INDIA'S 85 AMRIT DHAROHAR

RAMSAR SITES OF INDIA FACTBOOK

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Ministry of Environment, Forest and Climate Change, Government of India

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About this publication
This document is a compilation of information on Ramsar Sites of India. The data presented in this document has been sourced from the Ramsar Information Sheets, Management Action Plans and other publications. The maps are for representation purpose only and not to scale.

मंत्री
पर्यावरण, वन एवं जलवायु परिवर्तन
भारत सरकार

सत्यमेव जयते
भूपेन्द्र यादव
BHUPENDER YADAV

LiFE
Lifestyle for Environment

MINISTER
ENVIRONMENT, FOREST AND CLIMATE CHANGE
GOVERNMENT OF INDIA

MESSAGE

Wetlands, the transitional ecosystems occurring where water meets land, are integral to global ecological and economic stability. The continued functioning of these ecosystems is imperative for maintaining food and water security, climate resilience, and biodiversity. With the increasing impacts of climate change, the conservation of wetlands has never been more urgent. They serve as natural buffers against floods, regulate water cycles, purify the water by acting as filters and contribute to carbon sequestration. Global and national cooperation is essential to safeguard these ecosystems and the species that depend on them. The designation of wetlands as Ramsar Sites plays a pivotal role in this endeavour.

India has demonstrated outstanding leadership in wetlands conservation and management, expanding its Ramsar Sites network. The Government of India has designated 85 wetlands meeting international significance criteria as Ramsar Sites, making it the largest network of Ramsar Sites in Asia. This expansion is a significant milestone in India's ongoing commitment to protecting its wetlands, which provide essential services for millions of people.

I am pleased to present the Ramsar Sites Factbook, a comprehensive collection of fact sheets of the 85 Ramsar Sites of India. The factbook details the values and benefits of these wetlands of international importance and the threats facing them. It is a matter of great pride for all of us that on 24th January, 2025, Indore and Udaipur joined the group of 31 Wetland accredited cities across the globe, realising Hon'ble Prime Minister's vision of development and growth while maintaining ecological balance.

The Ramsar designation is just the starting point. To ensure the wise use of these critical ecosystems, it is essential that we focus on effective conservation and monitoring of the wetlands' health. This factbook serves as a step toward synthesizing the extensive knowledge about Ramsar Sites, providing a framework for their conservation and resilience.

I extend my heartfelt congratulations to the Wetlands Division of the Ministry of Environment, Forest & Climate Change and their knowledge partners who have compiled this comprehensive document.

(Bhupender Yadav)

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पर्यावरण, वन एवं जलवायु परिवर्तन
विदेश मंत्रालय
भारत सरकार
MINISTER OF STATE
ENVIRONMENT, FOREST AND CLIMATE CHANGE
EXTERNAL AFFAIRS
GOVERNMENT OF INDIA

Message

Wetlands are among the most vital ecosystems on Earth, serving as natural buffers that regulate water cycles, protect biodiversity, and maintain ecological balance. From the serene high-altitude wetlands nestled in the Himalayas to the lush mangrove swamps along India's coastline, India boasts an unparalleled wealth of these vital ecosystems. The total wetland area in India is estimated to be around 16 million hectares, which is almost 5% of the country's total geographical area.

In today's rapidly changing world, where the challenges of climate change, water scarcity, and food security are at the forefront, the significance of wetlands has never been more profound. Wetlands serve as the guardians of biodiversity, flood buffers, carbon sinks and water purifiers. As these ecosystems face degradation, we risk losing not just the flora and fauna that depend on them but also the essential benefits they provide to humankind.

In 1982, India ratified the Ramsar Convention on Wetlands of International Importance, committing to the conservation and sustainable management of wetlands across the country. This Convention has served as a critical framework for conserving wetlands, and the designation of Ramsar Sites has been an important step toward ensuring the long-term health of these ecosystems.

A defining moment in India's journey came in August 2024, when the Government designated 85 wetlands as Ramsar Sites. This momentous achievement not only positions India as a global leader in wetlands conservation but also marks the largest Ramsar Site network in Asia. It is a matter of immense pride for all of us that on 24th January, 2025, Indore and Udaipur joined the group of 31 Wetland accredited cities across the globe demonstrating India's resolve to move forward on both ecological and economy under the visionary leadership of Hon'ble Prime Minister.

I am pleased to present the Ramsar Sites of India Factbook, a comprehensive resource that offers valuable insights into the significance of India's 85 Ramsar Sites. This factbook highlights the essential ecosystem services provided by these wetlands, the remarkable biodiversity they support, and the challenges they face. I hope this factbook serves as a one-stop resource for information on India's Ramsar Sites and encourages coordinated action among government agencies, local communities, environmental organizations and individuals to ensure the continued health of India's wetlands.

(Kirti Vardhan Singh)

New Delhi
28January, 2025

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SECRETARY
GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST
& CLIMATE CHANGE

FOREWORD

India, with its vast and diverse landscape, is home to some of the most ecologically rich wetlands in the world. Recognising the significance of these ecosystems, the Government of India has taken bold and decisive steps towards ensuring their conservation and sustainable management.

A key milestone in India's wetlands conservation journey is the country's active engagement with the Ramsar Convention on Wetlands of International Importance. India ratified the Convention in 1982 and, since then, has progressively expanded its network of Ramsar Sites. As of today, India has the largest Ramsar Site network in Asia, with 85 Ramsar Sites spanning over 1.35 million hectares.

Wise use of wetlands, central to the Ramsar Convention's philosophy, aligns with Mission LiFE, a global initiative launched by the Hon'ble Prime Minister of India. The mission provides a foundation towards collective responsibility of people for the protection of earth through the basic principle of Lifestyle of the planet, for the planet and by the planet.

India's success in wetlands conservation is a result of a combination of strong governmental policies, innovative management practices, and active community engagement. The government has made significant investments through initiatives such as the National Plan for Conservation of Aquatic Ecosystems (NPCA), which provides the framework for the identification, management, and restoration of wetlands across the country, the Save Wetlands Campaign for making wetlands conservation a people's movement, and Amrit Dharohar initiative to promote the unique conservation values of the Ramsar Sites. The progress India has made in the field of wetlands conservation is a testament to the country's dedication to preserving its natural heritage and contributing to global environmental goals.

This publication, 'Ramsar Sites of India Factbook', aims to showcase the significance of these 85 Ramsar Sites, beneficial not only to stakeholders entrusted with their conservation and management but also to inform the public about the values, benefits and threats to the Indian Ramsar Sites.

I commend the Wetlands Division of the Ministry and its knowledge partners, for their commitment to creating this valuable resource. I hope this publication encourages greater awareness and collaborative action aimed at protecting India's wetlands and ensuring a sustainable future for everyone.

(Tanmay Kumar)

Place: New Delhi
Dated: January 30, 2025

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सत्यमेव जयते

भारत सरकार
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT FOREST AND
CLIMATE CHANGE

MESSAGE

Ramsar Sites are one of the world's largest network of protected areas. The vision of the Ramsar List is to create a global network of wetlands crucial for conserving biodiversity and sustaining human life through ecosystem services. The Ramsar Sites, also known as Wetlands of International Importance, are recognised for their significance to global biodiversity as they meet at least one of the nine criteria established by the Convention.

India ratified the Convention in 1982 by designating Keoladeo National Park, in Rajasthan and Chilika Lake, in Odisha as Ramsar Sites. In the last one decade India has rapidly expanded its network of Wetlands of International Importance. The number of Ramsar Sites in India is 85, the highest in Asia. The sites are highly diverse, ranging from Himalayan high-altitude wetlands, floodplains and marshes of the Gangetic – Brahmaputra alluvial plains, the river stretches, saline flats of the Great Indian Desert, mangrove swamps and coral reefs, lagoons and estuaries, crater lake and assemblages of sewage-fed fish farms. Ramsar Sites make a significant contribution to biological diversity. A recent compilation of faunal diversity of 75 Indian Ramsar Sites by the Zoological Survey of India enlists 8,213 species. For several of the faunal groups, these wetlands represent a significant share of the known diversity (for example, over one-third of recorded mammalian species, one-fifth of reptiles, and about two-thirds of known bird species). The compilation of floral diversity in these Sites by the Botanical Survey of India documented 4,126 species with more than 3226 types of flowering plants alone.

The Ramsar Sites of India Factbook offers an insightful overview of the ecological significance, values, and benefits of India's Ramsar Sites, while also highlighting the threats they face. It serves as a vital resource for understanding the factors that must be addressed in designing and implementing effective conservation and management strategies. This publication has been prepared under the Global Environment Facility- MoEFCC- United Nations Environment Programme funded Integrated Management of Wetland Biodiversity and Ecosystem Services (IMWBES) Project, with the knowledge partners Wetlands International South Asia (also the Lead Technical Support Agency of the IMWBES project), WWF-India and GIZ.

This publication consolidates the diverse information on India's Ramsar Sites into a concise and engaging format, making it an invaluable resource for the various stakeholders involved in conserving these vital ecosystems.

(Rajat Agarwal)

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Gitanjali Kanwar

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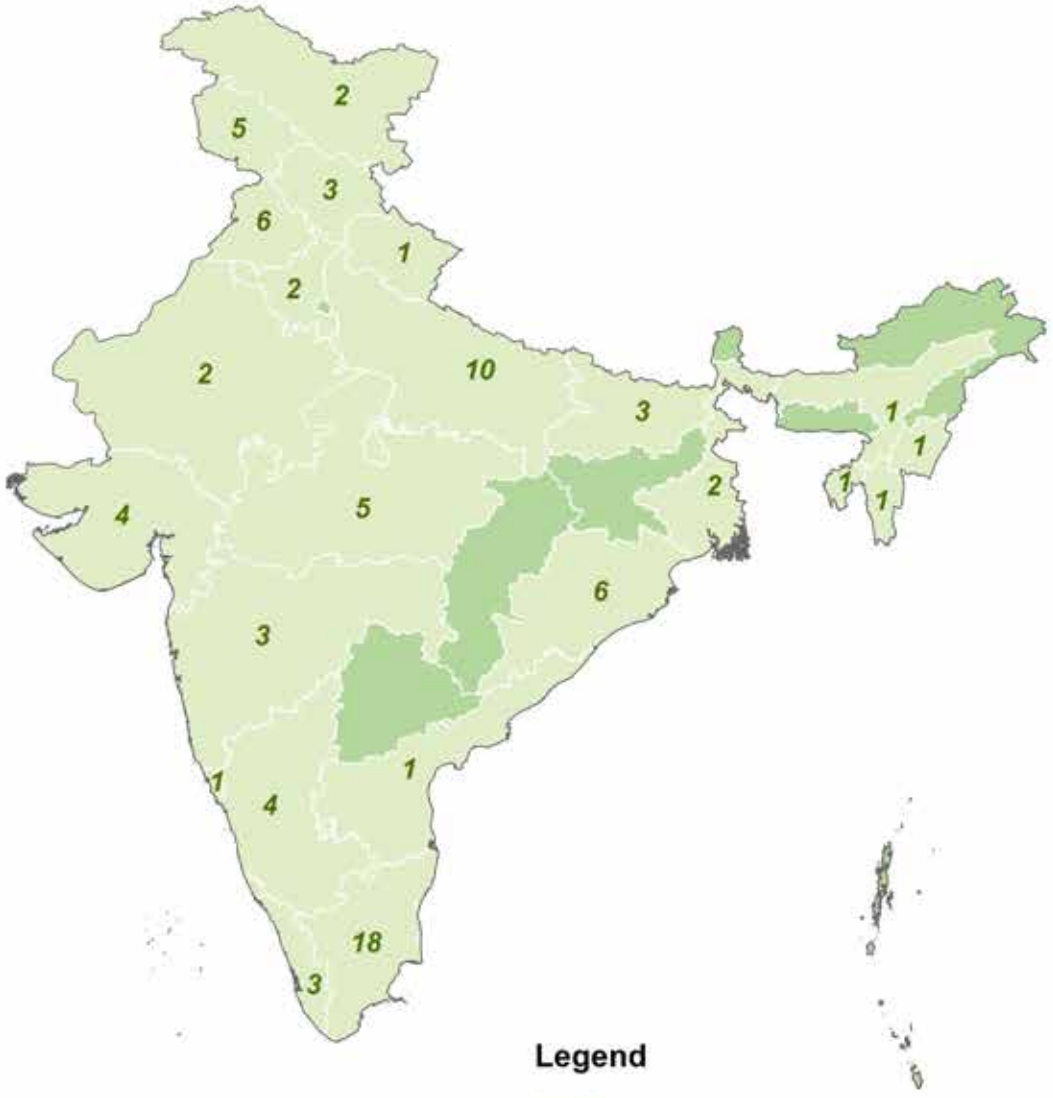
Ramsar Sites of India



Legend

States with Ramsar Sites

States without Ramsar Sites

N

350 175 0 350

Kilometers

Note: Numbers indicate the Ramsar Sites in the State

Wetlands International

THE RAMSAR SITES CRITERIA

The nine criteria for identifying Wetlands of International Importance

Group A. Sites containing representative, rare or unique wetland types

Criterion 1: A wetland should be considered internationally important if it contains a representative, rare, or unique example of a natural or near-natural wetland type found within the appropriate biogeographic region.

Group B. Sites of international importance for conserving biological diversity

Criteria based on species and ecological communities

Criterion 2: A wetland should be considered internationally important if it supports vulnerable, endangered, or critically endangered species or threatened ecological communities.

Criterion 3: A wetland should be considered internationally important if it supports populations of plant and/or animal species important for maintaining the biological diversity of a particular biogeographic region.

Criterion 4: A wetland should be considered internationally important if it supports plant and/or animal species at a critical stage in their life cycles, or provides refuge during adverse conditions.

Specific criteria based on waterbirds

Criterion 5: A wetland should be considered internationally important if it regularly supports 20,000 or more waterbirds.

Criterion 6: A wetland should be considered internationally important if it regularly supports 1% of the individuals in a population of one species or subspecies of waterbird.

Specific criteria based on fish

Criterion 7: A wetland should be considered internationally important if it supports a significant proportion of indigenous fish subspecies, species or families, life-history stages, species interactions and/or populations that are representative of wetland benefits and/or values and thereby contributes to global biological diversity.

Criterion 8: A wetland should be considered internationally important if it is an important source of food for fishes, spawning ground, nursery and/or migration path on which fish stocks, either within the wetland or elsewhere, depend.

Specific criteria based on other taxa

Criterion 9: A wetland should be considered internationally important if it regularly supports 1% of the individuals in a population of one species or subspecies of wetland-dependent non-avian animal species.

“

MISSION LIFE CAN BE SUCCESSFUL ONLY WHEN IT REACHES EVERY CORNER OF THE WORLD. WE HAVE TO REMEMBER THIS MANTRA – *PRAKRITI RAKSHATI RAKSHITA* – THAT IS, THOSE WHO PROTECT NATURE, NATURE PROTECTS THEM. I BELIEVE WE WILL BUILD A BETTER WORLD BY FOLLOWING MISSION LIFE

”

- Hon’ble Prime Minister Shri Narendra Modi

“

MINDFUL AND
DELIBERATE
UTILISATION,
NOT MINDLESS
AND
DESTRUCTIVE
CONSUMPTION,
IS NEEDED
TODAY

”

- Hon’ble Prime Minister Shri Narendra Modi

Adnan Abubakar

Kolleru Lake

SPECIES RICHNESS

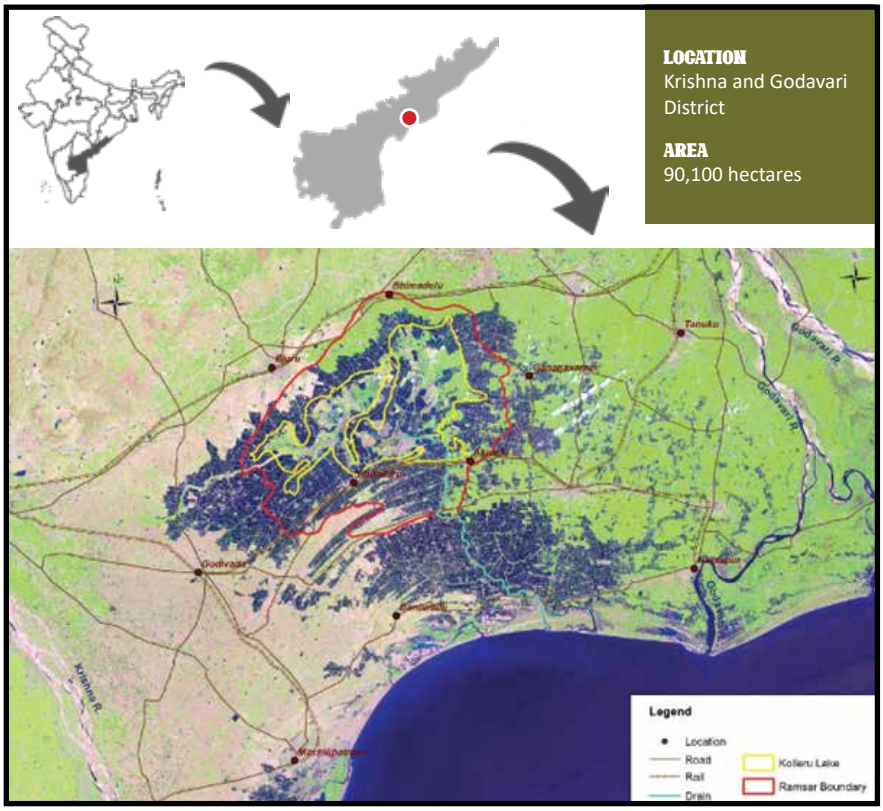
BIRDS	224
FISHES	75
PLANTS	34

Date of designation
August 19, 2002

Kolleru, the largest natural freshwater wetland on the East Coast of India, is located between Krishna and Godavari deltas. The wetland is fed by two seasonal rivers and several drains and channels. Kolleru acts as a flood balancing system between the two deltas and plays a significant role in the region's hydrography. The Ramsar Site, with its variety of habitats, supports rich biodiversity, including some endangered and endemic species. Kolleru was once famous for breeding colonies of spot-billed Grey Pelican, which represented the highest known population of this species in India. Located amid the deltaic floodplains, the wetland receives large quantities of nutrient-rich sediments and was traditionally utilized by the communities for fisheries during monsoon and agriculture in the lean period.

Andhra Pradesh

Designation Criteria	Wetland Type	Protection Status	Management Authority
1, 2, 4, 5, 8	Lakes, marsh & aquaculture ponds	Part designated as Wildlife Sanctuary	Andhra Pradesh Forest Department



LOCATION
Krishna and Godavari District

AREA
90,100 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

Recreation and tourism

Spiritual and inspirational importance

Habitat for migratory species

Fisheries

Buffers floods

Species of global conservation significance

Notable	Spot-billed Pelican
Endangered	Greater Adjutant
Vulnerable	Grey Pelican, Lesser Adjutant

THREATS

Significance

Low

Medium

High

Siltation

Pollution

Aquaculture

Hydrological regime regulation

Road network

Invasive species

Dhritiman Mukherjee

Deepor Beel

SPECIES RICHNESS

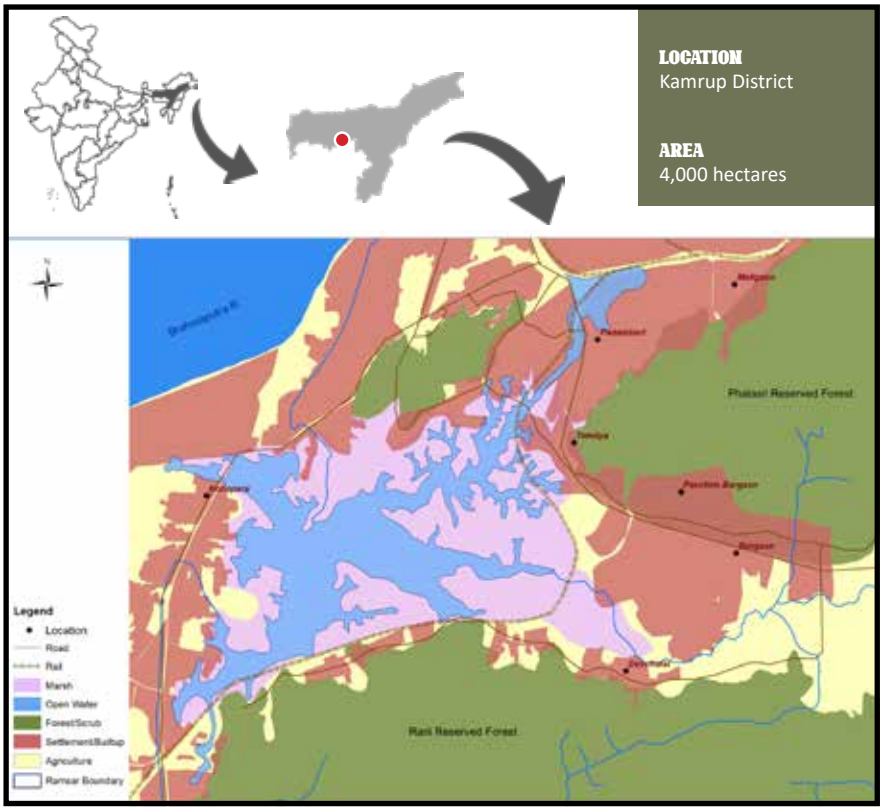
BIRDS	219
FISHES	50
REPTILES & AMPHIBIANS	38
PLANTS	448

Date of designation
August 19, 2002

Deepor Beel is a permanent freshwater wetland and the largest beel in the Brahmaputra valley of Lower Assam. It is located 10 km southwest of Guwahati, surrounded by residential, commercial, and institutional areas. It is believed that the wetland is an abandoned channel of the river Brahmaputra, situated in a wide U-shaped valley rammed between two cliffs on the north and the south. A perennial stream originating from the Basistha basin runs through the wetland and joins the Brahmaputra at Khanamukh. The Deepor Beel system is fed by streams and rivulets flowing from the south and southwestern parts of the wetland. Rain and stormwater from the surrounding areas are also the primary sources of flow during the monsoon season. The wetland supports fishery, providing a means of livelihood for several locals, and is an essential source of domestic water supply. Deepor Beel has also been serving as a potential source of groundwater as well as a stormwater receptacle for the surrounding areas. Deepor and the adjoining Beels absorb a significant proportion of the flood pulse of the Brahmaputra, providing flood protection to Guwahati.

