



Ramsar Information Sheet

Published on 2 February 2025

India

Udhwa Lake Bird Sanctuary



Designation date	8 January 2024
Site number	2559
Coordinates	24°59'43"N 87°48'37"E
Area	935,50 ha

Color codes

Fields back-shaded in light blue relate to data and information required only for RIS updates.

Note that some fields concerning aspects of Part 3, the Ecological Character Description of the RIS (tinted in purple), are not expected to be completed as part of a standard RIS, but are included for completeness so as to provide the requested consistency between the RIS and the format of a 'full' Ecological Character Description, as adopted in Resolution X.15 (2008). If a Contracting Party does have information available that is relevant to these fields (for example from a national format Ecological Character Description) it may, if it wishes to, include information in these additional fields.

1 - Summary

Summary

The Udhwa Lake Bird Sanctuary (ULBS) is located at 24° 57'51" N to 25°1'14"N Latitude and 87°47'40"E to 87°49'27"E Longitude in the Rajmahal Subdivision of Sahebganj district of Jharkhand. The largest natural Gangetic floodplain wetland of Jharkhand was declared a sanctuary in 1991 under the Wildlife Protection Act (1972). The sanctuary comprises of two connected complex wetlands namely the Barhel lake (area of 410 ha) and the Pataura lake (area of 155 ha). The Udhwa lake a natural wetland is situated in the alluvial plains of River Ganga and is surrounded by several hillocks of Rajmahal hills. The Udhwa Nala connects the wetland to the Ganges near the Farakka Barrage and it forms the main source of water to the wetland sanctuary. Additionally, several channels originate from the Rajmahal hillocks and drain into the Berhale lake.

The ULBS has a wide variety of habitats each supporting diverse flora and fauna. The Lake is rich in algae (over 41 species) and has 29 species of documented macrophyte that include six species of free floating, 17 species of rooted floating vegetation, seven species of submerged vegetation and six emergent vegetation. Among the vegetation the grass *Cyperus tagetum* (locally called petali) is widespread in the wetland and is locally used for livestock feeding. The fauna comprises of 146 species of birds, over 45 species of fish, mammals including fishing cat and Otter.

The ULBS wetland was the only sanctuary in the state of Jharkhand at the time of its separation from Bihar. The wetland provides habitats for over 146 birds that comprise of 80 species of water and water dependent birds. Further 79 species are resident while 39 are migrant and 28 species are resident migrants. The wetland has around 14 species categorized as threatened as per the IUCN Red list. These include the Asian Woolly-necked Stork, Lesser Adjutant Stork, Common Pochard etc.

Considering the diversity and abundance of birds in the wetland ULBS is also designated as Important Bird and Biodiversity Area (IBA) during 2016. The wetland complex forms an important landscape in the Central Asian fly way with the large number of birds that visit the wetland during the winters.

Thus, owing to the uniqueness of the wetland landscape located in the Lower Gangetic plains associated with biodiversity, ecosystem services and climate co-benefits (both tangible and non-tangible) makes the protection, management and conservation a priority for the Udhwa lake.

2 - Data & location

2.1 - Formal data

2.1.1 - Name and address of the compiler of this RIS

Responsible compiler

Institution/agency	Department of Environment, Forest and Climate Change
Postal address	Office of the Divisional Forest Officer, Near Gora Badi Hatiya, Sahibganj, Jharkhand, INDIA

National Ramsar Administrative Authority

Institution/agency	Ministry of Environment, Forest and Climate Change
Postal address	Ministry of Environment, Forest and Climate Change Government of India, Indira Paryavaran Bhawan Jorbagh Road, New Delhi - 110 003 INDIA

2.1.2 - Period of collection of data and information used to compile the RIS

From year	2006
To year	2023

2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish)	Udhwa Lake Bird Sanctuary
Unofficial name (optional)	Berhale and Pataura Jheel

2.2 - Site location

2.2.1 - Defining the Site boundaries

b) Digital map/image
<1 file(s) uploaded>

Former maps	0
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Boundaries description

The entire wetland area is located within Udhwa Lake Bird Sanctuary (located at 24°57'51" N to 25°1'14"N Latitude and 87°47'40"E to 87°49'27"E Longitude) and is thus protected under Wild life Protection Act. The wetland is surrounded by a buffer area designated under the Eco-sensitive zone that expands up to two kilometers on all sides along its periphery. This zone is dotted with villages on all sides with maximum settlement on eastern side, villages of Pranpur, Sukhahar are situated on northern periphery of ESZ while those of Chatradiha, Mohanpur, Dharampur are located on southern end. The western side has more than 10 villages with some villages such as Dulahar, Jonka, Singharia, are situated near the wetland boundary.

