might yield good results. Also, it is of immense ecological and economic significance for the villagers and thus needs to be protected and conserved.

Figure 8: Google Earth image of Chiraiyakot Taal, Maharajganj District

Sarus crane near Chiraiyakot Taal

Hariharpur Taal

1. Name and size of the wetland: Hariharpur Taal is a large wetland spread across 81 ha area.

2. Location details

a. Administrative location

District: Maharajganj
Block: Mithaura
Panchayat: Hariharpur
Village: Situated in the middle of Motipur/Gobrahiya/Aktaha and Hariharpur
Forest Division: Maharajganj
Forest Range: South Chowk

b. Geographical coordinates:
$27^0$11.445'N / 83^0 39.412' E

3. Water spread: During lean season the wetland shrinks to about 40% of the total area.

4. Status of the land (ownership): The wetland area is owned by government as well as local people. Government owns 33 ha of the wetland while rest of the areas is under private ownership.

5. Wetland use by sarus: The wetland is used by sarus round the year. Number of cranes using the wetland varies seasonally. During the survey 16 cranes were counted in the wetland. Villagers informed large congregation during peak period. In 2015, there were four sarus nests in the wetland.

6. Socio-economic values: The wetland is used for aquaculture and agricultural activities by villagers.

7. Cropping pattern around the wetland: Rice is the main crop in and around Hariharpur Taal. Water chestnut is also cultivated around the wetland but area under its cultivation is very less.

8. Other values of the wetland: There are no striking values of the wetland other than ecological and economic values.

9. Anthropogenic activities in and around the wetland: Farming, fishing and aquaculture are key activities in and around the wetland. Fodder and biomass (for use as fuel) collection is also done during lean season.

10. Threats: There is no direct threat to sarus and other birds in the wetland but encroachment of the wetland for farming is a major issue for the wetland.

11. Necessity of conservation of the wetland: Besides being of economic significance, the wetland is an important sarus congregation and nesting site. Also, it provides habitat to a number of other bird species. These values necessitate conservation of the wetland.

Figure 9: Google Earth image of Hariharpur Taal, Maharajganj District


Horses grazing near Hariharpur Taal

CHAPTER II
Faizabad District

Bisauli Jheel

1. Name and size of the wetland: Bisauli Jheel is a waterlogged area spread across 250 ha.

2. Location details:

a. Administrative location

District: Faizabad
Block: Sohawal
Panchayat: Sarangapur
Village: Bisauli
Forest Division: Faizabad
Forest Range: Faizabad

b. Geographical coordinates:
$26^0$44.328' N / $81^0$52.815' E

3. Water spread: During the lean season the wetland shrinks by about 60%.

4. Status of the land (ownership): Entire area of the wetland is under private ownership.

5. Wetland use by sarus: The wetland is used by sarus for feeding and roosting. During the survey eight sarus cranes were sighted. Villagers informed that number of birds increases during monsoons. In 2015, a single nest was spotted in the wetland.

6. Socio-economic values: The wetland is used by locals for collection of fodder. In dry season, it is used for farming.

7. Cropping pattern around the wetland: Wheat and rice are grown around the wetland.

8. Other values of the wetland: There is no tourism or other value of the wetland apart from its ecological importance.

9. Anthropogenic activities in and around the wetland: Fodder collection, agriculture, and farming.

10. Threats: There is no direct threat to sarus, but intensive farming on the wetland bed is a threat to the wetland.

11. Conservation importance of the wetland: The wetland used to be a sarus nesting site, but in the last few years no breeding of sarus has been reported from here. Human disturbance or change in habitat due to agricultural activities may have led to this. Protection of the wetland through awareness would help in improving the situation.

Figure 10: Google Earth image of Bisauli Jheel, Faizabad District

Sarus crane pair in Bisauli Jheel

Udhaila Jheel

1. Name and size of the wetland: Udhaila Jheel is an oxbow lake spread in 75 ha area.

2. Location details:

a. Administrative location
District: Faizabad
Block: Milkipur
Panchayat: Mohlara
Village: Udhaila
Forest Division: Faizabad
Forest Range: Kumarganj

b. Geographical coordinates:
$26^0$36.001' N / 81^0 53.754' E

3. Water spread: In the lean season, about 75% of the wetland has water.

4. Status of the land (ownership): Of the total area of the wetland, 35.5 ha land is government land while 40 ha land is under private ownership.

5. Wetland use by sarus: During the survey 12 sarus were sighted. Villagers informed regular sighting of the bird in the wetland. No nests were recorded in 2013 and 2014 but in 2015, two nests were observed.

6. Socio-economic values: The wetland is used by locals for fishing, which is a year round activity. Collection of fodder from the wetland is also common. Some villagers also collect *Kamalgatta* (lotus stem).

7. Cropping pattern around the wetland: Rice and wheat are the main crops around the wetland. Some farmers also cultivate sugarcane.

8. Other values of the wetland: Apart from ecological significance, there is no tourism, cultural or historical significance of the wetland.

9. Anthropogenic activities in and around the wetland: Fishing, farming and collection of wetland bio-resources are the key activities in and around the wetland.

10. Threats: Though there is no direct threat to sarus and other birds, but anthropogenic disturbances to exploit the wetland resources – *Kamalgatta* (lotus stem) collection and illegal fishing are some indirect threats to avifauna.

11. Conservation importance of the wetland: The wetland is a good habitat for sarus and other aquatic birds. Sarus nesting has also been reported in the past but the threats need to be addressed through awareness and other conservation measures to make the habitat suitable for sarus breeding.

Figure 11: Google Earth image of Udhaila Jheel, Faizabad District

Sarus crane flying above Udhaila Jheel

Sidsid Jheel

1. Name and size of the wetland: Sidsid Jheel is spread in about 85 ha area.

2. Location details:

a. Administrative location

District: Faizabad
Block: Milkipur
Panchayat: Sidsid
Village: Sidsid
Forest Division: Faizabad
Forest Range: Kumarganj

b. Geographical coordinates:
$26^0$37.230' N / $81^0$51.877' E

3. Water spread: During the lean season, water area shrinks to about 60% as compared to monsoon months.

4. Status of the land (ownership): Of the total area, 45.2 ha land is under private ownership, while 31.3 and 8.4 ha land is owned by Forest Department and Revenue Department, respectively.