Assam

Designation Criteria	Wetland Type	Protection Status	Management Authority
1, 2, 4, 7, 8	River Floodplain	Part of wetland notified as Wildlife Sanctuary	Forest Department, Assam



LOCATION
Kamrup District

AREA
4,000 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

Source of fresh water

Recreation and tourism

Cultural and spiritual importance

Supports livelihood of 500+ fishers

Flood buffer for Guwahati City

Lifecycle maintenance of migratory fish and birds

Medicinal and ornamental resources

Fodder

Species of global conservation significance

Notable	Asian Elephant
Critically Endangered	Baer's Pochard
Endangered	Greater Adjutant, Asian Elephant
Vulnerable	Lesser Adjutant

THREATS

Significance

Low | Medium | High

Encroachment

Regime fragmentation by roads and railways

Invasive species

Hydrological regime alteration

Pollution from sewage and solid waste dumping

Kabartal Wetland

SPECIES RICHNESS

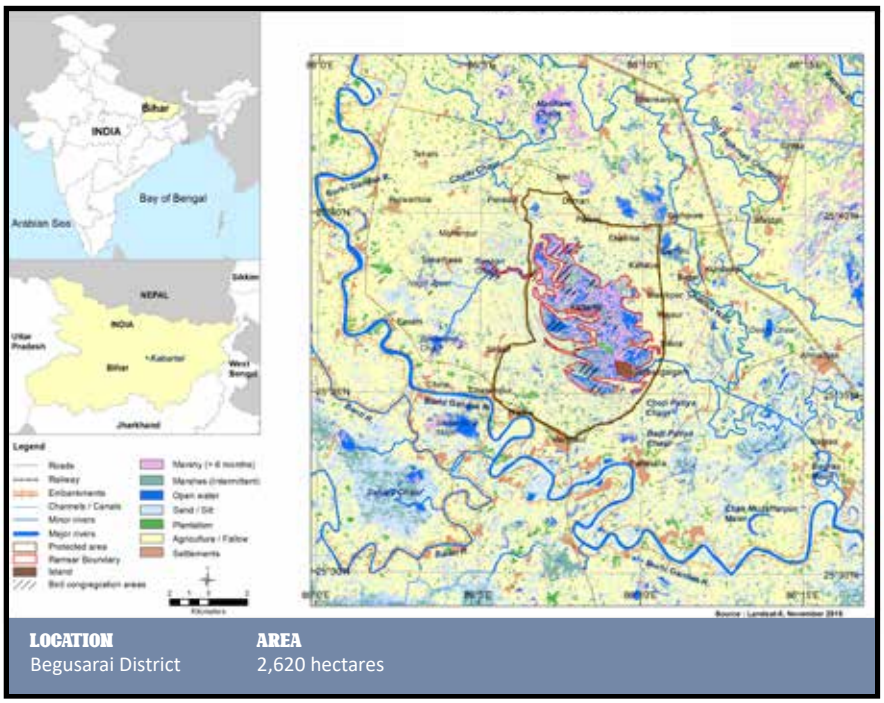
BIRDS	221
FISHES	35
MAMMALS	5
REPTILES & AMPHIBIANS	12
PLANTS	165

Date of designation
July 21, 2020

Kabartal is a part of an extensive floodplain wetland complex formed in the lower reaches of Gandak – Kosi interfan in North Bihar. Located at a distance of 21 km from Begusarai town, Kabartal is the largest of a series of shallow permanent and intermittently inundated wetlands formed in the depression between river Burhi Gandak and the paleochannel of river Bagmati. The exchange of water, sediment, and species with the flood pulses of the Burhi Gandak (and Kosi before the 1950s) support highly productive fisheries and agriculture sustaining the livelihoods of nearly 15,000 households in 17 villages in and around the wetland. Kabartal also plays an important role in the hydrography of the region by accommodating a significant proportion of rainfall and bank flows of river Gandak, protecting the adjoining settlements from flood risk as well as recharging groundwater. The wetland teems with waterbirds in the winters and is one of the important congregation areas in North Bihar, particularly for migrating ducks and coots. The island of Jaimangalgarh, located near the wetland's southern boundary, is revered as a religious and cultural significance site.

Bihar

Designation Criteria	Wetland Type	Protection Status	Management Authority
1, 2, 3, 4, 7, 8	Oxbow lake, freshwater marshes	Bird Sanctuary	Environment & Forest Department of Bihar/ Bihar State Wetland Authority



LOCATION
Begusarai District

AREA
2,620 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

Source of drinking water

Water purification

Cultural and spiritual importance

Recharges groundwater

Tourism and recreation

Scientific and educational importance

Fisheries support livelihood of 23 villages

Flood protection

Lifecycle maintenance

Reeds fibre and fodder

Species of global conservation significance

Critically Endangered	Baer's Pochard, White-rumped Vulture, Indian Vulture, Red-headed Vulture, Sociable Lapwing
Endangered	Common Pochard, Saker Falcon, Greater Adjutant, Egyptian Vulture
Vulnerable	Wallago Catfish, Greater Spotted Eagle , Woolly-necked Stork, Lesser Adjutant

THREATS

Significance

Low

Medium

High

Regime fragmentation

Encroachment

Siltation

Spread of invasive species

Pollution/ disposal of urban drainage

Hydrological regime alteration

Harsh Ganapathi

Nagi Bird Sanctuary

SPECIES RICHNESS

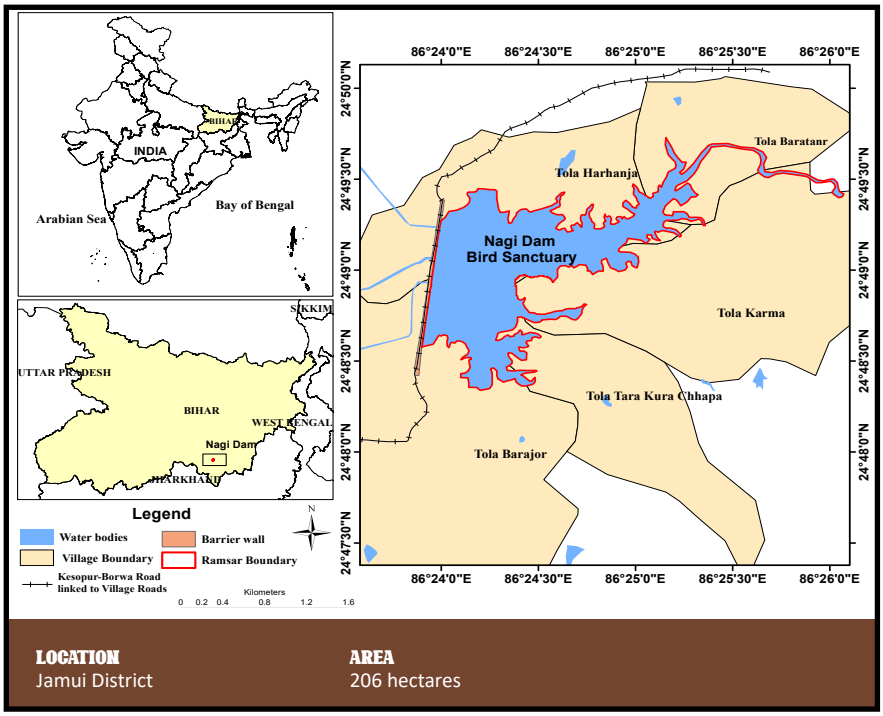
BIRDS	74
FISHES	33

Date of designation
October 11, 2023

Nagi Bird Sanctuary was formed by damming the River Nagi. The Ramsar Site is surrounded by an undulating landscape composed of barren agricultural fields interspersed with rocky hillocks. The wetland provides a reliable water source for the irrigation of over 9,800 acres of agricultural land and serves as a location for recreation, tourism, and educational activities. The wetland is an important wintering ground for waterbirds migrating along the Central Asian Flyway. Due to high avian diversity, Nagi has been recognised as an Important Bird Area. The wetland also provides breeding and spawning grounds for several fish species. Due to its importance for migratory bird species, the Site was recognised locally as a Bird Sanctuary in 1984 and internationally as an Important Bird and Biodiversity Area (IBA) by BirdLife International.

Bihar

Designation Criteria	Wetland Type	Protection Status	Management Authority
2, 3, 4, 5, 6	Water storage areas/Reservoirs	Bird Sanctuary	Principal Chief Conservator of Forest, Environment, Climate Change & Wetland, Department of Environment, Forest and Climate Change, Bihar, Bihar State Wetland Authority



LOCATION
Jamui District

AREA
206 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

- Food for humans
- Drinking water for humans and/or livestock
- Fuelwood/ fibre
- Groundwater recharge and discharge
- Livestock fodder
- Carbon sequestration
- Nutrient cycling
- Local climate regulation/buffering of change
- Pollution control and detoxification
- Nature observation and nature-based tourism
- Flood control, flood storage
- Biodiversity
- Water for irrigated agriculture
- Educational activities and opportunities

Species of global conservation significance

Notable	Bar-headed Goose, Ferruginous Duck, Red-crested Pochard, Osprey, Lesser Whistling-duck, Tufted Duck, Gadwall, Northern Pintail, Cotton Pygmy-goose, Northern Shoveler
Endangered	Black-bellied Tern
Vulnerable	*Walago attu*

THREATS

Significance

Low | Medium | High

- Livestock farming
- Fishing and harvesting aquatic resources
- Dams and water management/use
- Vegetation clearance/ land conversion
- Water abstraction
- Drainage
- Invasive non-native/ alien species

Pradip Paswan

Nakti Bird Sanctuary

SPECIES RICHNESS

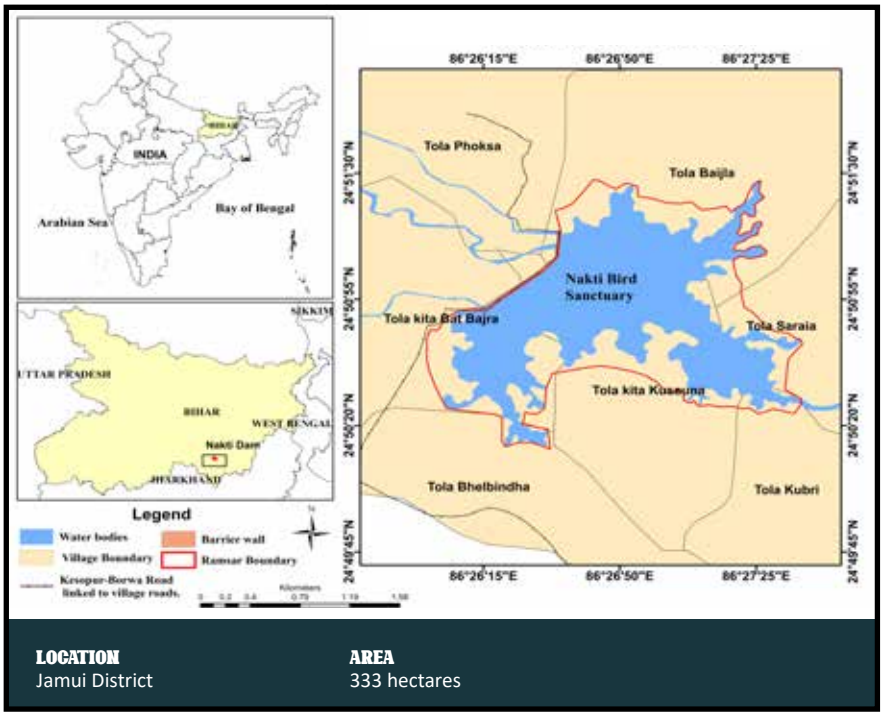
BIRDS	75
FISHES	36
MAMMALS	28
REPTILES & AMPHIBIANS	21

Date of designation
October 11, 2023

Located in the Jamui district of Bihar, the Nakti Bird Sanctuary is a human-made wetland formed following the construction of the Nakti Dam, which covers approximately 300 hectares on the Nakti River. The reservoir serves as a vital habitat for migratory birds during winter and was designated as a Bird Sanctuary in 1984. Additionally, the Nakti Bird Sanctuary has been recognised as an Important Bird and Biodiversity Area (IBA) by BirdLife International, meeting two IBA criteria related to waterbird populations. The floodplains of the site play a crucial role in groundwater recharge, leading to an increase in the water table's mean depth during the post-monsoon season. This helps meet the water needs of local communities for both agricultural and domestic purposes. The site also offers opportunities for educational and eco-tourism activities, including bird watching.

Bihar

Designation Criteria	Wetland Type	Protection Status	Management Authority
2, 3, 4, 5, 6	Water storage areas/Reservoirs	Bird Sanctuary	Principal Chief Conservator of Forest, Environment, Climate Change & Wetland, Department of Environment, Forest and Climate Change, Bihar, Bihar State Wetland Authority



LOCATION
Jamui District

AREA
333 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

- Drinking water for humans and/or livestock
- Pollution control and detoxification
- Carbon storage/ sequestration
- Groundwater recharge and discharge
- Nutrient cycling
- Local climate regulation/buffering of change
- Spiritual and inspirational
- Food for humans
- Biodiversity
- Fuelwood/ fibre
- Scientific and educational

Species of global conservation significance

Notable	Bar-headed Goose, Ferruginous Duck, Red-crested Pochard, Osprey, Lesser Whistling-duck, Tufted Duck, Gadwall, Northern Pintail, Cotton Pygmy-goose, Northern Shoveler
Endangered	Black-bellied Tern
Vulnerable	*Walago attu*

THREATS

Significance

Low | Medium | High

- Temperature extremes
- Drainage
- Annual and perennial non-timber crops
- Human intrusions and disturbance
- Pollution
- Invasive non-native/ alien species

Office of CCF MNP Jamnagar

SPECIES RICHNESS

BIRDS	233
FISHES	5
MAMMALS	7
REPTILES	7
PLANTS	183
PRAWNS	4
BUTTERFLIES	21

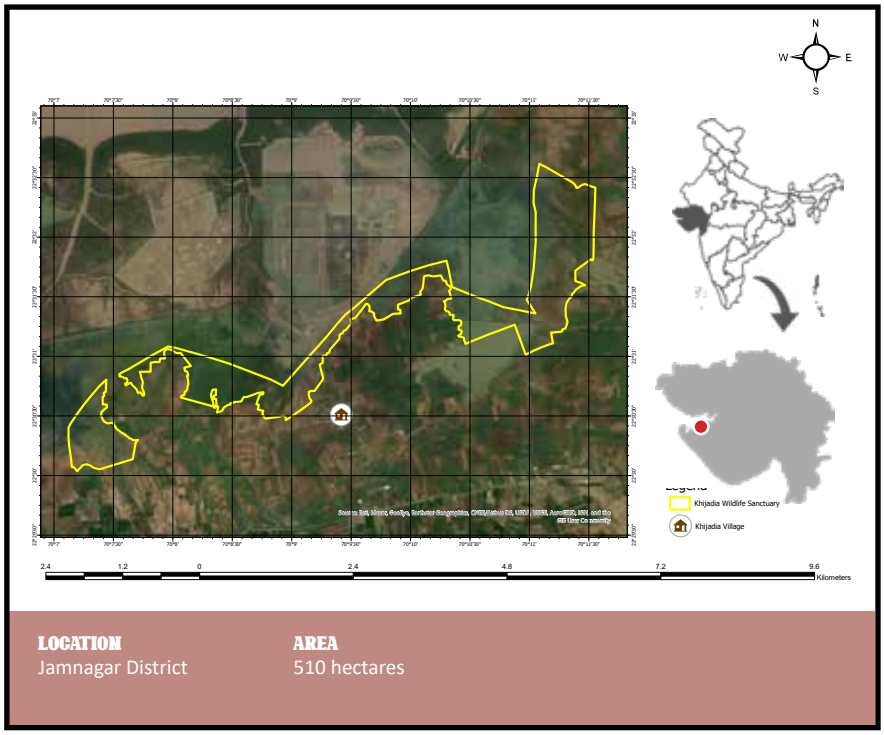
Khijadia Wildlife Sanctuary

Date of designation
April 13, 2021

Khijadia Wildlife Sanctuary is a complex of inland and coastal wetlands, located 12 Km from Jamnagar Town in Gujarat. These wetlands form the fringes of the watershed of seasonal rivers Ruparel and Kalindri. Khijadia is a mosaic of a seasonal freshwater shallow lake, inter-tidal mudflats, creeks, salt pans, saline land, and mangroves. The wetland existed as a saline marsh till the 1930s when an earthen embankment was constructed between Jamnagar and Navlakhi to reclaim parts of the marsh as a storage area for freshwater. In the succeeding decades, the freshwater inundation regime created conducive conditions for the colonization of hydrophytes such as Typha angustata, Hydrilla verticillate, and Vallisneria spiralis. While the monsoon runoff governs the hydrology of the inland zone, creeks from the Gulf carry sea water landward and reach the bunds of the wetland, passing through intertidal mudflats, salt pans, and salt marshes.