2.2.2 - General location

a) In which large administrative region does the site lie?	Sahibganj district in the state of Jharkhand.
b) What is the nearest town or population centre?	Rajmahal (sub-Division headquarter)

2.2.3 - For wetlands on national boundaries only

- a) Does the wetland extend onto the territory of one or more other countries? Yes No
- b) Is the site adjacent to another designated Ramsar Site on the territory of another Contracting Party? Yes No

2.2.4 - Area of the Site

Official area, in hectares (ha):	935.5
Area, in hectares (ha) as calculated from GIS boundaries	939.258

2.2.5 - Biogeography

Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
Freshwater Ecoregions of the World (FEOW)	Ganges delta and plain
Udvardy's Biogeographical Provinces	Indo-Malayan realm

3 - Why is the Site important?

3.1 - Ramsar Criteria and their justification

<no data available>

Criterion 2 : Rare species and threatened ecological communities

Criterion 3 : Biological diversity

Justification

The wetland supports a rich floral diversity that comprises of around 29 species of aquatic macrophytes, 67 species of water loving plants and over 87 species of angiosperms along the embankments. The wetland provides habitats for over 146 birds that comprise of 80 species of water and water dependant birds. Further 79 species are resident while 39 are migrant and 28 specie are resident migrants. The wetland has around 14 species categorised as threatened as per the IUCN Red list. These include the Asian Woolly-necked Stork, Lesser Adjutant Stork, Common Pochard, Pallas's Fish Eagle, Black-headed Ibis, Black-necked Stork, Ferruginous Duck, Pallid Harrier, Greater Spotted Eagle, River tern, Oriental Darter, Eurasian Curlew, Rufous-vented Grass-babbler, Alexandrine Parakeet. Among the others the Large Whistling Duck is listed under the Schedule I of India's Wildlife Protection Act, 1972. The wetland also supports over 45 species of fish that includes the IUCN Red list categorised Vulnerable Wallaguattu and the Near Threatened High fin Glassy Perchlet (Parambassislala). The reptiles like monitor lizard and python are also documented along with the rare sightings of mammals like Otters and Fishing cat.

3.2 - Plant species whose presence relates to the international importance of the site

Phylum	Scientific name	Criterion 2	Criterion 3	Criterion 4	IUCN Red List	CITES Appendix I	Other status	Justification
Plantae								
TRACHEOPHYTA/ LILIOPSIDA	<i>Aponogeton natans</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC	<input type="checkbox"/>		Criterion 3 important aquatic macrophyte
TRACHEOPHYTA/ LILIOPSIDA	<i>Commelina benghalensis</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC	<input type="checkbox"/>		Criterion 3 important aquatic macrophyte
TRACHEOPHYTA/ LILIOPSIDA	<i>Eleocharis dulcis</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC	<input type="checkbox"/>		Criterion 3 important aquatic macrophyte
TRACHEOPHYTA/ LILIOPSIDA	<i>Hydrilla verticillata</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC	<input type="checkbox"/>		Criterion 3 important aquatic macrophyte
TRACHEOPHYTA/ LILIOPSIDA	<i>Hygroryza aristata</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC	<input type="checkbox"/>		Criterion 3 important aquatic macrophyte
TRACHEOPHYTA/ POLYPODIOPSIDA	<i>Marsilea minuta</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC	<input type="checkbox"/>		Criterion 3 important aquatic macrophyte
TRACHEOPHYTA/ LILIOPSIDA	<i>Najas graminea</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC	<input type="checkbox"/>		Criterion 3 important aquatic macrophyte
TRACHEOPHYTA/ MAGNOLIOPSIDA	<i>Nelumbo nucifera</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC	<input type="checkbox"/>		Criterion 3 important aquatic macrophyte
TRACHEOPHYTA/ MAGNOLIOPSIDA	<i>Nymphaoides indica</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC	<input type="checkbox"/>		Criterion 3 important aquatic macrophyte
TRACHEOPHYTA/ MAGNOLIOPSIDA	<i>Oenanthe javanica</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC	<input type="checkbox"/>		Criterion 3 important aquatic macrophyte
TRACHEOPHYTA/ LILIOPSIDA	<i>Ottelia alismoides</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC	<input type="checkbox"/>		Criterion 3 important aquatic macrophyte
TRACHEOPHYTA/ LILIOPSIDA	<i>Panicum repens</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC	<input type="checkbox"/>		Criterion 3 important aquatic macrophyte
TRACHEOPHYTA/ POLYPODIOPSIDA	<i>Salvinia cucullata</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC	<input type="checkbox"/>		Criterion 3 important aquatic macrophyte
TRACHEOPHYTA/ MAGNOLIOPSIDA	<i>Trapa natans</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC	<input type="checkbox"/>		Criterion 3 important aquatic macrophyte
TRACHEOPHYTA/ MAGNOLIOPSIDA	<i>Utricularia gibba</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC	<input type="checkbox"/>		Criterion 3 important aquatic macrophyte
TRACHEOPHYTA/ LILIOPSIDA	<i>Vallisneria spiralis</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC	<input type="checkbox"/>		Criterion 3 important aquatic macrophyte