5. Wetland use by sarus: The wetland is a sarus congregation site. The villagers informed that they had not been able to locate nests in the wetland due to its large size. However, in 2015 one sarus nest was recorded.

6. Socio-economic values: The wetland is used by locals for aquaculture, fodder collection and dry land farming during the lean season.

7. Cropping pattern around the wetland: Rice and wheat are the primary crops grown in the area. Due to water scarcity, rabi crops are grown to a very limited extent around the wetland.

8. Other values of the wetland: Apart from ecological values, there is no other value such as tourism or cultural that is associated with the wetland. There is a large oxbow lake named Chunahwa Jheel east to Sidsid Jheel. The lake is not much used by sarus but black necked stork (*Ephippiorhynchus asiaticus*) can be seen in the wetland.

9. Anthropogenic activities in and around the wetland: Farming, fishing and aquaculture are the major activities around the wetland.

10. Threats: There is no direct threat to sarus. However, locals reported that hunting of migratory birds was done by outsiders during winters. Pisciculture in the lake also disturbs the birds in general and sarus in particular. Change in cropping pattern is also a long-term threat to in the wetland.

11. Conservation importance of the wetland: The wetland is an important sarus congregation site. The wetland also attracts other bird species, which are threatened due to hunting. It is important to take measures to reduce the threats through conservation activities and to highlight the wetland as an important biodiversity area.

Figure 12: Google Earth image of Sidsid Jheel, Faizabad District


Sarus crane chick near Sidsid Jheel

CHAPTER III
Pratapgarh District

Daudpur Jheel

1. Name and size of the wetland: Daudpur Jheel is spread in 50 ha area.

2. Location details:

a. Administrative location

District: Pratapgarh
Block: Prithiviganj
Panchayat: Patti
Village: Daudpur
Forest Division: Pratapgarh
Forest Range: Patti

b. Geographical coordinates:
25^{0}51.345' N / 87^{0}13.911' E

3. Water spread: During the lean season, 50% of the wetland is under water.

4. Status of the land (ownership): Of the total area of the wetland, 36 ha is under private ownership while 14 ha is owned by the government.

5. Wetland use by sarus: Though, it is a good habitat for sarus, but not much used by them. No nesting has been reported before 2013. But in 2014 and 2015 all together three nests were recorded. In 2015, ten sarus cranes were reported by villagers. Locals informed that few sarus pairs have been seen near the wetland.

6. Socio-economic values: The wetland is leased out by government for aquaculture and fisheries activities. Water chestnut is also cultivated in the jheel.

7. Cropping pattern around the wetland: Sugarcane is the key crop around the wetland. Agahani (summer) rice is also cultivated in some areas.

8. Other values of the wetland: Apart from biodiversity and economic values, there is no other important value associated with the wetland.

9. Anthropogenic activities in and around the wetland: Farming, fishing and aquaculture are main activities in and around the wetland.

10. Threats: There is no direct threat to sarus in the wetland, but fishing and encroachment for dry land farming pose serious threats and cause disturbance in the wetland. Sugarcane farming seems to be an immediate threat to the species.

11. Conservation importance of the wetland: The wetland is important for sarus and other aquatic birds, especially the migratory species. Change in cropping pattern may pose threats to the wetland, thus its conservation is necessary.

Figure 13: Google Earth image of Daudpur Jheel, Pratapgarh District

Bahuta Taal

1. Name and size of the wetland: Bahuta Taal is a waterlogged area and spread across 30 ha. Primarily, it is an agriculture field that gets inundated during the rainy season.

2. Location details:

a. Administrative location

District: Pratapgarh
Block: Prithiviganj
Panchayat: Bahuta
Village: Bahuta
Forest Division: Pratapgarh
Forest Range: Patti

b. Geographical coordinates:
$25^0$53.057' N / $82^0$13.348' E

3. Water spread: During the lean season, the wetland shrinks to about 10% of the total area.

4. Status of the land (ownership): The area is under private ownership.

5. Wetland use by sarus: Sarus cranes use the wetland during rainy season. In 2013, one sarus nest was recorded, while in 2014 and 2015 numbers increased to three in each year.

6. Socio-economic values: It is primarily used as agricultural land.

7. Cropping pattern around the wetland: Sugarcane is the main crop grown around the wetland.

8. Other values of the wetland: Apart from ecological and agricultural values, there is no other important value of the wetland.

9. Anthropogenic activities in and around the wetland: Farming is the key activity in and around the wetland.

10. Threats: Major threat to sarus in the wetland is stealing of eggs by locals. Also, change in cropping pattern and shift from wheat-rice to sugarcane is a threat to the habitat.

11. Conservation importance of the wetland: The wetland is used by sarus in rainy season for nesting and needs to be protected.

Figure 14: Google Earth image of Bahuta Taal, Pratapgarh District


A view of Bahuta Taal

CHAPTER IV
Sultanpur District

Enjar Taal

1. Name and size of the wetland: Enjar Taal is an oxbow lake spread across 118 ha.

2. Location details:

a. Administrative location

District: Sultanpur
Block: Dhanpatganj
Panchayat: Dehli
Village: Enjar
Forest Division: Sultanpur
Forest Range: Sultanpur Sadar

b. Geographical coordinates:
$26^0$29.526' N / $81^0$57.229' E

3. Water spread: During lean season, the water spread shrinks up to 30% of the total area.

4. Status of the land (ownership): Sixty ha land is under the private ownership while rest of the wetland is government land.

5. Wetland use by sarus: The wetland is a sarus congregation site and the bird can be seen throughout the year. In 2015, 12 sarus were recorded. No sarus nests have been reported by the villagers in recent years.

6. Socio-economic values: The villagers use the wetland for dry land farming and cattle grazing in lean season.

7. Cropping pattern around the wetland: Wheat and rice are the key crops cultivated around the wetland.

8. Other values of the wetland: Besides ecological and economic values there is no other important value of the wetland.

9. Anthropogenic activities in and around the wetland: Farming and cattle grazing are the key activities in and around the wetland.

10. Threats: There is no direct threat to sarus cranes and other aquatic birds, but encroachment of the wetland for farming is a major threat.

11. Conservation importance of the wetland: The wetland is a sarus congregation site and it is an important habitat for other bird species, thus initiatives for conservation would be meaningful.