Gujarat

Designation Criteria	Wetland Type	Protection Status	Management Authority
2, 3, 4, 5, 6, 8	Freshwater marsh	Wildlife Sanctuary	Gujarat Forest Department



LOCATION
Jamnagar District

AREA
510 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

Nutrient cycling

Water use for irrigation and domestic use

Supports biodiversity

Scientific studies

Groundwater recharge

Erosion protection

Nature based tourism

Species of global conservation significance

Notable	Dalmatian Pelican, Great Knot, Greater Flamingo, Indian Skimmer
Endangered	Great Knot, Indian Skimmer

THREATS

Significance

Low

Medium

High

Water abstraction

Gathering terrestrial resources/grazing

Intensive agriculture

Invasive species

Increase in housing and urban areas

Nalsarovar

SPECIES RICHNESS

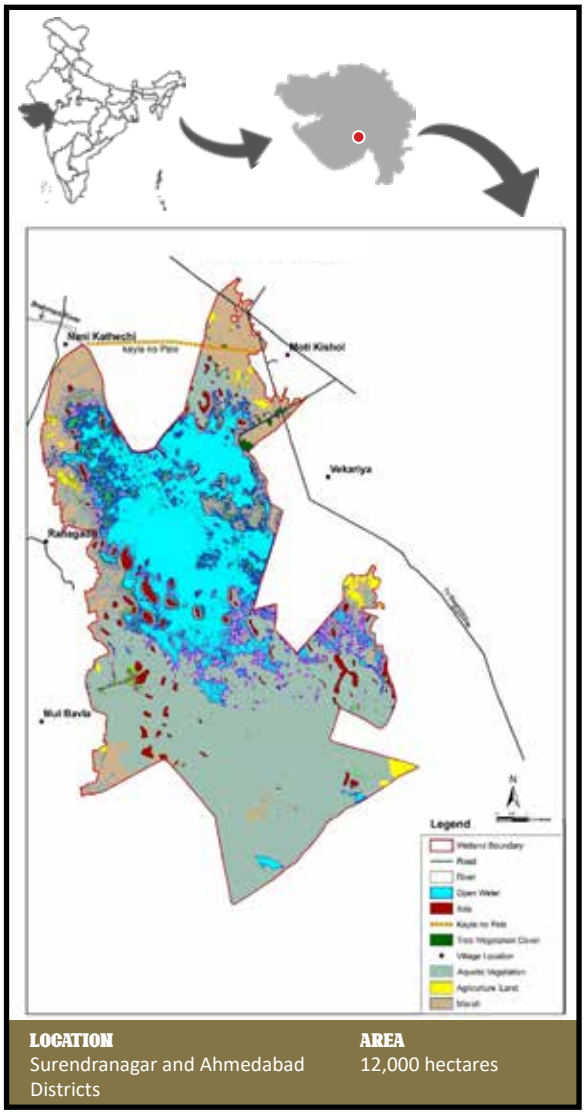
BIRDS	250
FISHES	20
MAMMALS	13
REPTILES & AMPHIBIANS	11
PLANTS	153

Date of designation
September 24, 2012

Nalsarovar is a natural shallow muddy wetland dotted by over 300 islets. The wetland is situated at the junction of the Saurashtra plateau with the Gujarat Mainland. Formerly an estuary, this area results from tectonic uplift, sedimentation, and aeolian infill. Although the primary water source is rainwater, the rivers Surendranagar-Bhogavo and Brahmani flow into the wetland. In addition, the Ghoda feeder canal from Mehsana District also feeds Nalsarovar. As per the locals, the wetland is named after King Nal, who ruled in the region. Padhar community, which is one of the most ancient tribal groups, resides on the periphery of the Nalsarovar. The most significant hydrological service of the wetland is its utility as a sponge against flooding in the monsoon. Moreover, it plays an important role during droughts as water is retained in it for a longer duration compared to the surrounding landscape during such a water scarcity period.

Gujarat

Designation Criteria	Wetland Type	Protection Status	Management Authority
1, 2, 3, 4, 5, 6	Marsh	Bird Sanctuary	Forest Department, Gujarat



LOCATION
Surendranagar and Ahmedabad Districts

AREA
12,000 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

- Cultural and spiritual importance
- Provides food & fodder
- Support several grass species
- Support livelihood of 40,000+ fishers
- Supports large congregation of waterbirds
- Maintains hydrological regime
- Attracts 70,000+ visitors annually

Species of global conservation significance

Notable	Greater Flamingo, Dalmatian Pelican
Critically Endangered	Sociable Lapwing, Red-headed Vulture, White-rumped Vulture
Endangered	Spotted Greenshank, Lesser Florican, Black-bellied Tern, Pallas's Fish-eagle
Vulnerable	Eastern Imperial Eagle

THREATS

Significance

Low | Medium | High

- Unsustainable tourism
- Pollution
- Poaching, high pressure on resources

Wildlife Division - Sanand, Gujarat

SPECIES RICHNESS

BIRDS **112**

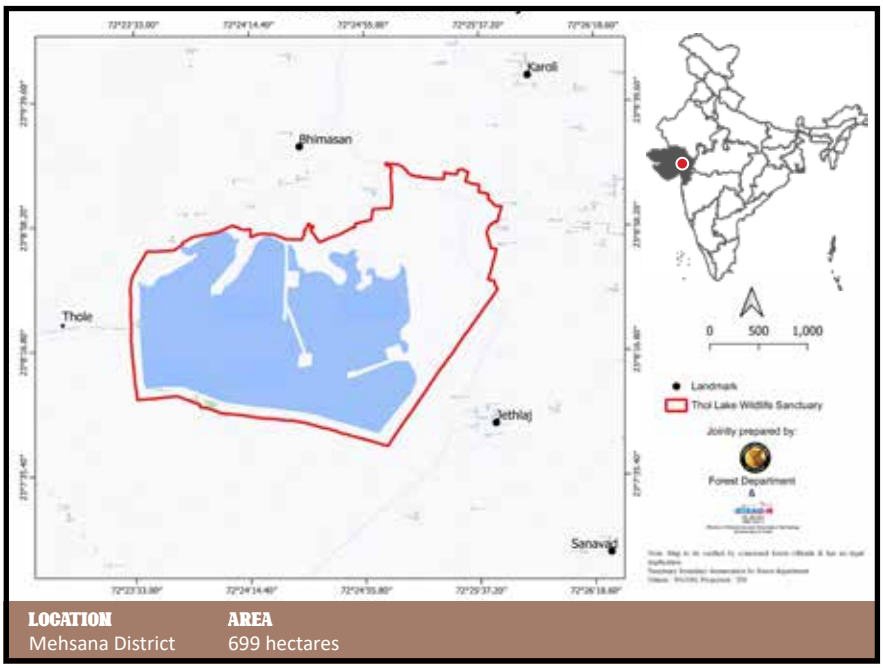
Thol Lake Wildlife Sanctuary

Date of designation
April 5, 2021

Thol Lake Wildlife Sanctuary, a shallow reservoir dominated by open water, is located in the Mehsana district of Gujarat. The wetland was initially constructed as an irrigation reservoir by the Gaekwad rulers in 1912 to store rainwater and prevent soil erosion and flooding. The wetland's southern, western, and eastern boundary is encrusted with an earthen bund, which helps retain water that flows into it during the monsoon. Thol is home to approximately 57% of the total species of Gujarat, making it one of the most important Wildlife Sanctuaries of the state as far as avian diversity is concerned. The vegetation provides excellent thatching material and is also used as fodder for domestic animals. The livelihoods of the local communities are intrinsically linked with the wetland as it is the primary source of drinking water and irrigation to fields. Tourism-related activities are another source of income for the local population

Gujarat

Designation Criteria	Wetland Type	Protection Status	Management Authority
2, 3, 4, 5, 6	Water storage area/ reservoir	Wildlife Sanctuary	Gujarat Forest Department



LOCATION
Mehsana District

AREA
699 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

Local climate regulation

Educational activities and opportunities

Supports biodiversity

Nature based tourism

Groundwater recharge

Water use for irrigation and domestic use

Species of global conservation significance

Notable	Glossy Ibis, Greylag Goose, Bar-headed Goose, Black-tailed Godwit
Critically Endangered	White-rumped Vulture, Sociable Lapwing
Endangered	Saker Falcon, Egyptian Vulture, Black-bellied Tern
Vulnerable	Lesser White-fronted Goose, Common Pochard, Sarus Crane, River Tern

THREATS

Significance

Low

Medium

High

Oil & gas drilling

Increase in housing and urban areas

Roads and railroads

Pollution from household sewage, urban wastewater

Vegetation clearance

Wadhvana Wetland

SPECIES RICHNESS

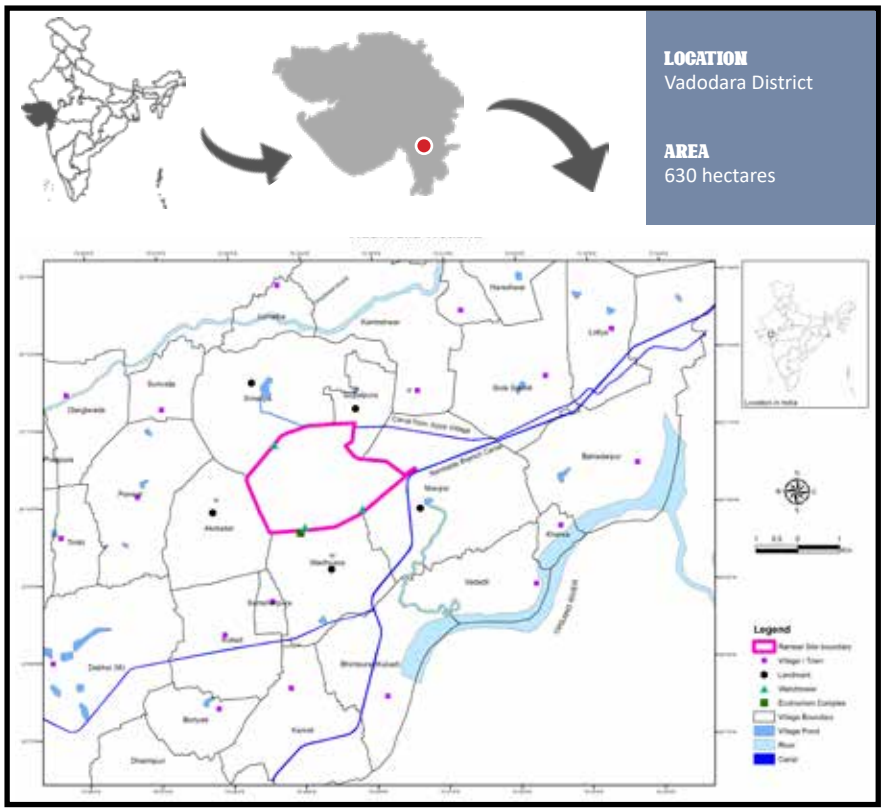
BIRDS	214
FISHES	5
MAMMALS	7
REPTILES & AMPHIBIANS	9

Date of designation
April 5, 2021

Wadhvana wetland is situated at a distance of 45 km from Vadodara city in Gujarat. The wetland is a century-old human-made wetland, created in 1909-10 by the erstwhile ruler Shrimant Maharaja Sir Sayajirao Gaekwad III of the then Baroda State. Wadhvana is located in a semi-arid agricultural landscape surrounded by wheat and paddy fields and villages. The ecosystem services provided by the wetland include irrigation, fisheries, groundwater recharge, ecotourism, and nature education. The wetland is internationally important considering its heritage value, avifaunal richness, including migratory waterbird species that use the Central Asian Flyway for migration, and the occurrence of some globally threatened waterbird species like Indian Sarus crane. Wadhvana provides a global example of how a wetland created for irrigation purposes by a princely state has also been serving as one of the finest waterbird abodes and how it has also been serving as an ecotourism-cum-nature education hub owing to its proximity to a metro-city of Western India.

Gujarat

Designation Criteria	Wetland Type	Management Authority
2, 3, 4, 5, 6, 7	Water storage area/reservoir, freshwater lake	Gujarat Forest Department



VALUES AND BENEFITS

Significance

Low | Medium | High

Food for Humans - fishes

Flood protection

Educational activities and opportunities

Supports biodiversity

Groundwater recharge

Water use for irrigation and domestic use

Nature based tourism

Species of global conservation significance

Notable	Glossy Ibis, Greylag Goose, Ruddy Shelduck
Critically Endangered	Oriental White-backed Vulture, Indian Vulture
Endangered	Pallas' Fish-eagle, Greater Adjutant, Black-bellied Tern
Vulnerable	Marsh Crocodile, Greater Spotted Eagle, Common Pochard, Sarus Crane, River Tern, Mugger

THREATS

Significance

Low

Medium

High

Biological resource extraction/ poaching

Vegetation clearance

Unsustainable tourism

Invasive species

Alteration of hydrological regime

Goa State Wetland Authority

SPECIES RICHNESS

BIRDS ..... **40+**

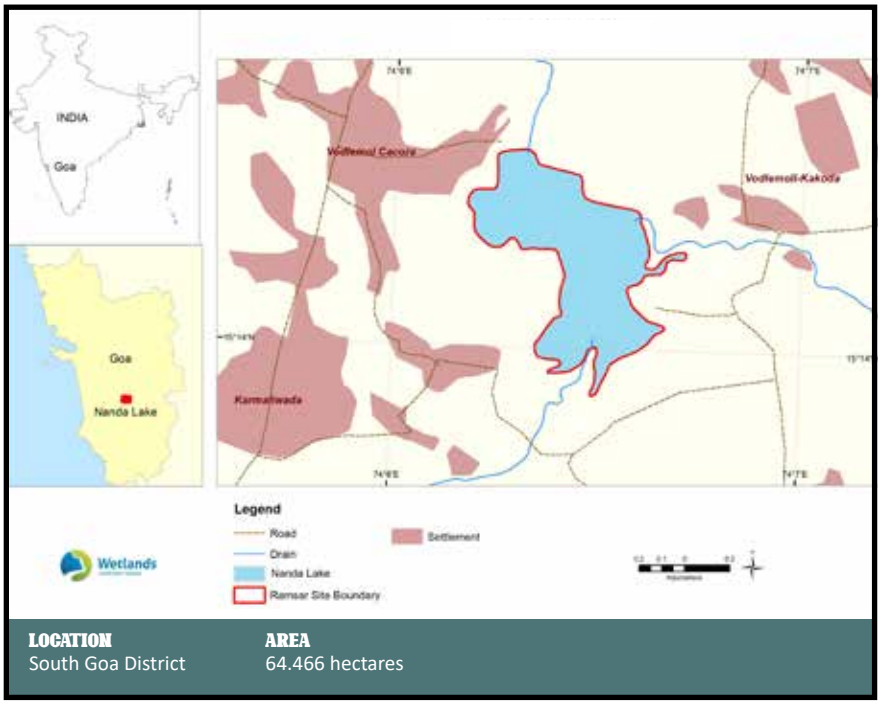
Nanda Lake

Date of designation
June 8, 2022

Nanda, located in the South Goa District of Goa, comprises intermittent freshwater marshes adjacent to one of the major tributaries of the river Zuari. They are linked to the adjoining river channel by a sluice gate. The wetland supports various migratory waterbirds and many other important plants and animals. The water from the wetland is utilized to cultivate paddy downstream of the lake and supports fishing and recreation. Large volumes of monsoon rain are also absorbed by Nanda, preventing floods in the nearby catchment and downstream low-lying communities.

Goa

Designation Criteria	Wetland Type	Protection Status	Management Authority
1, 2, 3	Seasonal/ intermittent freshwater marshes	Wetland notified under Wetlands (Conservation & Management) Rules,2017	Goa State Wetland Authority



LOCATION
South Goa District

AREA
64.466 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

Food

Drinking water

Erosion protection

Water for irrigation

Hazard reduction

Spiritual and inspirational

Pest control

Climate regulation

Hydrological regime

Biodiversity

Species of global conservation significance

Notable	Pistia sp., Pandanus sp., Black-headed Ibis, Common Kingfisher, Wire-tailed Swallow, Bronze-winged Jacana, Brahminy Kite, Intermediate Egret, Red-wattled Lapwing, Little Cormorant, Lesser Whistling Duck
Vulnerable	Smooth-coated Otter, River Tern, Lesser Adjutant
Critically Endangered	Great Indian Bustard

THREATS

Significance

Low | Medium | High

Encroachment

Fishing and harvesting aquatic resources

Dams and water management

Invasive non-native species

Storms and flooding

Canalization

Pollution

Yaiphaba Akoijam

SPECIES RICHNESS

BIRDS **265**

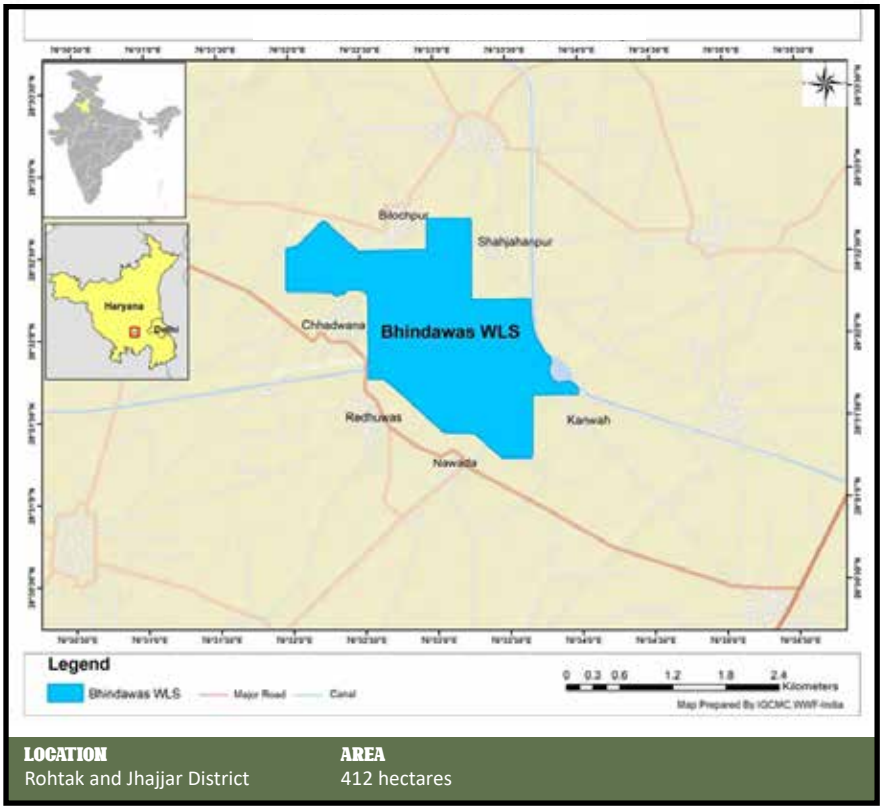
Bhindawas Wildlife Sanctuary

Date of designation
May 25, 2021

Bhindawas Wildlife Sanctuary, situated in the Jhajjar District of Haryana, is a human-made wetland carved from a saucer-shaped depression. The wetland is surrounded by private agricultural lands and is separated from these fields by a 12 km long elevated embankment. Water is received into the wetland from an escape channel of Jawahar Lal Nehru Canal. The main wetland habitat types include large open deep-water and shallow water areas with emergent vegetation. Bhindawas is home to thousands of migratory as well as resident birds. Bhindawas lies on the western route of migratory birds and is used as a stopover by birds heading towards Keoladeo National Park, Bharatpur.

Haryana

Designation Criteria	Wetland Type	Protection Status	Management Authority
2, 3, 4, 6	Water storage area / reservoir	Wildlife Sanctuary	Forest & Wildlife Department, Government of Haryana



LOCATION
Rohtak and Jhajjar District

AREA
412 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

Flood control

Local climate regulation

Nature based tourism

Supports biodiversity

Groundwater recharge

Storage recycling processing and acquisition of nutrients

Species of global conservation significance

Notable	Mallard, Red-crested Pochard, Ferruginous Duck, Baer's Pochard
Endangered	Steppe Eagle, Egyptian Vulture, Black-bellied Tern
Vulnerable	Lesser White-fronted Goose, Eastern Imperial Eagle, Common Pochard

THREATS

Significance

Low

Medium

High

Weed infestation and choking of water channel

Diurnal fluctuation of water level

Ravi Prakash

Sultanpur National Park

SPECIES RICHNESS

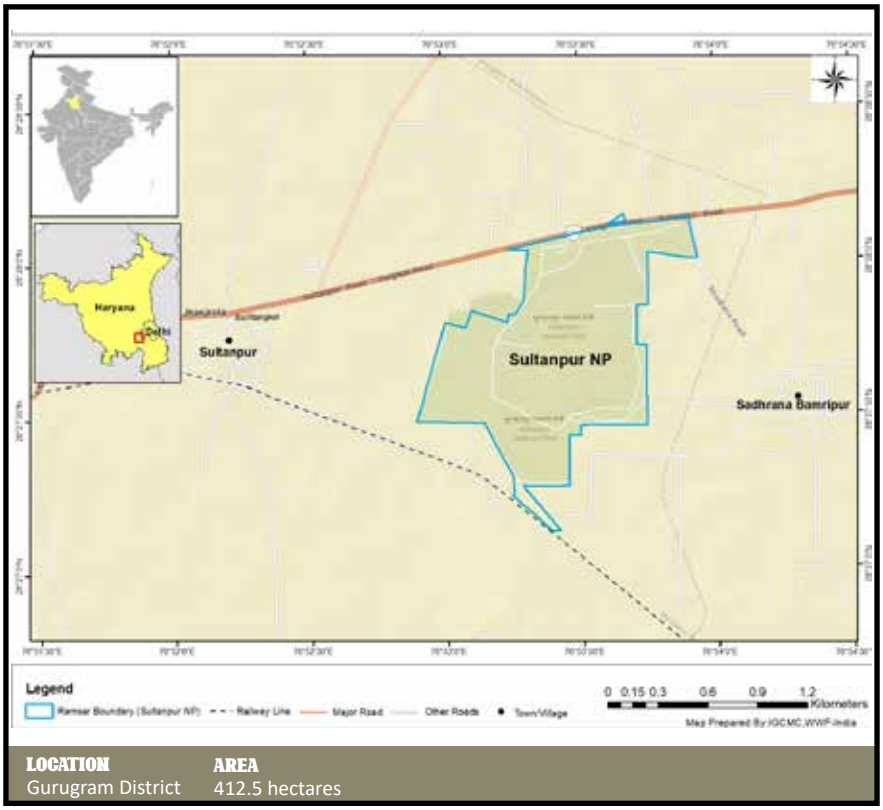
BIRDS	**220**
PLANTS	**150**

Date of designation
May 25, 2021

Sultanpur National Park is an intermittent freshwater wetland located in Gurugram District of Haryana. The wetland has been carved out from the land of adjoining villages, namely Sadharana, Chandu, Sultanpur, and Saidpur Mohmadpur. This shallow wetland is fed by the overflows from neighboring canals and agricultural fields and is replenished by saline groundwater. Sultanpur is a mosaic of shallow inundated areas, grasslands, and tree groves, which have developed over vast alluvial and sandy tracts of recent to sub-recent age. Till the late 19th century, Sultanpur was the center of salt production, supported by brine extracted from shallow borewells, for use in Delhi and surrounding regions. The ecosystem services offered by the Ramsar Site include nutrient cycling, recreation and tourism, and scientific and educational activities.