3.3 - Animal species whose presence relates to the international importance of the site

Phylum	Scientific name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
		2	4	6	9	3	5	7	8								
Fish, Mollusc and Crustacea																	
CHORDATA/ ACTINOPTERYGII	<i>Parabassiss lala</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				NT	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Criteria 3 Endemic to the biogeographic region and an important habitat as a nursery and spawning ground to complete its life cycle.
CHORDATA/ ACTINOPTERYGII	<i>Wallago attu</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				VU	<input type="checkbox"/>	<input type="checkbox"/>		Criteria 2. The wetland provides important habitat as a spawning ground and nursery to complete its life cycle.
Birds																	
CHORDATA/ AVES	<i>Anhinga melanogaster</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				NT	<input type="checkbox"/>	<input type="checkbox"/>		Criteria 3
CHORDATA/ AVES	<i>Aythya ferina</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				VU	<input type="checkbox"/>	<input type="checkbox"/>		Criteria 2 and 3
CHORDATA/ AVES	<i>Aythya nyroca</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				NT	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Criteria 2 and 3
CHORDATA/ AVES	<i>Ciconia episcopus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				NT	<input type="checkbox"/>	<input type="checkbox"/>		Criteria 3
CHORDATA/ AVES	<i>Ephippiorhynchus asiaticus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				NT	<input type="checkbox"/>	<input type="checkbox"/>		Criteria 3
CHORDATA/ AVES	<i>Haliaeetus leucoryphus</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				EN	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Criteria 2 and 3
CHORDATA/ AVES	<i>Leptoptilos javanicus</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				VU	<input type="checkbox"/>	<input type="checkbox"/>		Criteria 2 and 3
CHORDATA/ AVES	<i>Numenius arquata</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				NT	<input type="checkbox"/>	<input type="checkbox"/>		Criteria 3
CHORDATA/ AVES	<i>Threskiornis melanocephalus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				NT	<input type="checkbox"/>	<input type="checkbox"/>		Criteria 3

1) Percentage of the total biogeographic population at the site

3.4 - Ecological communities whose presence relates to the international importance of the site

Name of ecological community	Community qualifies under Criterion 2?	Description	Justification
Fish Community	<input checked="" type="checkbox"/>	The wetland supports more than 45 species of fish. Most of the species depend on the wetland as a nursery and spawning ground to complete their lifecycle. The important ones are the globally threatened Wallagu attu and the Parabassiss lala.	Conservation of the wetland is important for the survival of the two species since the wetland is also connected with the Ganges. The fish species find suitable breeding and feeding ground in the ULBS.
Avi-fauna	<input checked="" type="checkbox"/>	The wetland provides habitats for over 146 bird species that comprise of 80 species of water and water dependent birds. Further 79 species are resident while 39 are migrant and 28 specie are resident migrants. The wetland has around 14 threatened species	The wetland is an important habitat to complete the life cycle of the migratory birds along the Central Asian Flyway. In addition, the threatened species get protected due to the status of the wetland as a Sanctuary.