Figure 15: Google Earth image of Enjar Taal, Sultanpur District

A sarus crane pair in Enjar Taal

CHAPTER V
Basti District

Madhani Taal

1. Name and size of the wetland: Madhani Taal is a small oxbow lake of approximately 10 ha area.

2. Location details:

a. Administrative location

District: Basti
Block: Captanganj
Panchayat: Sentha
Village: Majha
Forest Division: Basti
Forest Range: Captanganj

b. Geographical coordinates:
$26^0$46.929' N / $82^0$37.843' E

3. Water spread: During lean season water spread in the wetland is up to 70% of its total area.

4. Status of the land (ownership): Of the total area, four ha land belongs to Revenue Department of UP State Govt, while Forest Department and private owners possess one ha and five ha lands respectively.

5. Wetland use by sarus: sarus cranes use the wetland round the year, but in rainy season number of the bird increases. In lean season, water spread gets reduced and human activities in the wetland increases. In 2015, 13 sarus were recorded. Sarus nesting has not been reported in the wetland.

6. Socio-economic values: The wetland is widely used for fishing and fodder collection by the locals. Farming in the wetland during lean season also contributes to local economy.

7. Cropping pattern around the wetland: Rice is cultivated in the vicinity of the wetland. Sugarcane is cultivated in the farms without flooding.

8. Other values of the wetland: Besides ecological and economic, no other important values are associated with the wetland.

9. Anthropogenic activities in and around the wetland: Fishing, farming and cattle grazing.

10. Threats: There is no direct threat to birds using the wetlands, but fishing activities disturb their congregation, especially during the dry periods.

11. Conservation importance of the wetland: Size of the wetland is small and it is under anthropogenic pressure due to intense farming practices in its catchment and in the drawdown area of the wetland. It also attracts sarus crane and other aquatic birds. Conservation measures would help reduce the indirect threats to birds.

Figure 16: Google Earth image of Madhani Taal, Basti District

Chando Taal

1. Name and size of the wetland: Chando Taal is a riverine wetland of about 650 ha area.

2. Location details:

a. Administrative location

District: Basti
Block: Captanganj
Panchayat: Pokharni
Village: Aathdama
Forest Division: Basti
Forest Range: Captanganj

b. Geographical coordinates:
$26^0$43.331 N / $82^0$39.769' E

3. Water spread: During the lean season, water spread in the wetland is reduced by approximately 80%.

4. Status of the land (ownership): Of the total wetland area, 120.6 ha belongs to the Revenue Department, while 12.5 ha and 516.9 ha area is owned by the UP Forest Department and private owners respectively.

5. Wetland use by sarus: The wetland is occupied by sarus cranes throughout the year, but their number varies in different periods. During the survey, 11 sarus were sighted in one pocket of the wetland.

6. Socio-economic values: Locals use the wetland for fishing, fodder and farming in lean season.

7. Cropping pattern around the wetland: Rice and wheat are the dominant crops in the vicinity of wetland. Sugarcane is also cultivated by few farmers.

8. Other values of the wetland: There is no cultural or eco-tourism importance of the wetland. However, a part of the wetland is declared as bird sanctuary and facilities like watch tower have been created to promote tourism.

9. Anthropogenic activities in and around the wetland: Fishing, fodder collection, cattle grazing and farming are the key human activities in and around the wetland.

10. Threats: There is no direct threat to the wetland and sarus, but fishing in the area disturbs birds.

11. Conservation importance of the wetland: It is a large wetland and it could be a very good sarus congregation and breeding habitat, if anthropogenic activities detrimental to sarus and other aquatic birds are minimized. Awareness activities in the area would highlight the values of the wetland and reduce the threats.

Figure 17: Google Earth image of Chando Taal, Basti District

Sarus cranes in Chando Taal

CHAPTER VI
Sant Kabir Nagar District

Bakhira Jheel

1. Name and size of the wetland: Bakhira Jheel is a lake spread across 2900 ha area. It has been notified as a Sanctuary in 1990.

2. Location details:

a. Administrative location

District: Sant Kabir Nagar
Block: Bakhira
Panchayat: Bakhira
Village: Bakhira
Forest Division: Sohagibarwa Wildlife Division
Forest Range: Maharajganj

b. Geographical coordinates:
$26^0$55.678' N / $83^0$07.324' E

3. Water spread: In lean season, the wetland shrinks to about 38% of the total area. Northern part of the wetland is marshy.

4. Status of the land (ownership): Of the total area, 1046 ha is under private ownership, while the remaining 1854 ha is owned by the government (Gram Samaj land).

5. Wetland use by sarus: Sarus cranes use the wetland round the year. The marshy areas around the wetland are the preferred sites of sarus. During field visit, 170 sarus were recorded in and around wetland. Local fishers informed of the presence of six-seven nests in 2013. No nests were recorded in 2015.

6. Socio-economic values: During lean season, dry land farming is done in some parts of the wetland. Fishing is common. Cattle grazing and fodder collection is also done by locals.

7. Cropping pattern around the wetland: Traditional cereal crops are grown around the wetland.

8. Other values of the wetland: Apart from biodiversity conservation and economic values, the wetland is also important for tourism.

9. Anthropogenic activities in and around the wetland: Farming, fishing, aquaculture and cattle grazing are key anthropogenic activities in and around the wetland.

10. Threats: There is no direct threat to sarus crane, but as per locals, migratory birds are poached in winters. Fishing is also a potential threat.

11. Conservation importance of the wetland: Though the wetland has been declared as a Wildlife Sanctuary, there are several anthropogenic pressures on it. Fishing and poaching of migratory birds are key issues. It is an important habitat for sarus as well as winter migratory birds; hence, it is important to conserve the area/wetland.

Figure 18: Google Earth image of Bakhira Jheel, Sant Kabir Nagar District


Sarus cranes in Bakhira Bird Sanctuary

Belduha Taal

1. Name and size of the wetland: Belduha Jheel is spread across 110 ha area.

2. Location details:

a. Administrative location

District: Sant Kabir Nagar
Block: Kersar
Panchayat: Jhakahi
Village: Jhakahi
Forest Division: Sant Kabir Nagar
Forest Range: Hainsar

b. Geographical coordinates:
$26^0$38.143' N / $83^0$07.812' E

3. Water spread: During lean season only 6-7% area of the wetland is under water.

4. Status of the land (ownership): Private owners have 49 hectare land while rest of the area is under government ownership.

5. Wetland use by sarus: The wetland is used by sarus cranes throughout the year. During field survey, 69 sarus were counted. Local fishermen informed presence of 9-10 sarus nests in 2013. But no nests were recorded in 2015.