Haryana

Designation Criteria	Wetland Type	Protection Status	Management Authority
2, 4, 5, 6	Freshwater lake	National Park	Forest & Wildlife Department, Government of Haryana



LOCATION
Gurugram District

AREA
412.5 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

Nature based tourism

Local climate regulation

Supports biodiversity

Educational activities and opportunities

Groundwater recharge

Storage recycling processing and acquisition of nutrients

Species of global conservation significance

Notable	Bar-headed Goose, Greylag Goose, Lesser White-fronted Goose
Critically Endangered	Sociable Lapwing
Endangered	Saker Falcon, Pallas's Fish-eagle, Egyptian Vulture, Black-bellied Tern
Vulnerable	Lesser White-fronted Goose, Eastern Imperial Eagle, Sarus Crane, Common Pochard

THREATS

Significance

Low | Medium | High

Mining and quarrying

Agriculture and forestry effluents

Increase in housing and urban areas

Weed infestation

Chandertal Wetland

SPECIES RICHNESS

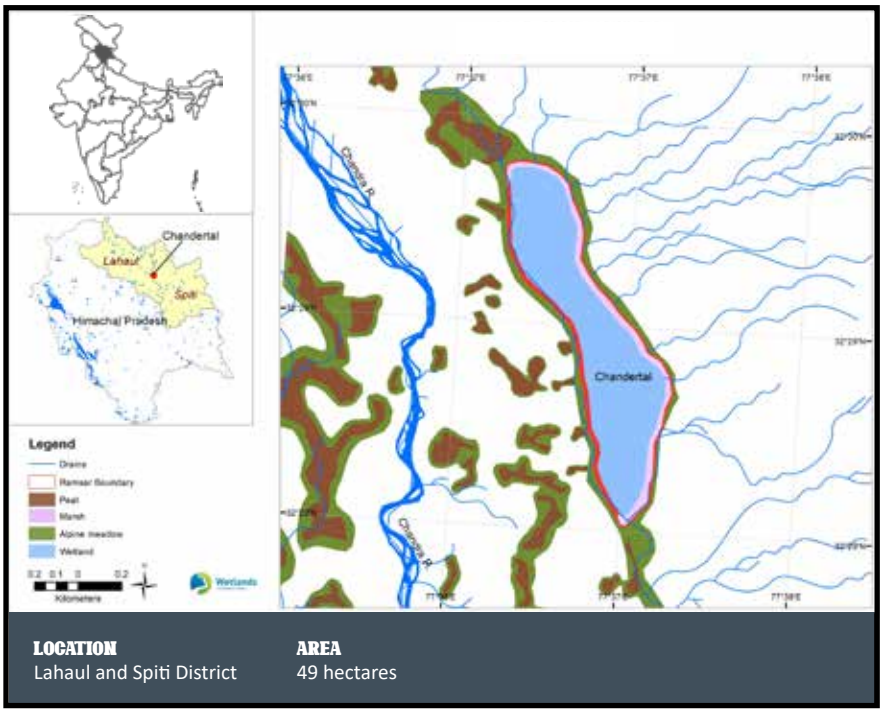
BIRDS	26
MAMMALS	11
PLANTS	28

Date of designation
November 8, 2005

Nested within the upper part of the River Chandra basin and flanked by Pir Panjal and Zanskar mountain ranges, Chandertal is one of the significant High-Altitude Wetlands of Himachal Pradesh. The crescent-moon-shaped wetland, from which it is believed to have derived its name, is situated at nearly 4,300 m AMSL. A distal lake linked with the Chandra-Bhaga glacier complex, Chandertal is an important element of the arid landscape, providing sustenance to diverse animal and plant species, including the iconic and globally vulnerable Snow Leopard, the state animal of Himachal Pradesh. The peatlands on the margins of the wetland are an important carbon store. The wetland is an integral part of the Central Asian Flyway network and is used by a range of migratory waterbird species in their sojourn from temperate to tropics to complete their lifecycle. Chandertal is also a popular trekking destination visited by over 40,000 tourists annually.

Himachal Pradesh

Designation Criteria	Wetland Type	Protection Status	Management Authority
2, 3	Freshwater Lake	Wildlife Sanctuary	Himachal Pradesh Forest Department



LOCATION
Lahaul and Spiti District

AREA
49 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

Source of freshwater

Lifecycle Maintenance

Tourism & recreation

Recharges groundwater

Carbon storage in Peatlands

Scientific and educational importance

Cultural and spiritual value

Erosion prevention

Buffers flash floods

Medicinal plants

Species of global conservation significance

Notable	Snow Leopard, Tibetan Wolf, Himalayan Ibex, Ruddy Shelduck
Vulnerable	Snow Leopard

THREATS

Significance

Low

Medium

High

Siltation

Solid waste

Unsustainable toursim

Climate Change

Over-grazing

Pong Dam Lake

SPECIES RICHNESS

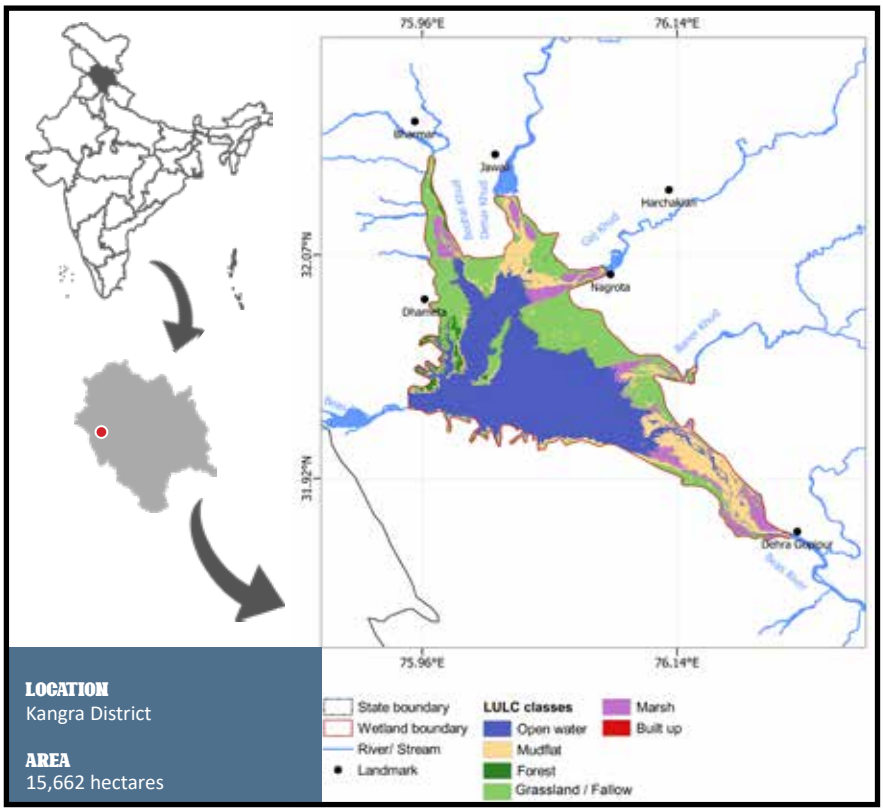
BIRDS	400
FISHES	27
MAMMALS	24

Date of designation
August 19, 2002

Pong dam is a human-made wetland that came into existence in 1975 due to damming of the river Beas in Kangra District of Himachal Pradesh. It is one of the highest earth-core gravel shell dams in India. Over 7,200 MCM of water stored in the reservoir, also known as Maharana Pratap Sagar, is used to generate nearly 390 MW of hydropower and irrigate agricultural lands in Beas Basin. The Dhauladhar mountain range forms a scenic backdrop to the Ramsar Site. Pong is famed for supporting one of the world's largest congregations of bar-headed geese. The migratory waterbirds use the wetland as a transitory habitat during their winter migration route along the Central Asian Flyway. About 2,000 families are directly dependent on the wetland for commercial fishing, which has been practiced since reservoir inundation. In addition to local people, migratory graziers like Gaddis and Gujjars benefit from the wetland.

Himachal Pradesh

Designation Criteria	Wetland Type	Protection Status	Management Authority
2, 5, 8	Reservoir	Wildlife Sanctuary	Himachal Pradesh Forest Department



VALUES AND BENEFITS

Significance

Low | Medium | High

Groundwater recharge

Erosion prevention

Cultural and spiritual importance

Moderation of extreme events

Tourism and recreation

Scientific and educational importance

Lifecycle maintenance
- Over 1 lakh migratory brids
- One of the world's largest congregation of Bar-headed Geese

Irrigates 1.6 million ha agricultural land

~ 400 tonnes annual fish production Livelihood for nearly 2700 fishers

Water for 396MW hydropower generation

Species of global conservation significance

Notable	Bar-headed Goose
Critically Endangered	White-rumped Vulture
Endangered	Black-bellied Tern, Mahseer
Vulnerable	Common Pochard, Asian Woollyneck, Indian Softshell Turtle

THREATS

Significance

Low | Medium | High

Pollution

Hydrological regime alteration/ Regime fragmentation

Siltation

Unsustainable harvest of wetland resources

Over-grazing

Extreme events

Harsh Ganapathi

Renuka Wetland

SPECIES RICHNESS

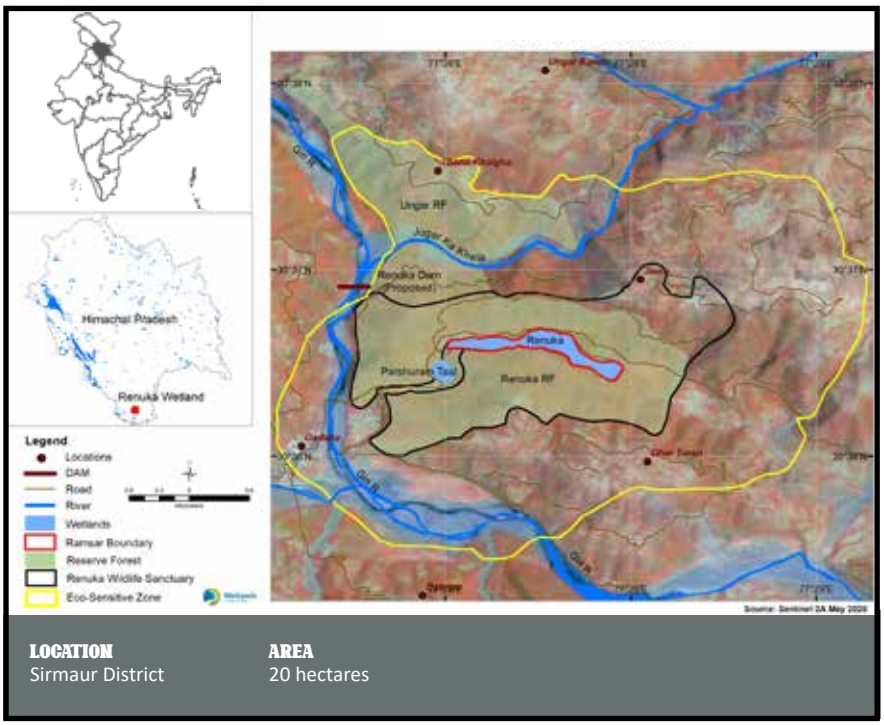
BIRDS	103
FISHES	19
REPTILES & AMPHIBIANS	23
PLANTS	42

Date of designation
November 8, 2005

Renuka is a natural wetland in the Western Himalayan foothills (or Shivaliks) in the Sirmaur district of Himachal Pradesh. The wetland is located within the Renuka Ji Wildlife Sanctuary, which forms the majority of its forested catchment. Renuka is fed by catchment rainwater runoff and several active springs. Water from the wetland drains into a smaller Parshuram Tal through a small channel. Renuka also carries tremendous cultural and religious value in Hindu mythology, with temples of Renuka Ji and Lord Parshuram located along its banks along with three ashrams. The wetland is named after the mother of a Hindu sage Parshuram, Renuka Ji. While many legends surround this wetland, the reunion of the mother Renuka and her son Parshuram is the most well-known. This event is celebrated annually as a major festival, Renuka Ji International Fair, which attracts lakhs of pilgrims to the wetland.

Himachal Pradesh

Designation Criteria	Wetland Type	Protection Status	Management Authority
3, 4	Freshwater lake & marshes	Wildlife Sanctuary	Himachal Pradesh Forest Department



LOCATION
Sirmaur District

AREA
20 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

Freshwater for domestic use and irrigation

Moderation of extreme events

Cultural and spiritual importance
- Sacred land based on the legend of Renuka ji and Lord Parshuram
- 2-3 lakh pilgrims visit during the annual 6-day Renuka ji fair

Water purification

Erosion prevention

Tourism and recreation

Groundwater recharge

Scientific and educational importance

Lifecycle maintenance

Species of global conservation significance

Notable	Mahseer
Endangered	Golden Mahseer

THREATS

Significance

Low | Medium | High

Siltation

Pollution

High tourism pressure

“

WE ARE BLESSED TO BE A PART OF A CULTURE WHERE LIVING IN COMPLETE HARMONY WITH THE ENVIRONMENT IS CENTRAL TO OUR ETHOS. LET'S ENSURE THAT EVEN THE SMALLEST STEP WE TAKE IN OUR DAILY LIVES WILL BE AN EFFORT TOWARDS CONSERVING NATURE AND NATURAL RESOURCES.

”

- Hon’ble Prime Minister Shri Narendra Modi

“

WHEN WE SPEAK ONLY OF CLIMATE CHANGE, THERE IS A PERCEPTION OF OUR DESIRE TO SECURE THE COMFORTS OF OUR LIFESTYLE. BUT WHEN WE SPEAK OF CLIMATE JUSTICE, WE DEMONSTRATE OUR SENSITIVITY AND RESOLVE TO SECURE THE FUTURE OF THE POOR FROM THE PERILS OF NATURAL DISASTERS.

”

- Hon’ble Prime Minister Shri Narendra Modi

Taej Mundkur

Hokera Wetland

SPECIES RICHNESS

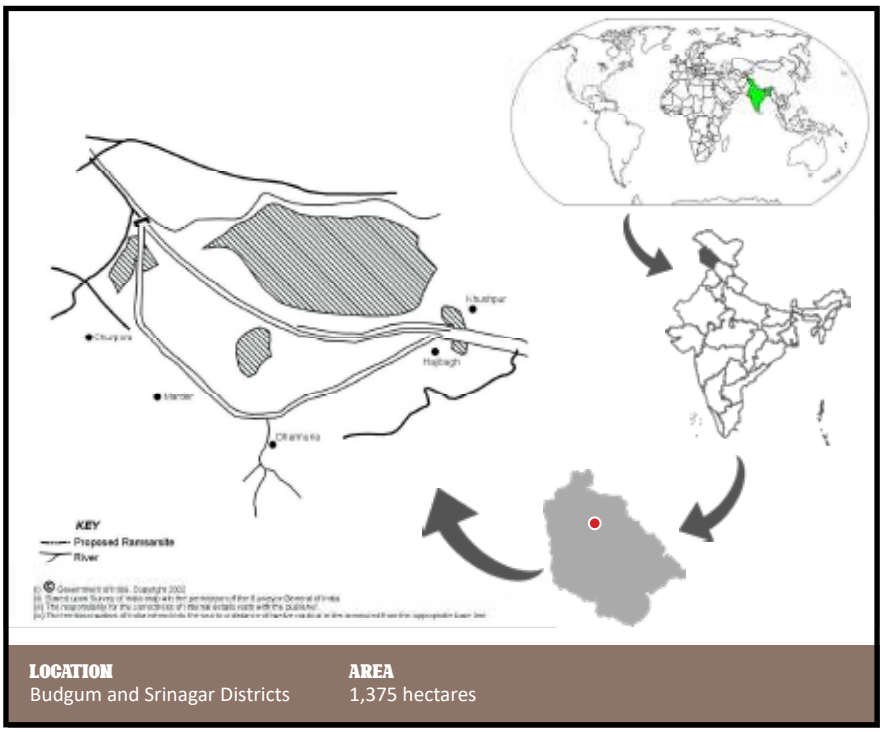
BIRDS	68
PLANTS	38

Date of designation
November 8, 2005

Hokera, an oval-shaped permanent freshwater wetland, is located in the northwest Himalayan biogeographic province of Kashmir, flanked by picturesque snow-draped Pir Panjal mountain ranges. The wetland lies in the flood basin of River Jhelum and the sub-basin of Doodh-Ganga and Sukhnag-Nalla. Of the total water received by the wetland, 91% is contributed from surface inlets and just 9% through precipitation. The water greatly fluctuates through the year's seasons in response to the primary discharge from the Flood Spill Channel. Apart from the silt from the catchment, the water which enters the wetland also brings nutrients from surrounding agricultural fields. The complex floral composition of the wetland traps the sediments and nutrients, besides acting as a flood absorption basin through water storage. Thus, providing flood buffer to the city of Srinagar and surrounding fields. Hokera plays a significant role as a biodiversity conservation site, eco-tourism destination and livelihood security for local communities.

Jammu & Kashmir

Designation Criteria	Wetland Type	Protection Status	Management Authority
2, 4, 5, 8	Marshes	Conservation Reserve	Department of Wildlife Protection, Government of UT of Jammu & Kashmir



LOCATION
Budgum and Srinagar Districts

AREA
1,375 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

Water for agriculture

Fisheries supports livelihood for 30 villages

Scientific and educational value

Water purification

Groundwater recharge

Flood protection

Reeds, fibre and fodder

Tourism and recreation

Species of global conservation significance

Notable	Eurasian Otter, *Schizothorax sp.*, Little Grebe
Endangered	Pallas's Fish-eagle
Vulnerable	Common Carp, Common Pochard

THREATS

Significance

Low

Medium

High

Pollution

Encroachment

Invasive species

Siltation

Harsh Ganapathi

SPECIES RICHNESS

BIRDS 21

PHYTOPLANKTON..... 183

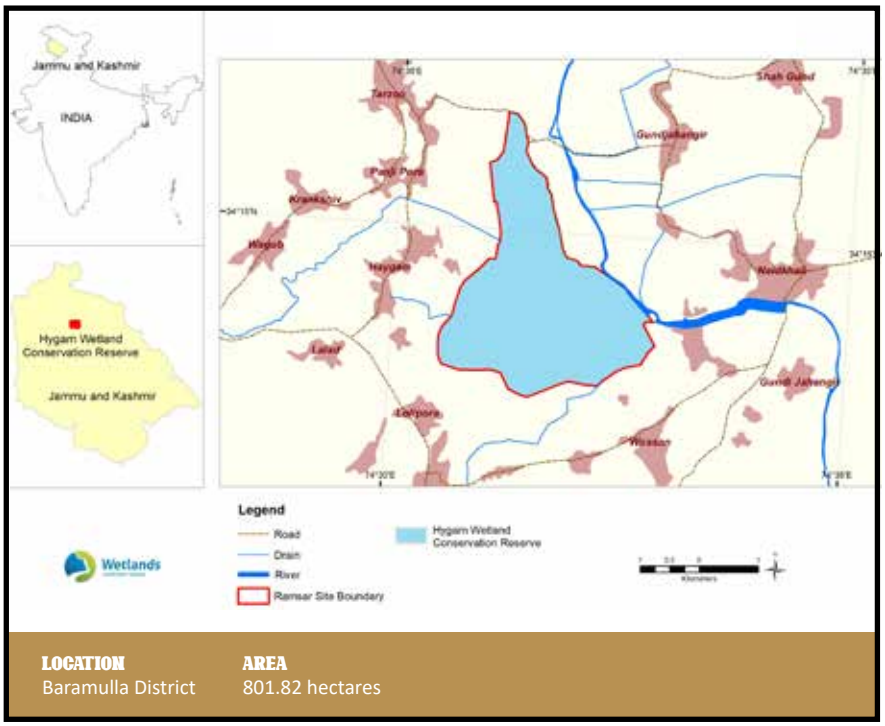
Hygam Wetland Conservation Reserve

Date of designation
June 8, 2022

Hygam Wetland Conservation Reserve, locally known as Hygam Rakh, is the largest remaining reed bed in the Kashmir valley. The wetland falls within the river Jhelum basin in the Baramulla district of the Union Territory of Jammu and Kashmir. It is adjacent to the southern tip of Wular, forming an interconnected ecosystem complex. The cone-shaped wetland was notified as a game reserve for duck shooting far back in 1945. Hygam is fed by a perennial stream of Ballakul, which enters the wetland in its south, while Ningli Nallah and other tributaries such as Hanji pora Kull and Trambgund Kull enter the wetland along its western boundary. The water table keeps on fluctuating through the seasons. The wetland plays a significant role as a flood absorption basin, biodiversity conservation site, eco-tourism site, and livelihood security for the local communities. Hygam is the only extensive marsh discernible in association with an artificial reservoir of lower Jhelum hydroelectric projects at Gantamullah. In emergencies, water from this wetland is used to irrigate the local villagers' fields along the peripheries.