4 - What is the Site like? (Ecological character description)

4.1 - Ecological character

The Udhwa Lake Bird Sanctuary (ULBS) is located at 24° 57'51" N to 25°1'14"N Latitude and 87°47'40"E to 87°49'27"E Longitude in the Rajmahal Subdivision of Sahebganj district of Jharkhand. The area falls under the Indo-Malayan realm of the Terrestrial Biogeographic realms of the world. Geologically it is on the borderline between the Chhotanagpur Plateau region and the Gangetic fore deep region. The Rajmahal hills on the north east are the formations of the upper Gondwana group with intertrappean sandstone, shales and their associated sedimentary and igneous rocks. Under the ecological sub division, the area comes under the Lower Indo- Gangetic Plain Zone. The largest natural Gangetic floodplain wetland of Jharkhand was declared a sanctuary in 1991 under the Wildlife Protection Act (1972). The sanctuary comprises of two connected complex wetlands namely the Barhel lake with an area of 410 ha and the Pataura lake with an area of 155 ha. The Udhwa lake a natural wetland is situated in the alluvial plains of River Ganga and is surrounded by several hillocks of Rajmahal hills. The Udhwa Nala connects the wetland to the Ganges near the Farakka Barrage and it forms the main source of water to the wetland sanctuary. Additionally, several channels originate from the Rajmahal hillocks and drain into the Berhale lake. The Udhwa lake forms the buffer wherein it receives water from the Ganges and provides water during the dry season. Udhwa lake comes in the zone of transition between the wetland tropical climate of Bengal and the semi arid or dry climate of the west. The landscape experiences three well differentiated seasons namely Summer (March to June), Monsoon (July to September) and Winter (November to February) and October being the transitory month. The ULBS has a wide variety of habitats each supporting diverse flora and fauna. The Lake is rich in algae (over 41 species) and has 29 species of documented macrophytes that include six species of free floating, 17 species of rooted floating vegetation, seven species of submerged vegetation and six emergent vegetation. Among the vegetation the grass *Cyperus* (locally called petali) is wide spread in the wetland and is locally used for livestock feeding mainly during the dry season. The fauna comprises of 146 species of birds, over 45 species of fish that includes the IUCN categorised Vulnerable Wallaguattu, Near Threatened High fin Glassy Perchlet (*Parambassis*), reptiles such as monitor lizards, python, cobra, etc.; mammals including fishing cat and Otter. The ULBS wetland gains importance as it was the only sanctuary in the state of Jharkhand at the time of its separation from Bihar. The wetland provides habitats for over 146 birds that comprise of 80 species of water and water dependant birds. Further 79 species are resident while 39 are migrant and 28 species are resident migrants. The wetland has around 13 species categorised as threatened as per the IUCN Red list. These include the Asian Woolly-necked Stork, Lesser Adjutant Stork, Common Pochard, Pallas's Fish Eagle, Black-headed Ibis, Black-necked Stork, Ferruginous Duck, Pallid Harrier, Greater Spotted Eagle, River tern, Oriental Darter, Eurasian Curlew, Rufous-vented Grass-babbler, Alexandrine Parakeet. Taking the diversity and abundance of birds in the wetland the ULBS is also designated as Important Bird and Biodiversity Area (IBA) during 2016. The wetland complex forms an important landscape in the Central Asian fly way with the large number of birds that visit the wetland during the winters. Historically this area is of significance because it was at Udhwa Nala the famous decisive battle of Udhwah nullah between Mir Kasim occurred in 1763. This incidence along with the other historical occurrence during the Moghul and British rule add to the uniqueness of the Udhwa Wetland landscape.

4.2 - What wetland type(s) are in the site?

Inland wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
Fresh water > Lakes and pools >> O: Permanent freshwater lakes	Jheel	1	590	

Other non-wetland habitat

Other non-wetland habitats within the site	Area (ha) if known
Agriculture fields	

(ECD) Habitat connectivity: The habitat has connectivity with the Ganges landscape.