6. Socio-economic values: Locals use the wetland for farming, fishing and cattle grazing.

7. Cropping pattern around the wetland: The wetland is surrounded by low-lying areas and only one crop is grown in a year.

8. Other values of the wetland: There is no other important value associated with the wetland other than ecological and economic benefits.

9. Anthropogenic activities in and around the wetland: Farming and fishing are the key human activities around the wetland during the lean season.

10. Threats: There is no direct threat to the wetland and sarus, but fishing is a threat that causes disturbance in the habitat.

11. Conservation importance of the wetland: It is a sarus congregation and nesting site and thus needs to be conserved.

Figure 19: Google Earth image of Belduha Taal, Sant Kabir Nagar District


Sarus cranes in Belduha Taal

CHAPTER VII
Siddharthnagar District

Semra Taal

1. Name and size of the wetland: Semra Taal is spread across 108 ha.

2. Location details:

a. Administrative location

District: Siddharthnagar
Block: Shohratgarh
Panchayat: Semra
Village: Semra
Forest Division: Naugarh
Forest Range: Shohratgarh

b. Geographical coordinates:
$27^0$25.763' N / $82^0$58.215' E

3. Water spread: During lean season, water spread shrinks by almost 50%.

4. Status of the land (ownership): Out of the total wetland area, 70 ha land is under private ownership while rest of the land belongs to the government.

5. Wetland use by sarus: The wetland is used by sarus cranes round the year. During the field survey, 16 sarus were sighted in the wetland. Local fishermen reported five-six nests in 2013. However, in 2014 and 2015 a total of six nests were recorded.

6. Socio-economic values: Farming, fodder collection, cattle grazing and fishing are the key activities for which the wetland is used by locals.

7. Cropping pattern around the wetland: Rice and wheat are the main crops grown in the area. Rabi cultivation is done when water level recedes.

8. Other values of the wetland: There is no other striking value of the wetland apart from ecological and economic values.

9. Anthropogenic activities in and around the wetland: Fishing and farming are the main activities around the wetland.

10. Threats: There is no direct threat to sarus cranes in the wetland, however, fishing in the wetland causes disturbance in the habitat.

11. Conservation importance of the wetland: The wetland is a sarus nesting site, thus it needs to be conserved.

Figure 20: Google Earth image of Semra Taal, Siddharthnagar District


Sarus cranes in Semra Taal

Masai Sagar Jheel

1. Name and size of the wetland: Masai Sagar Jheel is spread across 42 ha.

2. Location details:

a. Administrative location

District: Siddharthnagar
Block: Shohratgarh
Panchayat: Karma
Village: Karma and Masai
Forest Division: Naugarh
Forest Range: Shohratgarh

b. Geographical coordinates:
$27^0$25.332' N / $83^0$01.199' E

3. Water spread: During lean season water spread reduces to six or seven ha.

4. Status of the land (ownership): Of the total area, 34.5 ha is under private ownership while rest of the land belongs to the government.

5. Wetland use by sarus: The wetland is used by sarus cranes all through the year. During field visit eight sarus were sighted on one pocket of the wetland. Local fishermen informed of the presence of three nests in 2013. In 2015, two nests were recorded.

6. Socio-economic values: Dry land farming, fishing and aquaculture are practiced in the wetland.

7. Cropping pattern around the wetland: Wheat and rice are the main crops grown around the wetland.

8. Other values of the wetland: Apart from ecological and biodiversity values, there is no other value associated with the wetland.

9. Anthropogenic activities in and around the wetland: Fishing and farming are the key human activities in and around the wetland. Water chestnut is cultivated by farmers.

10. Threats: In the recent years, stealing of sarus eggs was reported by locals. Luxuriant growth of macrophytes also poses a threat to the sarus habitat.

11. Conservation importance of the wetland: Since the wetland is a sarus nesting site, it needs to be conserved.

Figure 21: Google Earth image of Masai Sagar Jheel, Siddharthnagar District


A view of Masai Sagar Jheel

Banaliya Taal or Azane Taal

1. Name and size of the wetland: Banaliya Taal is also known as Azane Taal and it is spread across 61 ha area.

2. Location details

a. Administrative location

District: Siddharthnagar
Block: Lotan
Panchayat: Azane
Village: Azane and Kapia
Forest Division: Siddharthnagar
Forest Range: Sadar Range

b. Geographical coordinates:
$27^0$19.437' N / 83^0 13.707' E

3. Water spread: In the lean season only 10% of the total area is covered under water, rest portion gets dried.

4. Status of the land (ownership): Of the total area of the wetland, 20 ha land is under the government ownership while rest of the wetland area is owned privately.

5. Wetland use by sarus: The wetland is used by sarus round the year. Altogether 36 sarus cranes were sighted during the survey in winter 2015. According to villagers, sarus number gets reduced during dry season. Villagers informed of the presence of four sarus nests in 2015. During the survey two juveniles were also sighted in the wetland.

6. Socio-economic values: The wetland is primarily used for fishing and agriculture. Sometimes earth is also mined mechanically using excavators. The soil is mainly used for personal work by the villagers.

7. Cropping pattern around the wetland: Rice and wheat are the key crops in the region. Rice farming depends on rainfall and water availability in the wetland. However many farmers also cultivate Agahani (summer) variety of rice on the periphery of the wetland.

8. Other values of the wetland: There are no important values of the wetland other than its ecological and economic significance.

9. Anthropogenic activities in and around the wetland: Farming and fishing are the key activities in and around the wetland. In low water situations, grazing and fodder collection are also done by the villagers.

10. Threats: Encroachment and soil mining in the wetland are the key threats to sarus habitat.

11. Necessity of conservation of the wetland: Congregation and nesting of sarus cranes make the wetland important for conservation of the species.

Figure 22: Google Earth image of Banaliya (Azane) Taal, Siddharthnagar District

A view of Banaliya (Azane) Taal

CHAPTER VIII
Deoria District

Sonda Taal

1. Name and size of the wetland: Sonda Taal is a lake spread across 26 ha.

2. Location details:

a. Administrative location

District: Deoria
Block: Deoria Sadar
Panchayat: Sonda
Village: Sonda
Forest Division: Deoria
Forest Range: Deoria Sadar

b. Geographical coordinates:
$26^0$28.233' N / $83^0$47.723' E

3. Water spread: Water spread in the lean season gets reduced to about 10% of the wetland area.

4. Status of the land (ownership): Of the total wetland area, 25 ha is under private ownership while the rest belongs to the state government (Revenue Department).