Jammu & Kashmir

Designation Criteria	Wetland Type	Protection Status	Management Authority
1, 2, 3, 5, 6	Freshwater marsh	Wildlife Conservation Reserve	Department of Wildlife Protection, Govt. of UT of Jammu & Kashmir



LOCATION
Baramulla District

AREA
801.82 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

Drinking water

Food

Carbon sequestration

Water storage and delivery

Nature based tourism

Biodiversity

Scientific and educational importance

Species of global conservation significance

Notable	Common Teal, Northern Pintail, Mallard, Little Egret, Whiskered Tern
Endangered	Steppe Eagle, Pallas's Fish-eagle, Black-bellied Tern
Vulnerable	Lesser White-fronted Goose, Eastern Imperial Eagle, Tawny Eagle, Common Pochard, Yellow-eyed Pigeon, Wood Snipe, River Tern, *Streptopelia turtur*

THREATS

Significance

Low

Medium

High

Canalization and river regulation

Wood and pulp plant

Non-timber crops

Habitat shifting and alteration

Water abstraction

Fishing

Pollution

Encroachment

SPECIES RICHNESS

BIRDS **54**

MAMMALS ..... **15+**

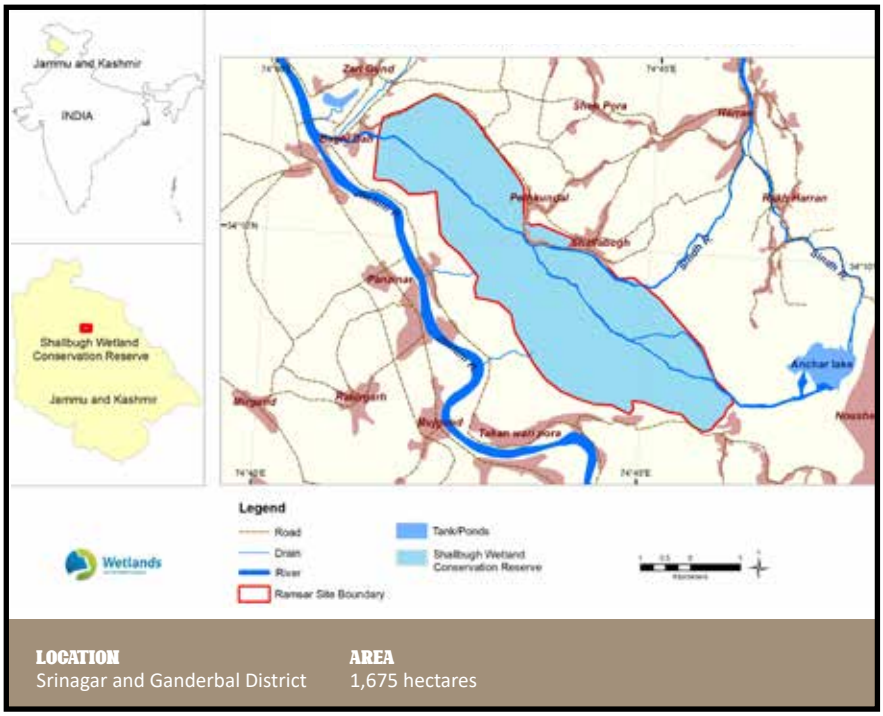
Shallbugh Wetland Conservation Reserve

Date of designation
June 8, 2022

Shallbugh Wetland Conservation Reserve, falling within the river Jhelum basin, is located in the Srinagar District of the Union Territory of Jammu & Kashmir. The wetland is situated in the deltaic region of the Sindh Nallah, about 18 km from Srinagar to the west of Anchar Lake. The wetland is an important aquatic ecosystem of Kashmir. Shallbugh harbors a rich diversity of resident and migratory avifaunal species and macrophytes of high socio-economic importance. The wetland plays a significant role as a flood absorption basin, biodiversity conservation site, Eco-tourist destination, groundwater recharge, control streamflow, and carbon sequestration. The livelihood of a sizeable population of around ten villages depends on the Shallbugh wetland reserve to extract wicker willow, popular fishery, and livestock grazing

Jammu & Kashmir

Designation Criteria	Wetland Type	Protection Status	Management Authority
1, 2, 3, 4	Freshwater Lake	Wildlife Conservation Reserve	Department of Wildlife Protection, Government of UT of Jammu & Kashmir



LOCATION
Srinagar and Ganderbal District

AREA
1,675 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

Food

Water irrigated

Groundwater recharge

Nature based tourism

Scientific and educational

Climate regulation

Biodiversity

Carbon sequestration

Pollination

Species of global conservation significance

Notable	Common Teal, Mallard, Northern Pintail, Gadwall, Eurasian Wigeon, Northern Shoveller, Common Pochard
Critically Endangered	Garganey, Leopard, Indian Himalayan Wolf, Red Fox, Jackal, Jungle Cat
Vulnerable	Eastern Imperial Eagle, Lesser White-fronted Goose, Tawny Eagle, Common Pochard

THREATS

Significance

Low

Medium

High

Canalization and river regulation

Drainage

Non-timber crops

Habitat shifting and alteration

Water abstraction

Fishing

Pollution

Encroachment

Pankaj Chandan

Surinsar-Mansar Lakes

SPECIES RICHNESS

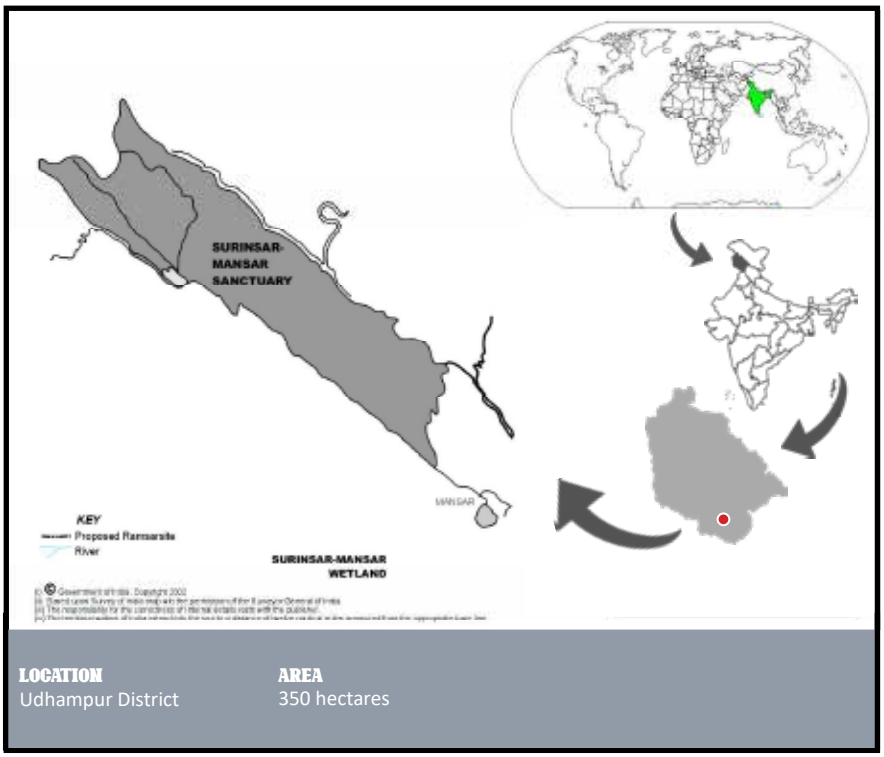
BIRDS	34
FISHES	8
MAMMALS	8
REPTILES & AMPHIBIANS	2+
PLANTS	28

Date of designation
November 8, 2005

Surinsar and Mansar are the twin wetlands in Udhampur district and Jammu District of the Union Territory of Jammu and Kashmir, respectively. Mansar is semi-oval, while Surinsar is oval in shape with a small island in the center. The wetlands form an ideal habitat and breeding ground for many endangered and threatened species. High micronutrients make Surinsar-Mansar an attractive habitat, breeding, and nursery ground for migratory waterbirds. The Ramsar site is socially and culturally significant, with many temples around, owing to its mythical origin from the Mahabharata period and an important and popular tourist destination. According to Hindu mythology, the origin of the wetlands is associated with Arjuna-the warrior of Mahabharata. It is believed that Arjuna shot an arrow into the ground at Mansar; the arrow pierced the earth, and a spring of water gushing from there formed Mansar wetland, and the spring gushing from the arrow-exit-land turned into Surinsar wetland. Although the lakes support a variety of fishes, however, due to their religious significance, fishing is not encouraged.

Jammu & Kashmir

Designation Criteria	Wetland Type	Protection Status	Management Authority
2, 3, 4	Freshwater lakes	Wildlife Sanctuary	Surinsar-Mansar Development Authority



LOCATION
Udhampur District

AREA
350 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

Water for agriculture

Fodder

Buffers floods

Tourism and recreation

Religious tourism

Groundwater recharge

Species of global conservation significance

Notable	Indian Flapshell Turtle
Vulnerable	Common Pochard, Indian Softshell Turtle, Common Carp

THREATS

Significance

Low

Medium

High

Siltation

Pollution

Invasive species

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SPECIES RICHNESS

BIRDS	56
FISHES	39
PLANTS	20+

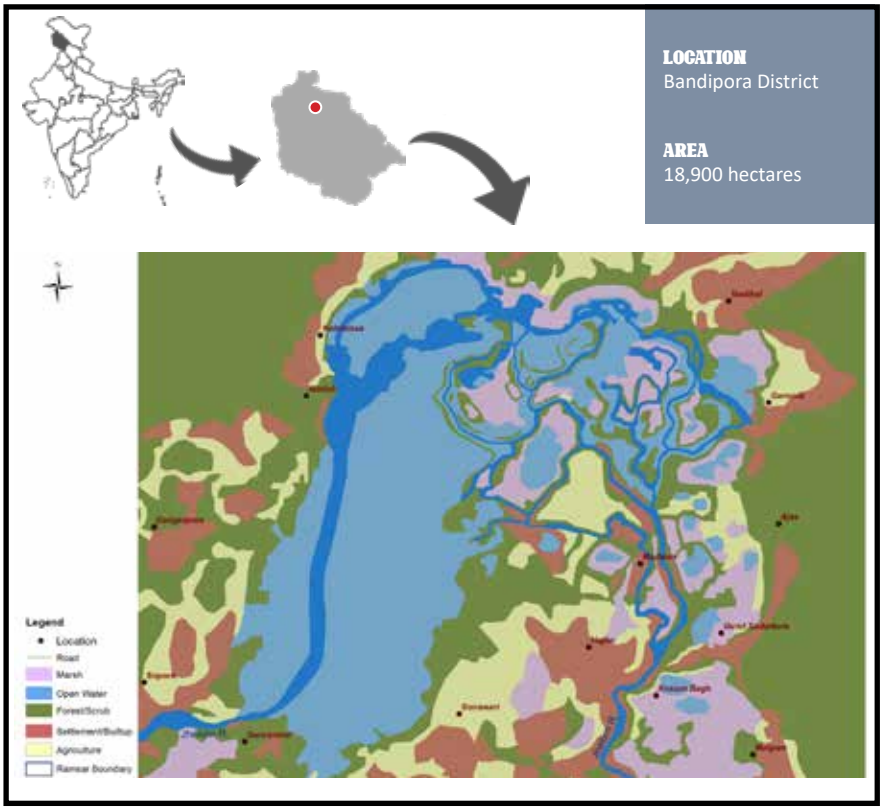
Wular Lake

Date of designation
March 23, 1990

Wular, the largest freshwater wetland within the river Jhelum basin, plays a significant role in the hydrography of Kashmir valley by acting as a absorption basin for floodwaters. Wular, with its associated wetlands, support rich biodiversity and provides important habitats for migratory waterbirds within the Central Asian Flyway. The wetland is the largest fisheries resource in Kashmir Valley, supporting the livelihoods of a large human population living along its fringes. Regulation of hydrological regimes of the basin through Wular and its associated wetlands protects the Kashmir valley from floods and maintains flows to support agriculture and hydropower generation. The wetland also generates revenue for the state government through fisheries and auctioning water chestnuts, fodder, and other economically important species. The wetland catchment supports coniferous forests and alpine pastures, adding to the natural beauty and biodiversity of the wetland area.

Jammu & Kashmir

Designation Criteria	Wetland Type	Management Authority
1	Freshwater lake & marsh	Wular Conservation & Management Authority



VALUES AND BENEFITS

Significance

Low | Medium | High

Groundwater recharge

Tourism and recreation

Important source of vegetables for 30+ villages

~1500 MT fish catch annually

Buffers floods

Fodder

Spiritual and historical significance

Species of global conservation significance

Critically Endangered	White-bellied Heron, Pink-headed Duck, Baer's Pochard, Kashmir Catfish
Endangered	Oriental Stork, White-headed Duck, White-winged Duck, Black-bellied Tern
Vulnerable	Black-necked Crane, Indian Skimmer, Marbled Teal, Common Carp

THREATS

Significance

Low

Medium

High

Construction of embankments

Pollution

Siltation

Encroachment (Willow plantation)

Aghanashini Estuary

SPECIES RICHNESS

BIRDS	117
FISHES	84
PLANTS	45

Date of designation
February 14, 2023

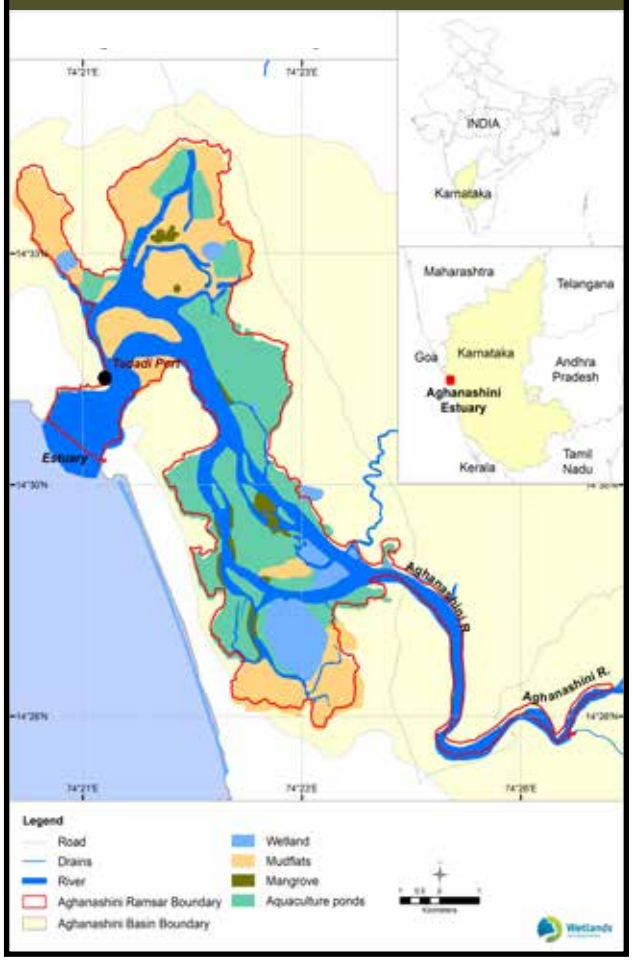
Aghanashini Estuary is formed at the confluence of the Aghanashini River and the Arabian Sea. The Aghanashini River, originating in the Western Ghats, flows westward for 117 kilometres before joining the Arabian Sea in Kumta Taluk of Karnataka. This brackish water ecosystem of the Estuary extends to 48 square kilometres and sustains around 6,000 and 7,500 families, with an estimated economic value of ₹50,05,035 per hectare annually. The Ramsar Site supports the livelihoods of more than 6,000 households that are engaged in activities such as fishing, agriculture, shrimp aquaculture, bivalve shell mining and salt production. In the estuary, farmers practice traditional farming to grow salt-tolerant rice called "kagga", which is one of the specialities of the region.

Karnataka

Designation Criteria	Wetland Type	Management Authority
2, 3, 4, 5, 6, 7, 8	Permanent shallow marine waters, Rocky marine shores, Sand, shingle or pebble shores, Estuarine waters, Intertidal mud, sand or salt flats	Karnataka Forest Department

LOCATION
Uttara Kannada District

AREA
4,801 hectares



VALUES AND BENEFITS

Significance

Low | Medium | High

- Pollination
- Spiritual and inspirational
- Scientific and educational
- Nutrient cycling
- Recreation and tourism
- Food for humans
- Erosion protection
- Groundwater recharge and discharge
- Biodiversity
- Water purification/ waste treatment
- Coastal shoreline and river bank stabilisation and storm protection

Species of global conservation significance

Notable	Mangrove sp., Narrow-barred Spanish mackerel, Pearlspot, Asian swamp eel, Lesser Adjutant Stork, Hilsa, Malabar Pied Hornbill, Eurasian Curlew
Critically Endangered	Halavi ray
Endangered	Four-finger threadfin, Bleeker's whipray
Vulnerable	River tern, Greater Spotted Eagle, Curlew Sandpiper, Black-capped Kingfisher. Grey goby, Malabar Tonguesole, Silver Pomfret

THREATS

Significance

Low | Medium | High

- Water regulation
- Marine and freshwater aquaculture
- Habitat shifting and alteration
- Human interference and disturbance
- Invasive non-native species
- Shipping lanes
- Fishing and harvesting aquatic resources
- Recreational and tourism activities

S. Subramanya

SPECIES RICHNESS

BIRDS	240
FISHES	41
MAMMALS	8
REPTILES & AMPHIBIANS	28
PLANTS	210
INSECTS	59

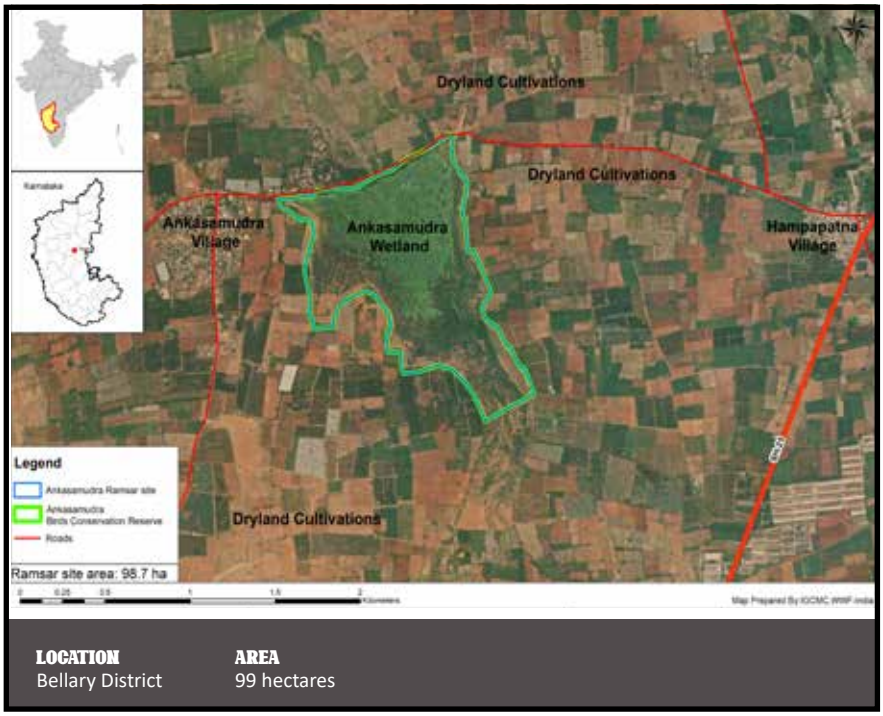
Ankasamudra Bird Conservation Reserve

Date of designation
March 10, 2023

The Ankasamudra Bird Conservation Reserve (ABCR) is a human-made village irrigation tank located approximately 40 km from the UNESCO World Heritage site of Hampi. The wetland has been built centuries back by local people for harvesting and storing monsoon surface run-off in an otherwise dry, parched inland Deccan Plateau of India. Thus, the traditional governess of the wetland has preserved its structure, ecology, and character for centuries. The lakebed is home to thousands of gum arabic trees (*Vachellia nilotica*), locally known as Karijali, which provide vital nesting and roosting habitats for numerous large colonial waterbirds. The wetland supports around 81 species of medicinal plants. The Ramsar Site is surrounded by agricultural fields on one side and Tungabhadra backwater on the other.