4.3 - Biological components

4.3.1 - Plant species

Other noteworthy plant species

Phylum	Scientific name	Position in range / endemism / other
TRACHEOPHYTALILIOPSIDA	<i>Colocasia esculenta</i>	Native to the tropical region, used as fodder and food plant
TRACHEOPHYTALILIOPSIDA	<i>Cyperus pangorei</i>	fodder for cattle
TRACHEOPHYTAMAGNOLIOPSIDA	<i>Euryale ferox</i>	Food source to herbivores

Invasive alien plant species

Phylum	Scientific name	Impacts
TRACHEOPHYTALILIOPSIDA	<i>Eichhornia crassipes</i>	Actual (major impacts)
TRACHEOPHYTALILIOPSIDA	<i>Phragmites karka</i>	Actual (minor impacts)

4.3.2 - Animal species

Optional text box to provide further information

Invasive species are not estimated for the Sanctuary

4.4 - Physical components

4.4.1 - Climate

Climatic region	Subregion
C: Moist Mid-Latitude climate with mild winters	Csa: Mediterranean (Mild with dry, hot summer)

The temperature ranges from 10°C to 40°C. Annual Rain fall is 1363.50 mm. The relative humidity is high and reaches up – to 92%. The inundation pattern of Udhwa Lake Bird Sanctuary is closely related to rainfall and inundations received from the Ganges River and the hillocks of Rajmahal Hills.

4.4.2 - Geomorphic setting

a) Minimum elevation above sea level (in metres)

a) Maximum elevation above sea level (in metres)

- Entire river basin
- Upper part of river basin
- Middle part of river basin
- Lower part of river basin
- More than one river basin
- Not in river basin
- Coastal

Please name the river basin or basins. If the site lies in a sub-basin, please also name the larger river basin. For a coastal/marine site, please name the sea or ocean.

The site lies in Ganga River basin and is annually inundated by monsoon overflow

4.4.3 - Soil

- Mineral
- Organic
- No available information

Are soil types subject to change as a result of changing hydrological conditions (e.g., increased salinity or acidification)? Yes No

4.4.4 - Water regime

Water permanence

Presence?	
Usually permanent water present	No change

Source of water that maintains character of the site

Presence?	Predominant water source	
Water inputs from surface water	<input checked="" type="checkbox"/>	No change
Water inputs from precipitation	<input checked="" type="checkbox"/>	No change

Water destination

Presence?	
Feeds groundwater	No change

Stability of water regime

Presence?	
Water levels largely stable	No change

^(ECD) Connectivity of surface waters and of groundwater

The wetland is connected to the Ganges river as it receives water during the monsoon and also releases water during the dry season.

4.4.5 - Sediment regime

- Significant erosion of sediments occurs on the site
- Significant accretion or deposition of sediments occurs on the site
- Significant transportation of sediments occurs on or through the site

- Sediment regime is highly variable, either seasonally or inter-annually
- Sediment regime unknown

4.4.6 - Water pH

- Acid (pH<5.5)
- Circumneutral (pH: 5.5-7.4)
- Alkaline (pH>7.4)
- Unknown

4.4.7 - Water salinity

- Fresh (<0.5 g/l)
- Mixohaline (brackish)/Mixosaline (0.5-30 g/l)
- Euhaline/Eusaline (30-40 g/l)
- Hyperhaline/Hypersaline (>40 g/l)
- Unknown

4.4.8 - Dissolved or suspended nutrients in water

- Eutrophic
- Mesotrophic
- Oligotrophic
- Dystrophic
- Unknown

4.4.9 - Features of the surrounding area which may affect the Site

Please describe whether, and if so how, the landscape and ecological characteristics in the area surrounding the Ramsar Site differ from the site itself: i) broadly similar ii) significantly different

- Surrounding area has greater urbanisation or development
- Surrounding area has higher human population density
- Surrounding area has more intensive agricultural use
- Surrounding area has significantly different land cover or habitat types

4.5 - Ecosystem services

4.5.1 - Ecosystem services/benefits

Provisioning Services

Ecosystem service	Examples	Importance/Extent/Significance
Food for humans	Sustenance for humans (e.g., fish, molluscs, grains)	High
Fresh water	Water for irrigated agriculture	High

Regulating Services

Ecosystem service	Examples	Importance/Extent/Significance
Maintenance of hydrological regimes	Groundwater recharge and discharge	High
Climate regulation	Local climate regulation/buffering of change	High
Hazard reduction	Flood control, flood storage	High

Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Nature observation and nature-based tourism	Medium
Scientific and educational	Educational activities and opportunities	High

Supporting Services

Ecosystem service	Examples	Importance/Extent/Significance
Biodiversity	Supports a variety of all life forms including plants, animals and microorganisms, the genes they contain, and the ecosystems of which they form a part	High
Nutrient cycling	Storage, recycling, processing and acquisition of nutrients	High

Within the site:

Outside the site:

Have studies or assessments been made of the economic valuation of ecosystem services provided by this Ramsar Site? Yes No Unknown

4.5.2 - Social and cultural values

- i) the site provides a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland
- ii) the site has exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland
- iii) the ecological character of the wetland depends on its interaction with local communities or indigenous peoples

Description if applicable

The site has been traditionally used for agriculture along the banks and local sustenance fishery. The local community has lived in harmony with the birds and other biota while justifiably using the resources for survival. This has helped in maintaining the ecological character of the wetland. However there have been instances of unplanned development in its catchment areas that can adversely impact the ecological character if it is not judiciously conserved.