5. Wetland use by sarus: According to locals, the wetland is used for nesting by two or three pairs of sarus. It is also a congregation site during the lean water season. In 2015, six sarus were recorded.

6. Socio-economic values: The portion of wetland belonging to Revenue Department is leased out for aquaculture. Fishing is also done in the wetland. It is also a source of fodder for the locals.

7. Cropping pattern around the wetland: Rice and wheat are the main crops around the wetland. However, sugarcane is also cultivated in the vicinity.

8. Other values of the wetland: No other striking value except the ecological values.

9. Anthropogenic activities in and around the wetland: Farming, fishing and fodder collection are the main anthropogenic activity in and around the wetland.

10. Threats: There is no direct threat to sarus and other birds. Change in cropping pattern would have negative effects on sarus cranes.

11. Conservation importance of the wetland: Being a sarus nesting site, the wetland needs to be protected, especially during breeding season.

Figure 23: Google Earth image of Sonda Taal, Deoria District

Sarus cranes near Sonda Taal

CHAPTER IX
Bahraich District

Chittaura Jheel

1. Name, type and size of the wetland: Chittaura Jheel also known as Ashtwarka Jheel is spread across 1039 ha. It is an oxbow lake.

2. Location details:

a. Administrative location

District: Bahraich
Block: Chittaura
Panchayat: Chittaura
Village: Kodri
Forest Division: Bahraich
Forest Range: Bahraich Sadar

b. Geographical coordinates:
$27^0$32.574' N / $81^0$38.628' E

3. Water spread: During rainy season the entire wetland is inundated, while in lean season water spread shrinks to 75% of the lake area. A small river Teri Nadi flows from this lake.

4. Status of the land (ownership): The entire lake is under private ownership.

5. Wetland use by sarus: Presence of sarus in the wetland is reported throughout the year, but their abundance increases during monsoons. According to locals, two pairs of sarus use the wetland every year for nesting. During the field survey, 11 sarus were recorded. Two nests were also recorded in 2015.

6. Socio-economic values: The wetland is used by local communities to collect fuel and fodder besides fishing. Dry land farming and cattle grazing is practices in the lean season.

7. Cropping pattern around the wetland: Traditional farming is done around the wetland. Main crops in the vicinity of the wetland are rice and wheat. Pulses are also cultivated in a small portion.

8. Other values of the wetland: The site is the place where epic fight between King Sukhdeo and Ghazi Syed Salar Masud took place about 200 years ago. A temple complex known as Raja Suheldev Darbar is situated here. Pilgrims take a holy dip in the wetland before visiting the Dargah of Syed Salar Masud at Bahraich.

9. Anthropogenic activities in and around the wetland: Fishing, farming and low scale tourism.

10. Threats: There are no direct threat to sarus and other birds in this wetland. Entry of unauthorised persons is prohibited by the King Sohail Deo Sewa Samiti, that controls the wetland. However, stealing of sarus eggs have been reported recently.

11. Conservation importance of the wetland: The wetland is of ecological and economic significance for the area. It is used by sarus cranes for roosting, feeding as well as nesting. Migratory birds also use the wetland. However, no study has been done on avian fauna of the wetland. A significant level of protection has been accorded to the wetland by the King Sohail Deo Sewa Samiti that primarily helps in preventing encroachments.

Figure 24: Google Earth image of Chittaura jheel, Bahraich District

Sarus crane nesting near Chittaura Jheel

CHAPTER X
Shrawasti District

Sakrail Taal

1. Name and size of the wetland: Sakrail Taal is spread across 90 ha area.

2. Location details:

a. Administrative location

District: Shrawasti
Block: Icona
Panchayat: Gilola
Village: Gilola
Forest Division: Shrawasti, Bhinga
Forest Range: Icona

b. Geographical coordinates:
$27^0$33.622' N / $81^0$48.243' E

3. Water spread: During rainy season the entire wetland is inundated while in the lean season water spread shrinks to 30% of the lake area.

4. Status of the land (ownership): Of the total area, 55 ha is under private ownership while the remaining 35 ha is under government ownership.

5. Wetland use by sarus: sarus cranes use the wetland round the year. It is also a nesting site for the species. Here, 116 sarus were counted in 2015. In 2013, five nests were recorded in the wetland, while in 2014 and 2015, eight and five nests respectively were recorded.

6. Socio-economic values: Local use the wetland for various purposes, including dry land farming in lean season. Fishing and *Kamalgatta* (lotus stem) collection is also prevalent. Cattle grazing and fodder collection are other activities contributing to the economy.

7. Cropping pattern around the wetland: Rice and wheat are the key crops grown around the wetland. Some farmers also cultivate sugarcane and mentha in the vicinity of the wetland.

8. Other values of the wetland: Apart from ecological and economic values, there is no other important value associated with the wetland.

9. Anthropogenic activities in and around the wetland: Fishing, farming and aquaculture are key human activities in and around the wetland.

10. Threats: Stealing of sarus eggs is a direct threat to these birds. Hunting of other bird species during winter months has also been reported. Change in cropping pattern could also affect sarus habitat in future.

11. Conservation importance of the wetland: It is a congregation and nesting site for sarus cranes and needs to be conserved.

Figure 25: Google Earth image of Sakrail Taal, Shrawasti District

View of Sakrail Taal in Shrawasti District

CHAPTER XI
Shahjahanpur District

Raipur Jhaber Jheel

1. Name and size of the wetland: Raipur Jhaber Jheel is spread across 100 ha.

2. Location details:

a. Administrative location

District: Shahjahanpur
Block: Bhawalkhera
Panchayat: Nausia
Village: Raipur
Forest Division: Shahjahanpur
Forest Range: Shahjahanpur Sadar

b. Geographical coordinates:
$27^0$44.984' N / $80^0$00.421' E

3. Water spread: During lean season water spread shrinks to 30-40% of the lake area.

4. Status of the land (ownership): Entire wetland is under private ownership.

5. Wetland use by sarus: It is an important sarus crane roosting and congregation site. During the field survey, 104 sarus were sighted in the wetland. No nesting has been reported in recent years.

6. Socio-economic values: Wetland is used for agricultural activities.

7. Cropping pattern around the wetland: Wheat and rice are cultivated around the wetland. Farmers reportedly use a high quantity of chemical fertilizers and pesticides.