Karnataka

Designation Criteria	Wetland Type	Protection Status	Management Authority
2, 3, 4, 5, 6	Water storage areas/Reservoirs	Conservation Reserve	Deputy Conservator of Forests Vijayanagara Division Karnataka State Forest Department & Principal Chief Conservator of Forests (Wildlife) Karnataka Forest Department



LOCATION
Bellary District

AREA
99 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

Water for irrigated agriculture

Groundwater recharge and discharge

Nature observation and nature-based tourism

Scientific and educational importance

Educational activities and opportunities

Biodiversity

Nutrient cycling

Water purification/waste treatment or dilution

Species of global conservation significance

Notable	Painted Stork, Oriental Darter, Spot-billed Pelican, Black-headed Ibis, Black-tailed Godwit, Pallid Harrier, Red-headed Falcon, Asian Woollyneck
Endangered	Steppe Eagle, Zebra Loach, Aruli Barb, Nukta
Vulnerable	Indian Sandalwood, Common Pochard, River Tern, Lesser Adjutant, Indian Spotted Eagle, Greater Spotted Eagle, Indian Flapshell Turtle, *Hyporhamphus xanthopterus*, Kolus Barb, *Walago attu*

THREATS

Significance

Low | Medium | High

Recreation and tourism

Aquaculture

Roads and railroads

Invasive non-native/ alien species

Hydrological regime alteration

Storms and flooding

Karnataka Forest Department

SPECIES RICHNESS

BIRDS ..... **166+**

Magadi Kere Conservation Reserve

Date of designation
February 14, 2023

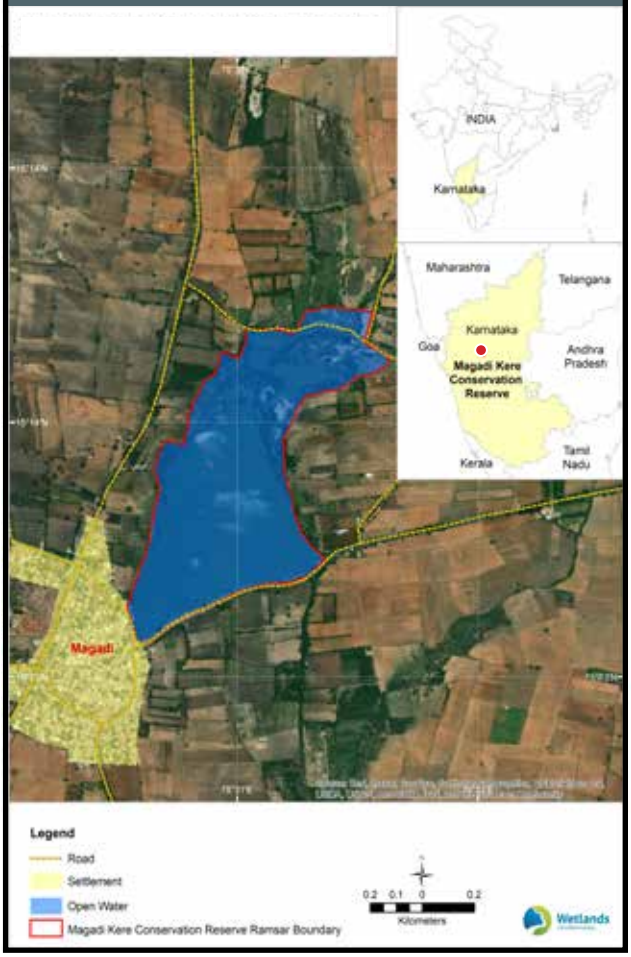
The Magadi Kere Conservation Reserve, located in the Shirahatti taluk of Gadag district, Karnataka, is a human-made wetland created for rainwater storage to support irrigation. However, increasing salinity has led to the cessation of its use for irrigation. The Ramsar Site boasts remarkable bird biodiversity, with over 166 species recorded, including 35 resident species. During winter, around 8,000 birds, including significant numbers of Bar-headed Geese (*Anser indicus*), flock to the wetland, making it one of the largest wintering grounds for the Bar-headed goose in Southern India. Magadi Kere is recognised as an Important Bird Area (IBA) and a priority conservation site which plays a crucial role in safeguarding avian species throughout Southern India.

Karnataka

Designation Criteria	Wetland Type	Protection Status	Management Authority
2, 3, 5, 6	Water storage areas/Reservoirs	Conservation Reserve	Magadi Kere Conservation Reserve Management Committee, Village Forest Committee, Karnataka Forest Department

LOCATION
Ramanagara District

AREA
54 hectares



VALUES AND BENEFITS

Significance

Low | Medium | High

- Food for humans
- Drinking water for humans and/or livestock
- Nature observation and nature-based tourism
- Climate regulation
- Biodiversity

Species of global conservation significance

Notable	Bar-headed goose, Pallid Harrier, Spot-billed Pelican
Endangered	Indian Pangolin
Vulnerable	Common pochard, River tern, Indian Spotted Eagle, Greater Spotted Eagle

THREATS

Significance

Low | Medium | High

- Mining and quarrying
- Roads and railroads
- Invasive non-native/ alien species
- Pollution
- Human interference and disturbance

Ranganathittu Bird Sanctuary

SPECIES RICHNESS

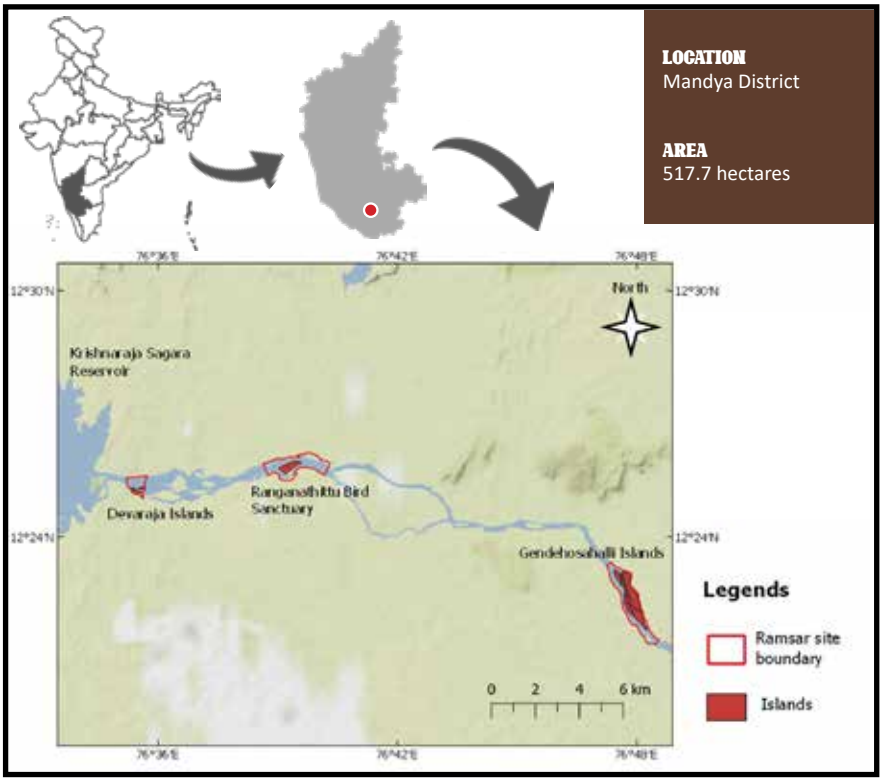
BIRDS	225
FISHES	109
MAMMALS	6
REPTILES & AMPHIBIANS	19
PLANTS	188

Date of designation
February 15, 2022

Ranganathittu Bird Sanctuary is located in the Mandya district of Karnataka. The major islands and islets of Ranganathittu are located in the midstream of river Cauvery and form part of the wetland system. A weir across river maintains the water level of Ranganathittu. The weir was built between 1645 -1648 when Kantirava Narasaraja Wodeyar was the ruler of Mysuru princely state. Ranganathittu is one of India's oldest Bird Sanctuaries, sustaining a spectacular congregation of waterbirds and waders within the Western Ghats Biological Diversity Hotspot. The wetland is essential for groundwater recharge and nutrient cycling, both of which have an impact on nearby irrigation activities. The wetland is well known for nature tourism which generates considerable revenue for local authorities and communities and provides educational and research opportunities.

Karnataka

Designation Criteria	Wetland Type	Protection Status	Management Authority
2, 3, 4, 6, 7, 8	River stretch	Bird Sanctuary	Karnataka Forest Department



VALUES AND BENEFITS

Significance

Low | Medium | High

- Groundwater recharge and discharge
- Flood buffer
- Nature based tourism and observation
- Supports biodiversity

Species of global conservation significance

Notable	Painted Stork, Common Pochard, River Lapwing, Red-wattled Lapwing
Critically Endangered	Oriental White-backed Vulture
Vulnerable	Greater Spotted Eagle

THREATS

Significance

Low | Medium | High

- Spread of invasive species
- Hydrological regime alteration
- Pollution
- Unsustainable tourism

Ashtamudi Wetland

SPECIES RICHNESS

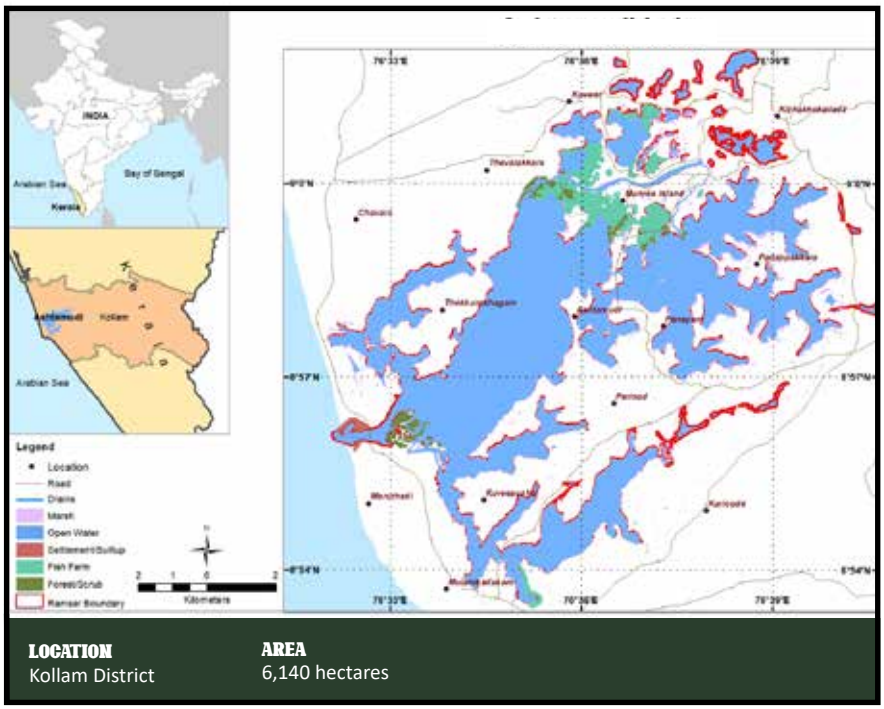
BIRDS	116
FISHES	87
PLANTS	115

Date of designation
August 19, 2002

Ashtamudi wetland is an estuarine system in the Kollam district and is the second largest in Kerala. The wetland is palm-shaped with eight cones that signify the local culture and belief systems, with many sites of historical and cultural significance, such as Quilon port located along its shorelines. Moving from the east, Thevally, Kureepuzha, Kandachira, Thekkumbhagam, Peruman, Kanjirottu, Kallada, and Kumbaluthu form the eight cones of the estuary, thus named Ashtamudi. The mouth of Ashtamudi has been developed into a harbour, Neendakara, which is used by over 3000 marine fishing boats and trawlers. The wide-ranging ecosystem services and biodiversity values for Ashtamudi exist within a densely populated and highly developed landscape. The clam fisheries of the estuary are famed for being the country's first Marine Stewardship Council-certified fishery. This picturesque estuary serves as the gateway of Cochin backwaters and is one of the prominent tourist destinations of the state.

Kerala

Designation Criteria	Wetland Type	Management Authority
1,2,3,8	Estuary	State Wetland Authority Kerala



LOCATION
Kollam District

AREA
6,140 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

Carbon sink

Prevents shoreline erosion

Part of famed Cochin backwaters

Livelihood for 30,000 fishers

Habitat for migratory fish and water birds

Flood buffering

Species of global conservation significance

Notable	Pearlspot
Critically Endangered	*Syzygium travancoricum*
Vulnerable	Greater Spotted Eagle

THREATS

Significance

Low

Medium

High

Freshwater flow reduction

Salinization

Encroachment

Pollution

Silt deprivation

High pressure on fishing

Suchita Awasthi

Sasthamkotta Lake

SPECIES RICHNESS

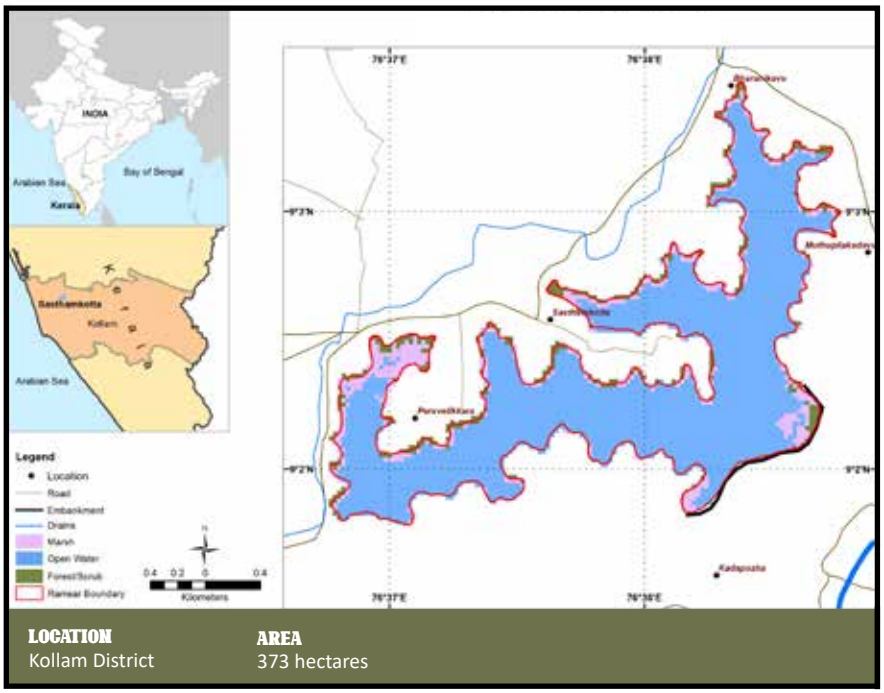
BIRDS	35
FISHES	37
PLANTS	158

Date of designation
August 19, 2002

Sasthamkotta, the largest freshwater wetland in Kerala, is located in Kunnathur Taluk of Kollam District. The main source of water is underground sprouts. The wetland is the principal source of water for nearly 0.5 million people living in Kollam City and its suburbs. Sasthamkotta forms a part of the extensive floodplain wetland of river Kallada. Sastha temple, from which the wetland is believed to have got the name, is an important religious and cultural center for the region. The striking beauty of Sasthamkotta's placid waters surrounded by lush green hills has earned it the distinction of 'Queen of Lakes'. Sasthamkotta is part of several freshwater wetlands separated by natural ridge features that dot the landscape of the river Kallada basin. The present form and shape of the lake are believed to have been acquired about 4,000 years ago, when extensive sedimentation, heavy load of siltation from the rivers along with meandering and migration cut-off isolated lakes and marshes.

Kerala

Designation Criteria	Wetland Type	Management Authority
1, 2, 7, 8	Freshwater Lake	State Wetland Authority Kerala



LOCATION
Kollam District

AREA
373 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

Groundwater recharge

Water for Kollam City

Buffers flood

Means of transport

Local tourism

Species of global conservation significance

Notable	Butter Catfish, Malabar Mystus
Vulnerable	Günther's Catfish, Wallago Catfish

THREATS

Significance

Low

Medium

High

Pollution

Over abstraction of water

Laterite mining

Vembanad-Kol Wetland

SPECIES RICHNESS

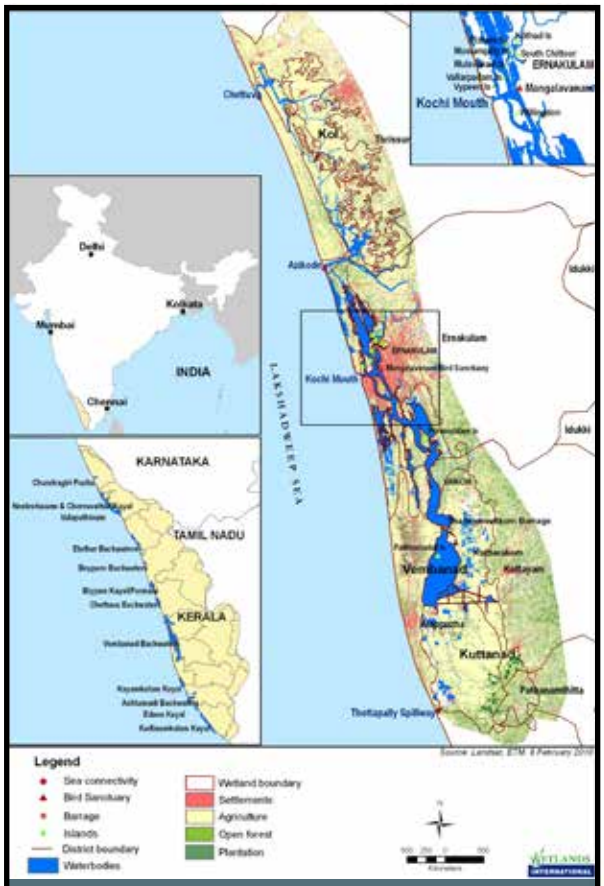
BIRDS	225
FISHES	102
PLANTS	200+

Date of designation
August 19, 2002

Vembanad-Kol constitutes one of the largest wetland regimes on the Malabar coastline. The wetland complex comprises the Vembanad estuary, flanked by river floodplains of Kuttanad and Kol in the south and north, interspersed by river estuaries and mangrove marshes which are interconnected by an intricate network of natural and human-made channels. Spanning around 145 km along the coastline of Alappuzha, Kottayam, Ernakulam, and Thrissur Districts, Vembanad-Kol wetlands form a part of the extensive chain of backwaters that are characteristic features of the state. The wetland supports rich biodiversity and harbors one of the highest populations of migrating waterbirds in the Central Asian Flyway within India. Vembanad-Kol sustains the livelihoods of nearly 0.2 million households through backwater tourism, inland navigation, and a range of resources such as clams, shellfish, and finfish. Located at the apex of the basin, the Ramsar Site also regulates hydrological regimes, providing flood protection to large settlements such as Cochin and Ernakulam and water for agriculture in the Kuttanad region – the Rice Bowl of Kerala. Mangalavanam, located on the eastern fringes of the wetland, is a site of a large waterbird congregation. Shallower wetland regions and marshes in the Kuttanad and Kol regions were converted into polders, locally called padashekharams, to enable agriculture.