- iv) relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological character of the wetland

4.6 - Ecological processes

(ECD) Notable aspects concerning migration	The wetland is an important part of the Central Asian Flyway. The wetland in fertile Gangetic landscape has several species of insects and endemic fishes that provide nutrition to the migratory birds.
(ECD) Pressures and trends concerning any of the above, and/or concerning ecosystem integrity	The pressure is the changing agriculture pattern with overuse of pesticides and fertilizers that can impact the water quality and thereby fish and other associated fauna.

5 - How is the Site managed? (Conservation and management)

5.1 - Land tenure and responsibilities (Managers)

5.1.1 - Land tenure/ownership

Public ownership

Category	Within the Ramsar Site	In the surrounding area
Provincial/region/state government	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Private ownership

Category	Within the Ramsar Site	In the surrounding area
Other types of private/individual owner(s)	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Provide further information on the land tenure / ownership regime (optional):

Out of total GIS boundary of 590Ha of proposed site, 565Ha is notified sanctuary rest is acquired government land. The area surrounding the permanently inundated area are agricultural and owned by raiyats.

5.1.2 - Management authority

Please list the local office / offices of any agency or organization responsible for managing the site:

Divisional Forest Officer, Sahibganj Forest Division, Sahibganj

Provide the name and/or title of the person or people with responsibility for the wetland:

Mr. Manish Tiwari.

Postal address:

Office of the Divisional Forest Officer, Godabadi Hatiya, Sahibganj- 816109, Jharkhand.

E-mail address:

dfo-sahebganj@gov.in

5.2 - Ecological character threats and responses (Management)

5.2.1 - Factors (actual or likely) adversely affecting the Site's ecological character

Human settlements (non agricultural)

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Housing and urban areas	Low impact	Medium impact	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Tourism and recreation areas	Low impact	Low impact	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Unspecified development	Medium impact	High impact	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Water regulation

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Drainage	Low impact	Low impact	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Water abstraction	Medium impact	Medium impact	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Agriculture and aquaculture

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Annual and perennial non-timber crops	Low impact	Low impact	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Energy production and mining

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Mining and quarrying	Low impact	Low impact	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Transportation and service corridors

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Roads and railroads	Low impact	Low impact	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Biological resource use

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Fishing and harvesting aquatic resources	Medium impact	Medium impact	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Human intrusions and disturbance

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Recreational and tourism activities	Low impact	Low impact	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Natural system modifications

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Vegetation clearance/ land conversion	Medium impact	High impact	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Invasive and other problematic species and genes

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Invasive non-native/ alien species	Medium impact	Medium impact	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Pollution

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Household sewage, urban waste water	Low impact	Low impact	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Agricultural and forestry effluents	Low impact	Low impact	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Garbage and solid waste	Medium impact	Medium impact	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Geological events

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Unspecified	Low impact	Low impact	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Climate change and severe weather

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Habitat shifting and alteration	Low impact	Low impact	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Storms and flooding	Low impact	Low impact	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Please describe any other threats (optional):

Changing rainfall patterns has resulted in creation of aquaculture ponds in the landscape by locals for sustenance. Prolonged and increased usage and conversion can in the long term affect the ecological character of the wetland.