8. Other values of the wetland: Apart from ecological and biodiversity values, there is no other important value of the wetland.

9. Anthropogenic activities in and around the wetland: Farming is done in and around the wetland.

10. Threats: There is no direct threat to sarus cranes in the wetland, but intensive farming and use of agrochemicals pose long-term threat to sarus habitat.

11. Conservation importance of the wetland: The wetland is a sarus congregation site and needs to be conserved.

Figure 26: Google Earth image of Raipur Jhaber Jheel, Shahjahanpur District

Sarus cranes near Raipur Jhaber Jheel

Faqurganj Jheel

1. Name and size of the wetland: Faqurganj Jheel is spread across 199 ha.

2. Location details:

a. Administrative location

District: Shahjahanpur
Block: Bhawalkhera
Panchayat: Pidra sikandrapur
Village: Faqurganj
Forest Division: Shahjahanpur
Forest Range: Shahjahanpur Sadar

b. Geographical coordinates:

$27^0$48.571' N / $80^0$01.716' E

3. Water spread: During rainy season, the entire wetland is inundated. In the lean season, water occupies only 30-35 ha area.

4. Status of the land (ownership): Of the total area, 100 ha land is under private ownership while rest of the wetland area of about 99 ha is owned by the government.

5. Wetland use by sarus: The wetland is used by sarus round the year. During the field visit, 96 sarus were counted. In 2015, two nests were recorded.

6. Socio-economic values: The wetland is used for farming during the lean season while fishing is done by locals during monsoons. The wetland is leased out by the government for fishing.

7. Cropping pattern around the wetland: Wheat and rice are the main crops around the wetland. Some farmers have also started cultivating sugarcane.

8. Other values of the wetland: Other than economic, ecological and biodiversity values, there is no other important value of the wetland.

9. Anthropogenic activities in and around the wetland: Farming and fishing are the key human activities in and around the wetland.

10. Threats: There is no direct threat to sarus, but extensive farming during the lean season may affect the wetland habitat. Agrochemical usage in the adjoining agricultural land and change in cropping pattern can affect sarus and its habitat adversely.

11. Conservation importance of the wetland: It is a sarus congregation site and there is no restriction on activities that have detrimental impact on the wetland. Thus, focus should be on the conservation of these birds. Through conservation efforts, this landscape could turn into a good sarus nesting site.

Figure 27: Google Earth image of Faqurganj Jheel, Shahjahanpur District

A sarus crane near Faqurganj Jheel

CHAPTER XII
Pilibhit District

Maini Jhaber Jheel

1. Name and size of the wetland: Maini Jhaber Jheel is spread across 49 ha.

2. Location details:

a. Administrative location

District: Pilibhit
Block: Bilsonda
Panchayat: Nagwan
Village: Maini
Forest Division: Pilibhit
Forest Range: Bisalpur

b. Geographical coordinates:
$28^0$16.982' N / $79^0$52.251' E

3. Water spread: Maini Jhaber Jheel is reduced by 30% during the lean season.

4. Status of the land (ownership): About 15 hectare of the land is under private ownership while 34 hectare area of the wetland is owned by the government.

5. Wetland use by sarus: Sarus cranes use the wetland round the year with a marginal decline in number during lean season. Two nests were recorded in 2015.

6. Socio-economic values: The wetland is used for fishing and cultivation of water chestnut. The wetland area is leased out by administration for such uses.

7. Cropping pattern around the wetland: Cropping pattern around the wetland has changed in the recent past and farmers have started cultivating cash crops instead of cereals. Sugarcane constitutes major crop around the wetland.

8. Other values of the wetland: Apart from economic and ecological values, there is no other important value associated with the wetland.

9. Anthropogenic activities in and around the wetland: Farming, fishing and water chestnut cultivation are the key activities in and around the wetland.

10. Threats: There is no direct threat to the sarus. But, change in cropping patterns from traditional to commercial farming is a potent threat to the habitat as well as the bird. Fishing and other anthropogenic activities in the wetland also cause disturbance to sarus and other birds.

11. Conservation importance of the wetland: The wetland is a sarus crane nesting site and it is facing direct as well as indirect threats due to anthropogenic activities and change in cropping pattern.

Figure 28: Google Earth image of Maini Jhaber Jheel, Pilibhit District


Fishing activity in the wetland

CHAPTER XIII
Lakhimpur-Kheri District

Semrai Taal

1. Name and size of the wetland: Semrai Taal is spread across 150 ha.

2. Location details:

a. Administrative location

District: Lakhimpur-Kheri
Block: Lakhimpur-Kheri
Panchayat: Rajaro
Village: Semrai
Forest Division: Lakhimpur-Kheri
Forest Range: Mohammadipur

b. Geographical coordinates:
28^{0}01.826' N / 80^{0}30.957' E

3. Water spread: During the lean season, the water body shrinks to about 70%.

4. Status of the land (ownership): Of the total area, 50 ha is under the private ownership, while 100 ha is government land.

5. Wetland use by sarus: It is a sarus congregation and nesting site. In 2015, one nest was recorded.

6. Socio-economic values: The wetland is used mainly for fishing by locals.

7. Cropping pattern around the wetland: Cropping pattern around the wetland has changed from the traditional crops of wheat and rice to

cash crops, mainly sugarcane. Only a few farmers cultivate traditional crops.

8. Other values of the wetland: Very little value other than economic and biodiversity conservation. However, one watch tower has been constructed to promote tourism.

9. Anthropogenic activities in and around the wetland: Farming and fishing are the key activities in and around the wetland.

10. Threats: There is no direct threat to sarus cranes, but intense fishing activities in the wetland poses significant threat to sarus and other wetland birds. For easy fishing, macrophytes in the wetland are cleaned by villagers that distract many avian species.

11. Conservation importance of the wetland: The wetland is of significant size and is also a breeding ground of sarus cranes. Fishing poses a threat to the habitat, therefore, it is important to take appropriate measures to conserve it.

Figure 29: Google Earth image of Semrai Taal, Lakhimpur-Kheri District


A view of Semrai Taal

CHAPTER XIV
Sitapur District

Taalgaon Taal

1. Name and size of the wetland: Taalgaon Taal is spread across 90 ha.

2. Location details:

a. Administrative location

District: Sitapur
Block: Persondi
Panchayat: Gohriyajhar
Village: Taalgaon
Forest Division: Sitapur
Forest Range: Sitapur Sadar

b. Geographical coordinates:
$27^0$37.103' N / $80^0$51.408' E

3. Water spread: Even during the lean season, water spread in the wetland is about 80% of the lake expanse.

4. Status of the land (ownership): Of the total wetland area, government owns 45.3 ha while 44.7 ha is under private ownership.