Kerala

Designation Criteria	Wetland Type	Management Authority
1, 2, 4, 5, 8	Lagoon & floodplain complex	State Wetland Authority Kerala



LOCATION
Ernakulam, Alappuzha, Kottayam and Thrissur Districts

AREA
1,51,250 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

Flood buffer for Cochin and Ernakulam cities

Backwater tourism

Livelihoods for over 0.2 million households Kuttanad: Rice bowl of Kerala

Habitat for several migratory species

Scientific and educational values

Cultural significance: Pokkali farming-geographical indication

Species of global conservation significance

Notable	Pearl Spot, Malabar Mystus
Endangered	Steppe Eagle

THREATS

Significance

Low

Medium

High

Invasive species

Regulation by Thaneermukkom Barrier

Pollution

Regime fragmentation

Encroachment

Tourism pressure

Shutterstock

SPECIES RICHNESS

BIRDS	139
MAMMALS	10
REPTILES	2
PLANTS	232

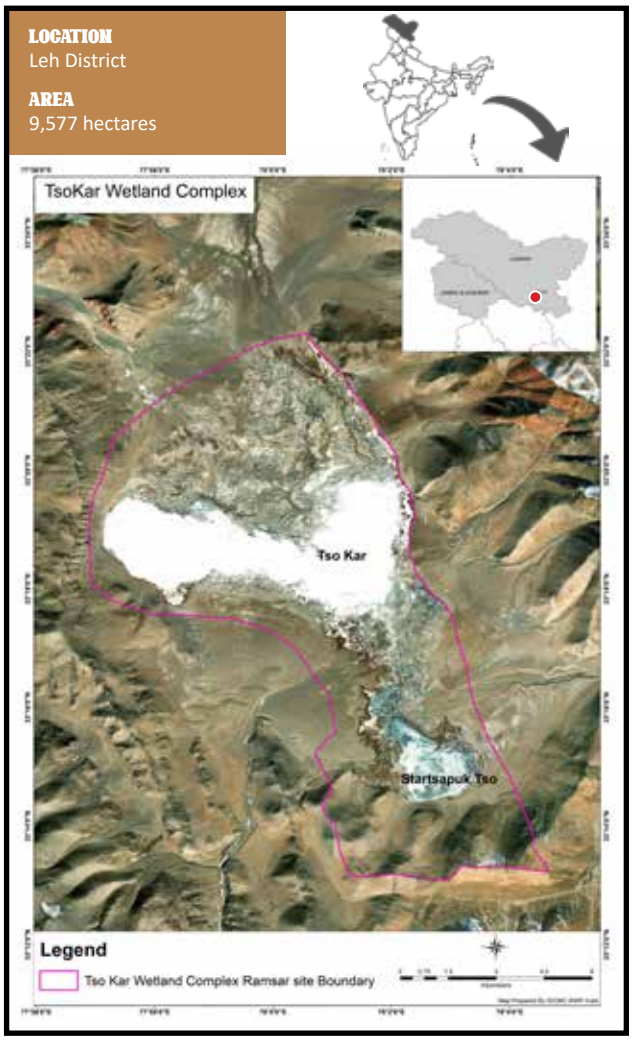
Tso Kar Wetland Complex

Date of designation
November 17, 2020

Tso Kar is a high-altitude wetland complex located in the Changthang region of Ladakh. The wetland complex consists of two connected wetlands, Startsapuk Tso, a freshwater wetland to the south, and Tso Kar itself, a hypersaline wetland to the north. Tso Kar refers to the white salt efflorescence on the margins of the wetlands caused by the evaporation of the saline waters. The glacial meltwater is the primary water source for the wetlands. The presence of freshwater attracts biodiversity in a biologically sparse region. During autumn migration, Tso Kar wetland complex becomes an assembling place for local breeding birds and a major staging spot for migratory birds along the Central Asian Flyway. The wetland complex plays a significant role in maintaining the water table in the high-altitude mountain steppe and cold desert region and is paramount in maintaining the overall water cycle. There is no other wetland in India that supports the breeding of black-necked crane, bar-headed goose, and saker falcon during the same time of the year in the same basin, making this a unique wetland complex. The local Changpa community considers the basin's wetlands to be of sacred origin. As a result, the local community has imposed sanctions and rules that prohibit the use of water from the wetlands and its biotic resources.

Ladakh

Designation Criteria	Wetland Type	Protection Status	Management Authority
1, 2, 3, 4	Brackish/alkaline lake & freshwater lake	Partially designated as Wildlife Sanctuary	Department of Wildlife Protection, Government of the UT of Ladakh



VALUES AND BENEFITS

Significance

Low | Medium | High

- Traditional knowledge
- Groundwater recharge and discharge
- Wetland non-food products eg. livestock fodder
- Recreation and tourism
- Cultural and spiritual importance
- Lifecycle maintenance

Species of global conservation significance

Notable	Tibetan Wolf, Kiang, Snow Leopard, Black-necked Crane, Saker Falcon, Tibetan Argali
Endangered	Saker Falcon
Vulnerable	Common Pochard, Black-necked Crane, Snow Leopard

THREATS

Significance

Low | Medium | High

- Roads and railroads
- Pollution from household sewage, urban wastewater
- Livestock farming and ranching
- Unsustainable tourism

Dhritiman Mukherjee

Tsomoriri

SPECIES RICHNESS

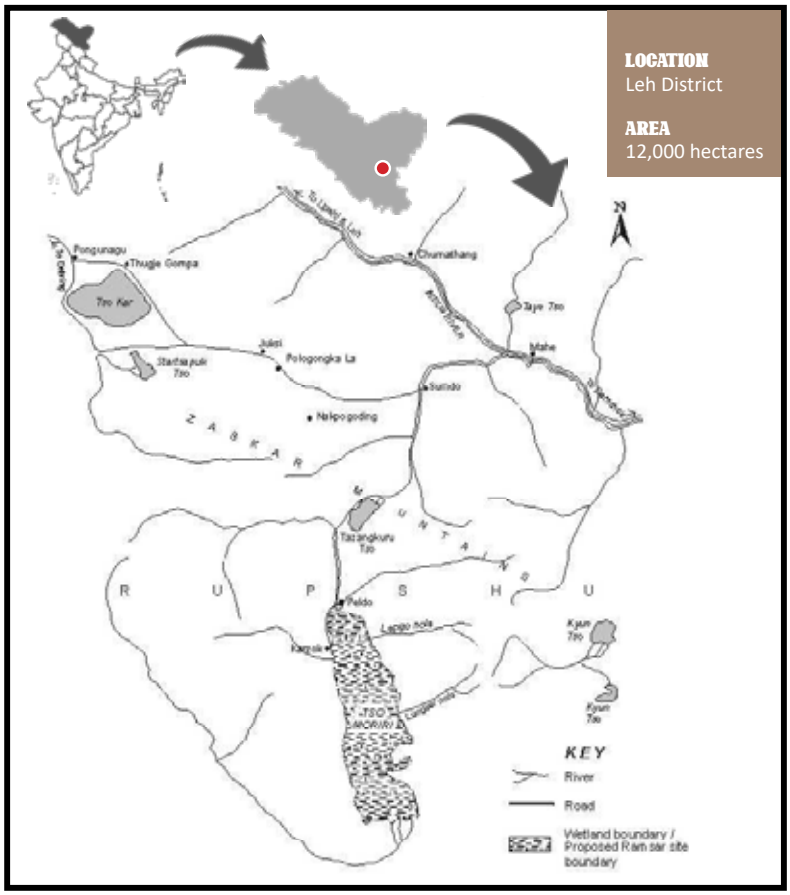
BIRDS	11
MAMMALS	8
PLANTS	7

Date of designation
August 19, 2002

Tsomoriri is a fresh to brackish water wetland located in the Changthang region, 200 km southeast of Leh. The wetland receives water from several small mountain streams. Tsomoriri is considered a relic of the ice age, formed by meltwaters of ice masses left behind by retreating glaciers. Waters from surrounding areas drain into the wetland, though the wetland has no outflow. Due to desert-like conditions, vast amounts of water evaporate very fast from the lake's surface, changing, what had initially been a freshwater lake into a brackish, and finally saline water lake. Tsomoriri represents one of the few known breeding grounds outside China for the black-necked crane and the only known breeding ground of the bar-headed geese in India. The catchment area is also home to notable mammalian species such as snow leopard, Himalayan wolf, blue sheep, argali, Himalayan marmot, and kiang. Korzok monastery in Korzok village, some 400 years old, unlike most gompas in Ladakh, is built on a gentle slope, is not multi-storeyed, and attracts many tourists. The wetland is considered sacred by the local Buddhist community, and they do not use the water of the wetland.

Ladakh

Designation Criteria	Wetland Type	Protection Status	Management Authority
1, 2, 4	Brackish/ Alkaline lake	Conservation Reserve	Forest Department, Government of the UT of Ladakh



VALUES AND BENEFITS

Significance

Low | Medium | High

Scientific and educational values

Fodder

400-year-old Korzok Monastery is a tourism destination

Breeding ground for migratory waterbirds

Buffers flood

Carbon sink

Species of global conservation significance

Notable	Black-necked Crane
Vulnerable	Common Pochard, Black-necked Crane

THREATS

Significance

Low | Medium | High

Over-grazing

Construction of roads

Tourism pressure

Harsh Ganapathi

SPECIES RICHNESS

BIRDS	160+
FISHES	43
REPTILES & AMPHIBIANS	10+
PLANTS	106

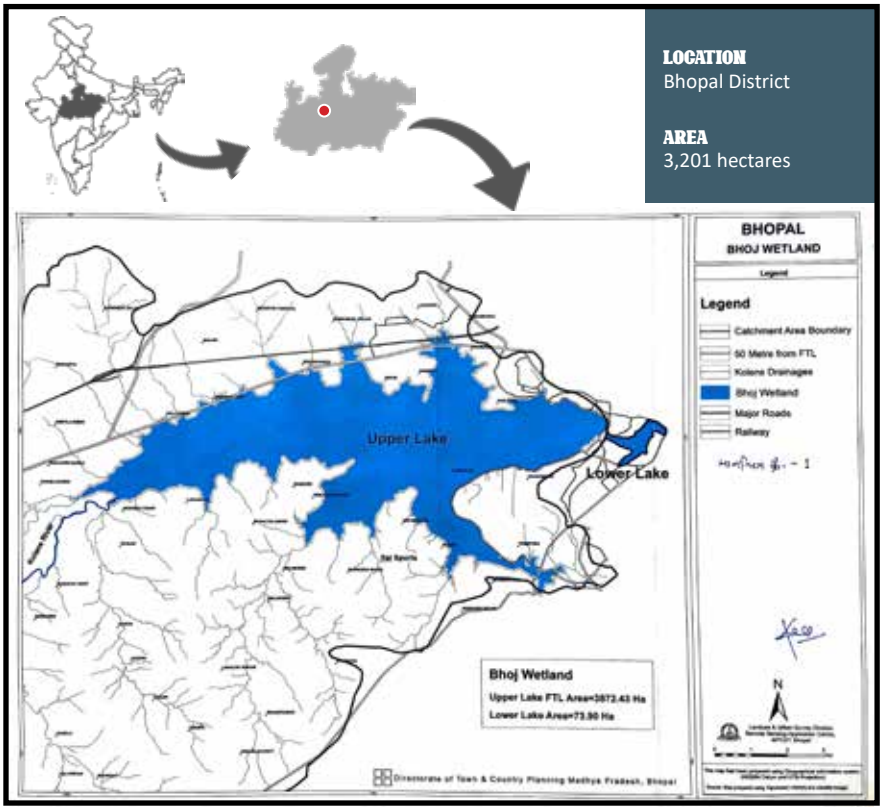
Bhoj Wetland

Date of designation
August 19, 2002

Bhoj Wetland comprises two lakes, the Upper Lake and Lower Lake, located in Bhopal, Madhya Pradesh. The Upper Lake drains a catchment of 361 km² spread in the Bhopal and Sehore districts. The catchment of the Upper Lake is primarily rural, with some urbanized areas around its eastern end. The catchment of Lower Lake is mainly urbanized. The Upper Lake was constructed during the regime of Paramara Raja Bhoj, ruler of Malwa, by damming the Kolans River, formerly a tributary of the Halali River. The Lower Lake was created in 1794 by Nawab Chhote Khan, Minister of Nawab Hayath Mohammad Khan, to beautify the city. It is also contained behind an earthen dam and drains into the Halali River via the lower reach of the Kolans River, presently known as the Patra drain. Both the Kaliasot and Halali Rivers are tributaries of the Betwa River. The city of Bhopal is centralized in and around these two lakes, and the locals are sentimentally attached to them. The Upper Lake is one of the city's principal sources of drinking water; the Lower Lake meets the requirement of raw water and enhances the city's beauty. The wetland supports a wide variety of flora and fauna, providing ideal habitat in the form of food and shelter to a large number of migratory waterbirds.

Madhya Pradesh

Designation Criteria	Wetland Type	Management Authority
1, 2, 3, 5, 8	Reservoir	Bhopal Municipal Corporation



LOCATION
Bhopal District

AREA
3,201 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

Water source for the capital city

Livelihoods for 200+ fishers

Cultural and spiritual importance

Scientific and educational value

Recreation and tourism

Buffers floods

Species of global conservation significance

Notable	Red-crested Pochard
Endangered	Egyptian Vulture
Vulnerable	Sarus Crane

THREATS

Significance

Low | Medium | High

Pollution

Siltation

Invasive species

Encroachment

“

CONNECTING
WITH NATURE
MEANS TO
CONNECT WITH
OURSELVES. IF
WE DO SO, WE
NURTURE
A BETTER
PLANET.

”

- Hon’ble Prime Minister Shri Narendra Modi

“CLIMATE CHANGE IS A PRESSING GLOBAL CHALLENGE. IT CALLS FOR A COLLECTIVE HUMAN ACTION AND A COMPREHENSIVE RESPONSE. IN INDIA, FAITH AND NATURE HAVE HAD A DEEP LINK SINCE ANCIENT TIMES.”

- Hon’ble Prime Minister Shri Narendra Modi

Madhya Pradesh State Wetland Authority

Sakhya Sagar

SPECIES RICHNESS

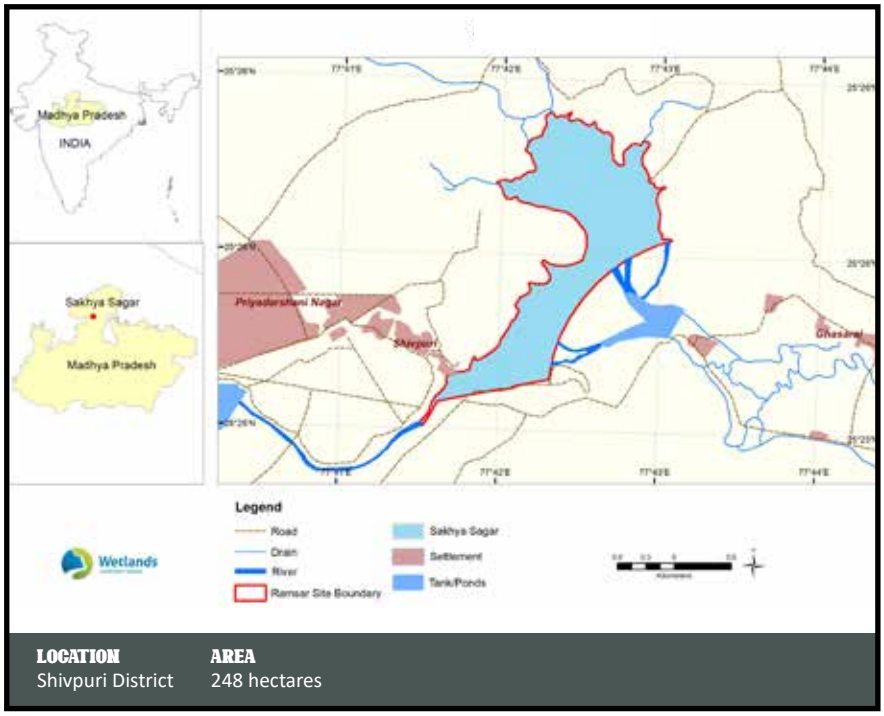
BIRDS	73
FISHES	19
MAMMALS	19
REPTILES & AMPHIBIANS	10
PLANTS	16

Date of designation
January 7, 2022

Sakhya Sagar is a human-made reservoir on the outskirts of Shivpuri town within the Madhav National Park, one of the oldest national parks of Madhya Pradesh. The Ramsar Site features a mosaic of landforms, including open water and surrounding marshes, plantations, and a small patch of agricultural land. The northeastern part maintains open water and marsh areas yearly, whereas the north-western part is often dried out. The wetland was created due to damming of the Manier River in 1918 by the Maharaja of the Scindias clan. Sakhya Sagar not only adds to the area's natural beauty but also provides a permanent source of water for wildlife and a habitat for animals, including thousands of migratory waterfowl and mugger crocodiles, whose presence attracts tourists. The wetland also plays a vital role in nutrient cycling, groundwater recharge, and regulating the area's micro-climate.

Madhya Pradesh

Designation Criteria	Wetland Type	Protection Status	Management Authority
2, 3, 7	Water storage area/ reservoir	National Park	Madhya Pradesh Forest Department, Madhya Pradesh State Wetland Authority



LOCATION
Shivpuri District

AREA
248 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

- Medicinal products
- Wetland non-food products
- Groundwater recharge
- Climate regulation
- Erosion protection
- Nutrient cycling
- Scientific and educational
- Nature based tourism
- Biodiversity

Species of global conservation significance

Notable	Asian Openbill Stork, Lesser Whistling Duck, Indian Cormorant, Ruddy Shelduck, Northern Shoveler
Endangered	Indian Skimmer
Vulnerable	Sambar, Wallago Attu, Common Pochard, Sarus Crane

THREATS

Significance

Low | Medium | High

- Encroachment
- Invasive non-native species
- Livestock farming and ranching
- Dams and water management
- Fishing and harvesting aquatic resources
- Pollution
- Water abstraction
- Drainage
- Recreational and tourism activities
- Roads and railroads
- Storms and flooding

Sirpur Wetland

SPECIES RICHNESS

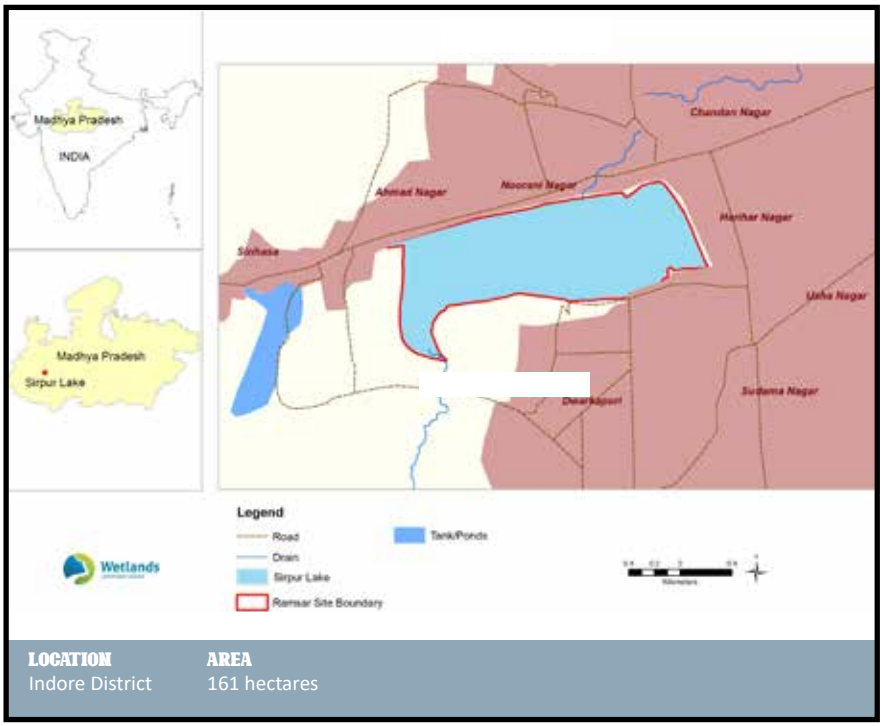
BIRDS	130
FISHES	30
REPTILES & AMPHIBIANS	8+
PLANTS	181
BUTTERFLIES	34

Date of designation
January 7, 2022

Sirpur Wetland is a human-made wetland created by the Holkers, the former kings of Indore. Over the last two centuries, the wetland has stabilized and acquired near-natural characteristics. Commonly named Pakshi Vihar (bird sanctuary), the site is a shallow, alkaline, nutrient-rich lake that floods during the monsoon to a maximum depth of two meters. It boasts a wealth of plants and animals, including threatened species. Sirpur provides surrounding communities with fisheries and medicinal plants and acts as a buffer against flooding while helping to regulate the local microclimate. The wetland offers significant ecological benefits, such as serving a significant water supply and assisting groundwater recharge in the areas downwind of it. Sirpur Wetland is also important to the city's local populations on a cultural level. The local communities also benefit from spiritual enrichment, recreation, and education.