5.2.2 - Legal conservation status

Global legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Other global designation	Udhwa Lake Bird Sanctuary	http://datazone.birdlife.org/india/ex.php/site/factsheet/udhwalake-iba-india	whole

National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Sanctuary	Udhwa Lake Bird Sanctuary	http://www.wiienviis.nis.in/Database/wls_8230.aspx	whole

Non-statutory designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Important Bird Area	Udhwa Lake Bird Sanctuary	http://www.wiienviis.nic.in/Database/IBA_8463.aspx	whole

5.2.3 - IUCN protected areas categories (2008)

- Ia Strict Nature Reserve
- Ib Wilderness Area: protected area managed mainly for wilderness protection
- II National Park: protected area managed mainly for ecosystem protection and recreation
- III Natural Monument: protected area managed mainly for conservation of specific natural features
- IV Habitat/Species Management Area: protected area managed mainly for conservation through management intervention
- V Protected Landscape/Seascape: protected area managed mainly for landscape/seascape conservation and recreation

VI Managed Resource Protected Area: protected area managed mainly for the sustainable use of natural ecosystems

5.2.4 - Key conservation measures

Legal protection

Measures	Status
Legal protection	Implemented

Habitat

Measures	Status
Habitat manipulation/enhancement	Proposed
Re-vegetation	Proposed
Land conversion controls	Implemented
Faunal corridors/passage	Implemented

Species

Measures	Status
Control of invasive alien plants	Implemented

Human Activities

Measures	Status
Fisheries management/regulation	Implemented
Harvest controls/poaching enforcement	Partially implemented
Regulation/management of wastes	Partially implemented
Communication, education, and participation and awareness activities	Partially implemented

5.2.5 - Management planning

Is there a site-specific management plan for the site? Yes

Has a management effectiveness assessment been undertaken for the site? Yes No

If the site is a formal transboundary site as indicated in section Data and location > Site location, are there shared management planning processes with another Contracting Party? Yes No

5.2.6 - Planning for restoration

Is there a site-specific restoration plan? Yes, there is a plan

5.2.7 - Monitoring implemented or proposed

Monitoring	Status
Water regime monitoring	Proposed
Water quality	Proposed
Birds	Implemented
Plant community	Proposed
Animal species (please specify)	Proposed

6 - Additional material

6.1 - Additional reports and documents

6.1.1 - Bibliographical references

Published papers

- Anwaruddin Choudhury (2018) Jewel-Of-Jharkhand SAVEUS Magazine June – August
- Bondya Sutanu Lal and Nitu Bharti (2021) Ethnomedicinal study of some wetland plants of Udhwa lake bird sanctuary of Rajmahal, Jharkhand. The Biobrio 8 (3&4): 705-710
- Dwivedi M.D., Raziuddin M. and Arvind Mishra (2023) Population Expansion Of Vulnerable Stork Species Lesser Adjutant (*Leptoptilos javanicus*, Horsfield, 1821) In Jharkhand, India. IJCRT | Volume 11, Issue 5: 944 - 952 ISSN: 2320-2882.
- Ghose IK, Choudhury S.K and Mishra. A (1991). A checklist of the Birds of Udhwa Lake Bird Sanctuary. Rajmahal (Bihar). J Freshwater biol. 5(1): 83-91.
- Mallick Natick Imam (2020) Wildlife in - situ conservation strategies in Jharkhand. Biospectra: ISSN: 0973-7057, Vol. 15(2): 47-54.
- Mishra A., Ghosh T.K., Moitra A., Pan T.K., Agrawal S., and A.Kumar (2009) Udhwa: The sole bird sanctuary in Jharkhand – an IBA. Mistnet 10(4): 4–7.
- N. K. Sharma, N. J. Kullu, P. K. Swain and A. T. Jeyaseelan (2012) Geospatial Analysis of Wetlands in Jharkhand Using Multi-Temporal Satellite Data Journal of Remote Sensing & GIS Volume 3, Issue 3, December 2012, Pages 22-30
- Prakash, S., A. Mishra, M. Dwivedi, A. K. Mishra, M. Ranjan and M. Raziuddin (2012) Avian diversity of Udhwa Lake Bird Sanctuary (IBA), Sahibganj, Jharkhand, India. Columban J. Life Sci. 13(1&2): 57–71.
- Prakash, S., Dwivedi M.D and Raziuddin, M. (2015). Report on Asian Waterbird Census (AWC 2015), Jharkhand. ENVIS Jharkhand News, Issue No. 12, Feb-Mar: 2015, Department of Forest and Environment, Jharkhand. Pp. 8-11
- Rahmani, A. R., Islam, M. Z. and Kasambe, R. M. 2016. Important Bird and Biodiversity Areas in India: Priority Sites for Conservation (Revised and updated). Bombay Natural History Society, Indian Bird Conservation Network, Royal Society for the Protection of Birds and Bird Life International (U.K.). Pp. 1992 + xii.
- Sharma Rashmi Rani, Verma Rohit Kumar, Bhattacharya Tanmay and Surendra Prasad Roy (2020) Assessment of heavy metals pollution in sediments of Udhwa and Simultalla lakes of Jharkhand International Journal for Innovative Research in Multidisciplinary Field ISSN: 2455-0620 Volume – 6(11): 20-24.
- Singh Navneet, Ahmad Jalil and Rahul Joshi (2017) Diversity of moths (Lepidoptera) with new faunistic records from Northeast Jharkhand, India. Rec. zool. Surv. India: Vol. 117(4): 326-340.
- Reports**
- Choudhary, S. K., Mishra, A., Ghosh, T. K. and A. Jha (1992) Udhwa Lake Bird Sanctuary: Status Report I. Mandar Nature Club, Bhagalpur. Pp. 26.
- Manish Kumar Mishra, and A Mishra (2002) Draft Report Biodiversity Strategy & Action Plan for Jharkhand. Report by Mandar Nature Club (MNC) Bhagalpur, Bihar - 812002, India
- Wetlands International South Asia (2020) Asian Waterbird Census: Results for Coordinated January Counts for India 2006-2015. Wetlands International, India. pp 80.
- District Census Handbook Sahibganj (2011) Series 21, Part XII A. Directorate of Census Operations, Jharkhand. pp 903