5. Wetland use by sarus: The wetland is used by sarus cranes throughout the year. However, fishermen have not seen any sarus nest in the last two to three years. As per secondary information, 16-17 sarus cranes use this wetland on regular basis. In 2015, ten sarus and one nest was recorded.

6. Socio-economic values: The wetland is used by locals for fishing and water chestnut cultivation. The wetland is leased out by local revenue department and Gram Panchayat for these purposes.

7. Cropping pattern around the wetland: Rice and wheat are the key crops around the wetland.

8. Other values of the wetland: Apart from ecological and economic value, there is no other significant value of the wetland. Forest department has constructed a watch tower to promote tourism in the area.

9. Anthropogenic activities in and around the wetland: Fishing, farming and aquaculture are the key activities in and around the wetland.

10. Threats: There is no direct threat to sarus in the wetland, but fishing and other anthropogenic activities cause disturbance to sarus and other birds.

11. Conservation importance of the wetland: It is a sarus congregation site and needs to be protected. Keeping in view the increased human activities, it is important to utilize the wetland sustainably.

Figure 30: Google Earth image of Taalgaon Taal, Sitapur District


A view of Taalgaon Taal

CHAPTER XV
Barabanki District

Nardahi Taal

1. Name and size of the wetland: Nardahi is an oxbow lake spread across 35 ha.

2. Location details:

a. Administrative location

District: Barabanki
Block: Haidargarh
Panchayat: Nardahi
Village: Nardahi
Forest Division: Barabanki
Forest Range: Haidargarh

b. Geographical coordinates:
$26^0$36.552' N / $81^0$12.381' E

3. Water spread: Water spread in Nardahi wetland shrinks to about 70% of the total area during the lean season.

4. Status of the land (ownership): About 15 ha is under private ownership while rest of the wetland is government owned.

5. Wetland use by sarus: The wetland is a breeding and roosting site for sarus crane and it is used by the bird round the year. In 2013, three nests were reported by villagers. In 2015, three nests were recorded.

6. Socio-economic values: The wetland is used for fishing and cultivation of water chestnut. The land is leased out for the purposes by the state revenue department.

7. Cropping pattern around the wetland: Sugarcane is the main crop cultivated around the wetland. Very few farmers have maintained the traditional rice-wheat cropping pattern. Some farmers have started growing mentha.

8. Other values of the wetland: Besides ecological, there is no other important value associated with the wetland.

9. Anthropogenic activities in and around the wetland: Fishing and farming

10. Threats: Villagers informed that locals use carbofuran pesticide for fishing in the lake which causes death of aquatic birds. Stealing of eggs was also reported by locals. Changing crop patterns – from cereal crops to commercial crops like sugarcane and mentha–pose threats to sarus habitat.

11. Conservation importance of the wetland: The wetland provides resources for livelihood to locals. It attracts many birds as informed by local farmers. It is a sarus congregation and breeding site.

Figure 31: Google Earth image of Nardahi Taal, Barabanki District

A sarus crane with eggs

CHAPTER XVI
Kushinagar District

Berhara Taal

1. Name and size of the wetland: Berhara Taal is a water logged area spread in about 15 ha area.

2. Location details:

a. Administrative location

District: Kushinagar
Block: Captanganj
Panchayat: Berhara
Village: Berhara
Forest Division: Kushinagar
Forest Range: Haata

b. Geographical coordinates:
$26^0$53.717' N / $83^0$39.251' E

3. Water spread: During lean season, water area shrinks to about 20% of the expanse during monsoon months.

4. Status of the land (ownership): Of the total area, 6.2 ha is under private ownership while 8.8 ha is owned by UP's Revenue Department.

5. Wetland use by sarus: The wetland is used by sarus cranes almost round the year, but in monsoon their number increases as compared to the lean season. During survey, 10 sarus were sighted in the wetland. According to locals, two sarus nests were found in 2013. Also, in 2014 and 2015 two nests in each year were recorded.

6. Socio-economic values: The wetland is used by locals for dry land farming. Cattle grazing, fishing and fodder collection is also done by villagers.

7. Cropping pattern around the wetland: Adjoining the wetland, farmers mainly grow rice and wheat. In the agricultural lands where water logging is for longer duration, sugarcane is also cultivated.

8. Other values of the wetland: Besides ecological and economic values, there is no other significant value of the wetland.

9. Anthropogenic activities in and around the wetland: Farming and fishing are the major activities around the wetland.

10. Threats: There is no direct threat to sarus crane in the area.

11. Conservation importance of the wetland: It is a breeding and congregation site for sarus cranes and it is of immense economic value for the villagers. To maintain the ecological and biodiversity values of the wetland, it needs to be conserved.

Figure 32: Google Earth image of Berhara Taal, Kushinagar District


Anthropogenic pressure on Berhara Taal

Pachar Taal

1. Name and size of the wetland: Pachar Taal is spread in about 2,500 ha.

2. Location details:

a. Administrative location

District: Kushinagar
Block: Naurangi
Panchayat: Mehda
Village: Pachar
Forest Division: Kushinagar
Forest Range: Haata

b. Geographical coordinates:
$26^0$53.678' N / $83^0$40.902' E

3. Water spread: During the lean season, water area shrinks to about 40% of the expanse during monsoon months.

4. Status of the land (ownership): Private parties own 1,500 ha land while the State Revenue Department owns the remaining 1,000 ha.

5. Wetland use by sarus: It is a sarus congregation and nesting site. During the field survey, 10 sarus were sighted. Villagers informed about presence of three nests in 2013. In 2014 and 2015, two nests in each year were recorded.

6. Socio-economic values: A vast area of the wetland is under water round the year and is used for aquaculture. In lean season, farming and fodder collection are the key activities.

7. Cropping pattern around the wetland: The villagers grow traditional crops i.e. wheat and rice in and around the wetland.

8. Others values of the wetland: Other than biodiversity and economic values, there is no other significant value of the wetland.

9. Anthropogenic activities in and around the wetland: Aquaculture and farming are the key activities in and around the wetland.