6.1.2 - Additional reports and documents

i. taxonomic lists of plant and animal species occurring in the site (see section 4.3)

<3 file(s) uploaded>

ii. a detailed Ecological Character Description (ECD) (in a national format)

<no file available>

iii. a description of the site in a national or regional wetland inventory

<2 file(s) uploaded>

iv. relevant Article 3.2 reports

<no file available>

v. site management plan

<1 file(s) uploaded>

vi. other published literature

<5 file(s) uploaded>

6.1.3 - Photograph(s) of the Site

Please provide at least one photograph of the site:



Landscape view of Udhwa Lake Bird Sanctuary (Sunilkumar Gupta, SACON Coimbatore, 29-11-2023)



Black headed Ibis with its prey (Frog species) in Udhwa Lake Bird Sanctuary (Sunilkumar Gupta, SACON Coimbatore, 29-11-2023)



Barn Swallows perching on the dried emergent rooted vegetation in Udhwa lake Bird Sanctuary (Sunilkumar Gupta, SACON Coimbatore, 29-11-2023)



Agricultural landscape and Avian diversity of Udhwa Lake Bird Sanctuary (Sunilkumar Gupta, SACON Coimbatore, 25-03-2023)



Lesser Adjutant Stork in Udhwa Lake Bird Sanctuary (Siddhesh D. Bhawe, SACON Coimbatore, 24-03-2023)



Udhwa Lake Bird sanctuary supporting the local livelihood and the domestic life stalk (Prathamesh Gurjarpadhaye, SACON Coimbatore, 30-03-2023)



Avian diversity of Udhwa Lake Bird Sanctuary (Prathamesh Gurjarpadhaye, SACON Coimbatore, 23-03-2023)



Darter & Cormorants perching on a vantage point in Udhwa Lake Bird Sanctuary (Siddhesh D. Bhawe, SACON Coimbatore, 24-03-2023)



Landscape of Udhwa Lake Bird Sanctuary (Siddhesh D. Bhawe, SACON Coimbatore, 29-11-2023)



Flock of Black Headed Ibis in Udhwa Lake Bird Sanctuary (Siddhesh D. Bhawe, SACON Coimbatore, 29-11-2023)



Entry gate of the Udhwa Lake bird sanctuary (Goldin Quadros, SACON Coimbatore, 30-11-2023)



Removal of Eichhornia crassipes using Jute coir as floats from the Udhwa lake bird sanctuary (Manishkumar Mishra, Sahibganj Forest Department, Jharkhand, 16-10-2023)



Pheasant tailed Jacana and water lily in Udhwa lake bird sanctuary (*Manishkumar Mishra, Sahibganj Forest Department, Jharkhand, 07-11-2023*)



Udhwa Lake Bird Sanctuary Interpretation Centre (*Manishkumar Mishra, Sahibganj Forest Department, Jharkhand, 02-12-2023*)

6.1.4 - Designation letter and related data

Designation letter

<1 file(s) uploaded>

Date of Designation