10. Threats: There is no direct threat to sarus cranes but changing land use and intense wetland use throughout the year are some key indirect threats.

11. Conservation importance of the wetland: It is a sarus congregation and nesting site and makes an important contribution to the local economy.

Figure 33: Google Earth image of Pachar Taal, Kushinagar District


A sarus pair near Pachar Taal

Signages have been put near ISWS in eastern Uttar Pradesh


School students watching sarus cranes in Sakrail wetland in Shrawasti District on World Wetlands Day

Table 2. Sarus number and nests in Important Sarus Wetland Sites over three years

District	ISWS	Number of sarus			Number of nests		
		2013	2014	2015	2013	2014	2015
Maharajganj	Baisar Taal	36	12	67	7*	3	1
Maharajganj	Kamnaha Taal	6	5	5	3*	1	0
Maharajganj	Paragpur Taal	10	14	17	7*	8	3
Maharajganj	Badauli Bankatti Jheel	4	7	10	2*	2	2
Maharajganj	Chiraiyakot Taal	10	16	30	0	2	7*
Maharajganj	Hariharpur Taal	8	9	16	0	1	4*
Faizabad	Bisauli Jheel	5	3	8	0	0	1
Faizabad	Udhaila Jheel	7	0	12	0	0	2
Faizabad	Sidsid Jheel	6	0	8	0	0	1
Pratapgarh	Daudpur Jheel	4	7	10*	0	1	2
Pratapgarh	Bahuta Taal	6	5	7	1	3	3
Sultanpur	Enjar Taal	NA	NA	12	NA	NA	0*
Basti	Madhani Taal	NA	NA	13	NA	NA	0*
Basti	Chando Taal	NA	NA	11	NA	NA	0
Sant Kabirnagar	Bakhira Jheel	NA	NA	170	NA	NA	0
Sant Kabirnagar	Belduha Taal	NA	NA	69	NA	NA	0
Siddharthnagar	Semra Taal	4	8	16	6*	2	4
Siddharthnagar	Masai Sagar Taal	5	9	8	3*	1	2
Siddharthnagar	Banaliya Taal	35	96	36	2*	2	4
Deoria	Sonda Taal	NA	NA	6	NA	NA	0
Bahraich	Chittaura Jheel	8	4	11	2	2	2
Shrawasti	Sakrail Taal	45	36	116	5	8	5
Shajahanpur	Raipur Jhaber Taal	NA	NA	104	NA	NA	0
Shajahanpur	Faqurganj Jheel	NA	NA	96	NA	NA	2
Pilibhit	Maini Jhaber Taal	NA	NA	18	NA	NA	2
Lakhimpur-Kheri	Semrai Taal	NA	NA	12	NA	NA	1
Sitapur	Taalgaon Taal	NA	NA	10	NA	NA	1
Barabanki	Nardahi Taal	8	6	14	3	1	3
Kushinagar	Berhara Taal	8	9	11	2*	2	2
Kushinagar	Pachar Taal	6	7	10	3*	2	2
* Secondary information; NA: Data Not Available							

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Tata Trusts and the Sarus Crane Conservation Project

The Tata Trusts have been working in eastern Uttar Pradesh, since 2010, to enhance the quality of life of the community through livelihood enhancement interventions, focusing on agricultural development. Whilst implementing projects based on agricultural development, Trusts' team observed a significant population of sarus crane in and around the Trusts' project areas. As a preliminary survey, "count of sarus being sighted in and around the project areas", was introduced as a parameter in the monthly project report, which was shared by the Trusts' partners. These reports indicated a need to make the surveys more scientific and extensive. Consequently, the Tata Trusts partnered with the Wildlife Trust of India and a project on conservation of these birds was rolled out. Initially, the Trusts supported the project for a period of two years (from 2013 to 2015). Thereafter, the project was extended for three years.

Currently, the Trusts through its agricultural development projects reach out to 400 villages of 25 clusters across 11 districts in eastern Uttar Pradesh. The objective of the projects is to bring economic prosperity to about 50,000 small farmers in the next three years. To achieve the said results, the projects will intensify farming, through the value chain development of select agricultural products.

Under the rural livelihood focused project, the Trusts focus on enhancement of crop productivity, reduction in input cost, etc., as a result there is increase in farmers' incomes. Further, these projects have emphasis on training the farmers to use appropriate inputs, besides reducing the use of chemical inputs for crop production. It is envisaged that this approach will contribute to the reduction of pollution in the wetlands around the project areas. Furthermore, while targeting such outcomes, the Trusts' projects provide prime consideration to ecological sustainability.

Focus on conservation of sarus cranes in Uttar Pradesh, thus became an integral part of the projects in the paddy landscapes. This is a unique project of the Trusts, which is dedicated to the conservation of a bird species and the ecosystem associated with it. As of now, the Trusts is the single major investor for conservation of sarus cranes in Uttar Pradesh, in partnership with Wildlife Trust of India.

Connect with the Tata Trusts online on:

Twitter: @tatatrusts
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Conserving the forest of Garo Hills with elephant and gibbon as flagships

Hasthisiksha:
A mannual on humane training of elephant calves destined for permanent captivity

D. OTHERS

Wrap up the Trade:
An international campaign to save the endangered Tibetan Antelope

Tiger Bridge:
Nine days on a bend of the Nauranala

Emergency Network Relief Digest 2005-2006

Emergency Network Relief Digest 2006-2007

Action Tiger:
Tiger action plans of 12 tiger range countries

Born to be Wild:
Commemorating a decade of Wildlife Rescue and Rehablilitation

Tigers of North Kheri:
A collection of short stories and articles penned by Ashok Kumar

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Wildlife Trust of India (WTI), Tata Trusts and UP Forest Department have been implementing the Sarus Crane Conservation Project in the agricultural landscape of eastern Uttar Pradesh in 18 districts which were not considered a stronghold of the sarus crane. One of the objectives of WTI-Tata Trusts project was to identify the wetlands that are important for sarus cranes. These wetlands were documented with a perspective to assess their use by sarus cranes and the threats they face, which may adversely affect both the wetlands and the sarus in the region. To give impetus to protection of natural habitat of sarus, 30 wetlands have been identified and documented in this publication. The identified wetlands are important for conservation of not only the species in the region, but also sustaining the livelihood of local communities. It helps in prioritizing areas for concentrated effort for conservation of the State Bird of Uttar Pradesh.

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