Madhya Pradesh

Designation Criteria	Wetland Type	Management Authority
2, 3, 4, 7	Water storage area/ Reservoir	Indore Municipal Corporation, Madhya Pradesh State Wetland Authority



LOCATION
Indore District

AREA
161 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

- Water purification
- Food for humans
- Medicinal products
- Historical and archaeological heritage
- Carbon sequestration
- Nutrient cycling
- Erosion protection
- Soil formation
- Groundwater recharge
- Flood buffer
- Control of pests (supports predators of pests)
- Climate regulation
- Scientific and educational importance
- Biodiversity
- Recreation and tourism

Species of global conservation significance

Notable	Oriental Darter, Northern Shoveler, Eurasian Wigeon, Little Cormorant, Black Kite, Indian Grey Hornbill, Greater Flamingo
Endangered	Egyptian Vulture
Vulnerable	Eurasian Carp, Wallago Attu, Common Pochard, Sarus Crane, River Tern

THREATS

Significance

Low | Medium | High

- Drainage
- Encroachment
- Invasive non-native species
- Aquaculture
- Water abstraction

SPECIES RICHNESS

FISHES	30
REPTILES & AMPHIBIANS	8
PLANTS	181

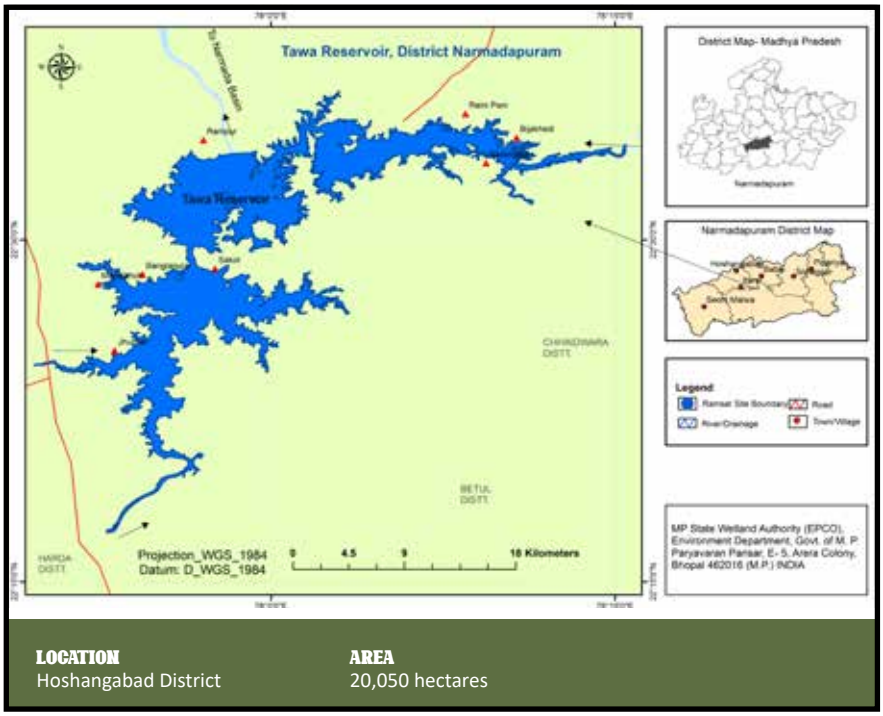
Tawa Reservoir

Date of designation
January 8, 2024

Tawa Reservoir is located at the confluence of the Rivers Tawa and Denwa, with major tributaries including the Malani, Sonbhadra, and Nagdwari. The Tawa River, a left-bank tributary of the Narmada, originates in the Mahadeo Hills in the Chhindwara district, flows through the Betul district, and ultimately joins the Narmada River in the Narmadapuram district. Spanning a length of 172 km, the Tawa River is the longest tributary of the Narmada. The reservoir is situated near Itarsi town and was primarily constructed for irrigation. Over time, however, it has also been utilised for power generation and aquaculture. The Tawa Reservoir covers a submergence area of 20,050 hectares and has a total catchment area of 598,290 hectares. Situated within the Satpura Tiger Reserve, the reservoir forms the western boundary of the Satpura National Park and the Bori Wildlife Sanctuary. As the largest protected area in Madhya Pradesh, the Ramsar Site is rich in ecological, archaeological, historical, and forestry significance, contributing to its exceptional biodiversity and environmental importance.

Madhya Pradesh

Designation Criteria	Wetland Type	Management Authority
2, 3, 4, 7, 8	Water storage areas/Reservoirs	Park Director and Forest Department, Government of Madhya Pradesh, MP State Wetland Authority



LOCATION
Hoshangabad District

AREA
20,050 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

- Pollution control and detoxification
- Fuelwood/ fibre
- Food for humans
- Scientific and educational importance
- Spiritual and religious values
- Flood control, flood storage
- Local climate regulation/buffering of change
- Carbon storage/ sequestration
- Nature observation and nature-based tourism
- Nutrient cycling
- Water for irrigated agriculture
- Biodiversity
- Groundwater recharge and discharge

Species of global conservation significance

Notable	Fulvous Whistling-duck, Black-winged Kite, Alexandrine Parakeet, Malabar Pied Hornbill, Indian Paradise-flycatcher, Indian Giant Squirrel, Striped Hyena
Endangered	Indian Skimmer, Dhole, Tiger
Vulnerable	River Tern, Common Pochard, Egyptian Vulture, Sambar, Leopard

THREATS

Significance

Low | Medium | High

- Water releases
- Dams and water management/use
- Water abstraction
- Livestock farming and ranching
- Fishing and harvesting aquatic resources
- Recreational and tourism activities
- Marine and freshwater aquaculture
- Pollution
- Invasive non-native species

Yashwant Sagar

SPECIES RICHNESS

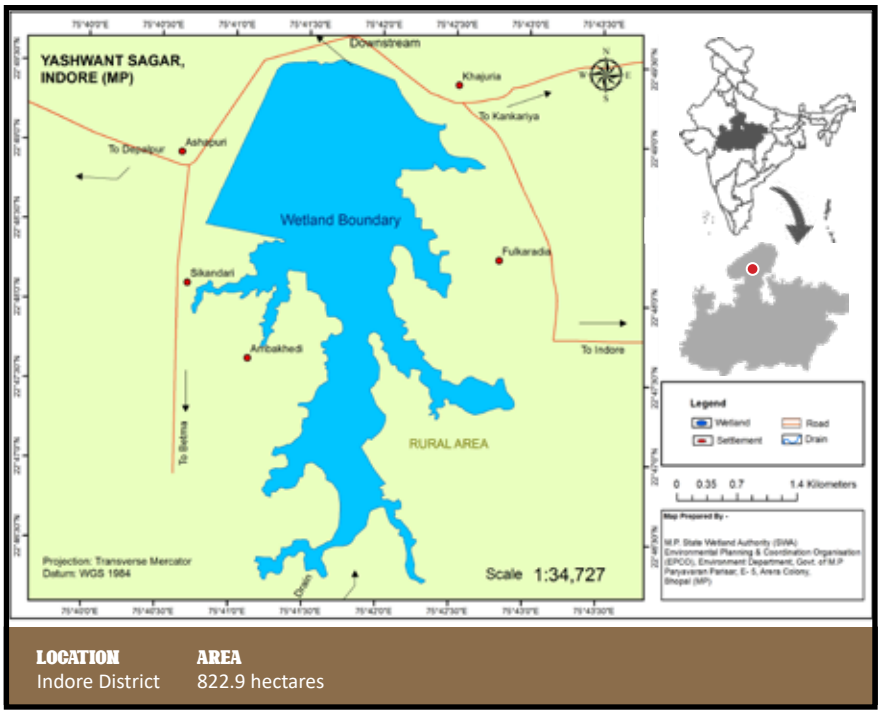
BIRDS	293
FISHES	39

Date of designation
January 7, 2022

Yashwant Sagar, a human-made reservoir on the river Gambhir, is located in the Indore district of Madhya Pradesh. The wetland is one of the 19 important bird areas of Madhya Pradesh. Yashwant Sagar reservoir was built by the erstwhile ruler of Holker State of Indore, Yashwant Rao Holkar in 1930 to fulfil multipurpose objectives such as irrigation and supply of drinking water. Presently, it is mainly used for water supply to the city of Indore and is also being used for fish culture on a commercial scale. The wetland is considered to be a stronghold of the vulnerable Sarus Crane in central India. The backwaters of the wetland have plenty of shallow areas conducive for waders and other waterfowl. As the water level recedes, many islands serve as roosting sites for waterfowl. Due to its vast shallow reed beds, the wetland is considered heaven to a large number of winter migratory birds.

Madhya Pradesh

Designation Criteria	Wetland Type	Management Authority
2, 3, 4, 5, 7, 8	Water storage area/ Reservoir	Indore Municipal Corporation, Madhya Pradesh State Wetland Authority



LOCATION
Indore District

AREA
822.9 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

- Fresh water for drinking
- Maintenance of hydrological regimes
- Nature based tourism
- Biodiversity

Species of global conservation significance

Notable	Northern Shoveler, Eurasian Wigeon, Bar-headed Goose, Greylag Goose, White-necked Stork, Northern Pintail, Ferruginous Duck
Endangered	Egyptian Vulture
Vulnerable	Eurasian Carp, Wallago Attu, Common Pochard, Sarus Crane, River Tern

THREATS

Significance

Low | Medium | High

- Encroachment
- Livestock farming and ranching
- Water abstraction
- Dams and water management
- Pollution
- Recreational and tourism activities
- Logging and wood harvesting
- Fishing and harvesting aquatic resources
- Invasive non-native species
- Storms and flooding

Purva Joshi/Shutterstock

Lonar Lake

SPECIES RICHNESS

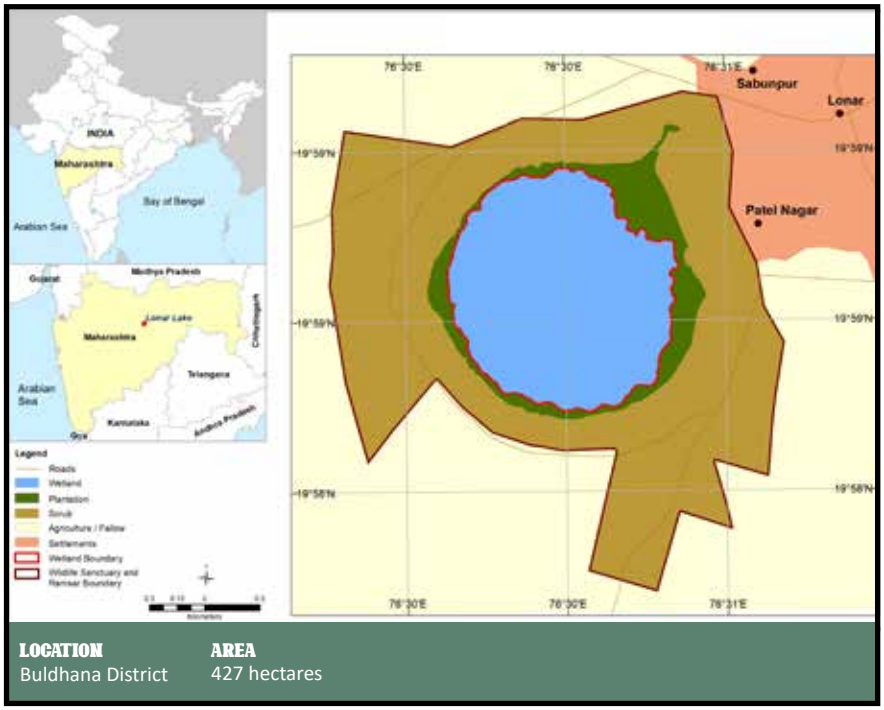
BIRDS	160
MAMMALS	12
REPTILES & AMPHIBIANS	53
PLANTS	67

Date of designation
July 22, 2020

Lonar is a natural, saline wetland situated in the Buldhana district of Maharashtra. The wetland was formed by a meteorite impact in the Deccan Trap region and is composed of basaltic flows. Almost circular, the depression is surrounded by steeply rising escarpments, lying amongst the vast monotonous plateau. The drainage is endorheic, with natural springs and precipitation as major sources of water. Lonar, the third-largest crater in the world, is the only crater in basaltic rock to have been created by a meteorite impact in India. Lonar is high in salinity and alkalinity, as the lack of an outflow leads to a concentration of minerals as the water evaporates. Between November and March, the wetland attracts a significant number of wintering migratory birds. Locals visit the historic Hembal Panthi Devi, Gaimukh, and Ramgaya in the sanctuary region all year long as a pilgrimage destination.

Maharashtra

Designation Criteria	Wetland Type	Protection Status	Management Authority
1, 2, 3, 4	Alkaline Lake	National Geo-Heritage site, Wildlife Sanctuary	Maharashtra Forest Department



LOCATION
Buldhana District

AREA
427 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

National Geo-heritage Monument as the wetland was created by an asteroid collision with earth impact during the Pleistocene Epoch

Carbon storage and sequestration

Nature observation and nature-based tourism

Important knowledge systems, importance for research

Genes for tolerance to high salinity conditions

Species of global conservation significance

Vulnerable	Common Pochard

THREATS

Significance

Low

Medium

High

Fragmentation due to roads

Livestock farming and ranching

Pollution from household sewage, urban wastewater

Hydrological regime alteration

Encroachment

Unsustainable tourism

Nandur Madhameshwar

SPECIES RICHNESS

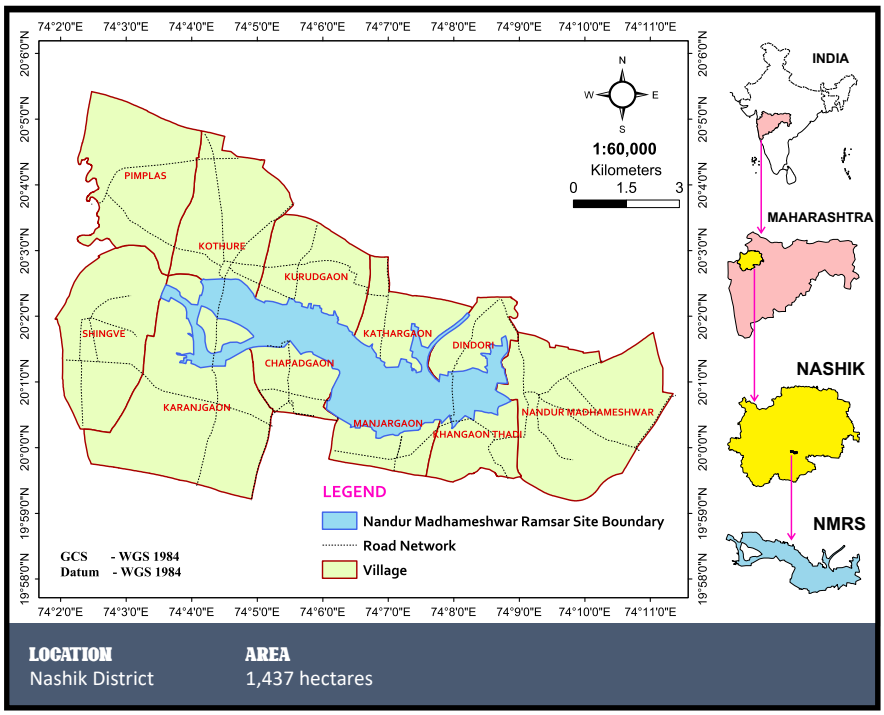
BIRDS	256
FISHES	8
MAMMALS	8
PLANTS	536

Date of designation
June 21, 2019

Nandur Madhameshwar, located 40 km from the Nashik town of Maharastra and at the confluence of the Godavari and Kadawa Rivers, is a mosaic of marshes, intermittent pools, and riparian forests. Juxtaposed to the rain shadow semi-arid area of the Western Ghats within the Deccan Plateau, the wetland has a species assemblage representing both of these biogeographic zones. The construction of the Nandur Madhameshwar Weir at the confluence of the Godavari and Kadwa Rivers helped create this thriving wetland. Originally designed to overcome water shortages in the surrounding area, Nandur Madhameshwar now also serves as a buffer against floodwaters and as a biodiversity hotspot. The wetland is also known for providing a variety of ecosystem services like recharging of groundwater, climate regulation, safety from floods, facilitating nutrient recycling, soil formation, providing habitat to flora and fauna, providing recreational and tourism opportunities, supporting spiritual and cultural practices, facilitating scientific research.

Maharashtra

Designation Criteria	Wetland Type	Protection Status	Management Authority
2, 3, 4, 5, 6, 7, 8	Barrage & water storage area	Wildlife Sanctuary	Maharashtra Forest Department (Wildlife Wing)



LOCATION
Nashik District

AREA
1,437 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

Madhmeshwar temple is a pilgrimage site

Groundwater recharge

Prevention of erosion

Lifecycle maintenance of migratory fishes and waterbirds

Micro-climate regulation

Flood control

Water Purification

Provides water for domestic use and irrigation

Site for tourism and recreation

Scientific and educational value

Species of global conservation significance

Notable	Butter Catfish
Critically Endangered	White-rumped Vulture, Indian Vulture, Deolali Minnow
Endangered	Egyptian Vulture, Kooral
Vulnerable	Common Pochard, Bristled Grassbird, Shalyni Barb

THREATS

Significance

Low | Medium | High

Regime fragmentation

Unsustainable tourism

Pollution

Unsustainable water abstraction

Unsustainable fish harvest

Hydrological regime alteration

Over-grazing

Invasive species

Thane Creek

SPECIES RICHNESS

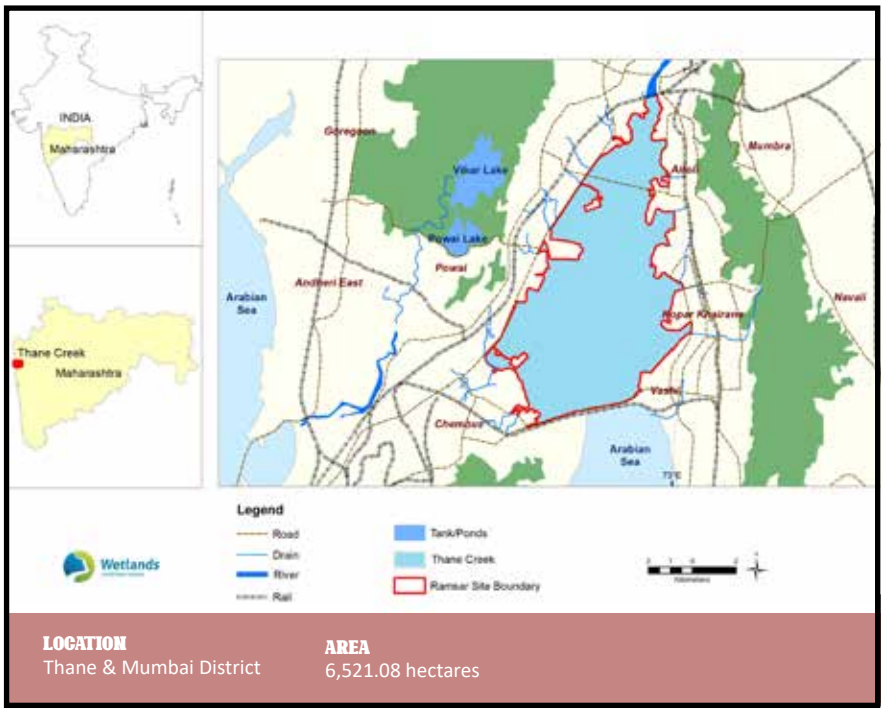
BIRDS	202+
FISHES	18
INSECTS	67
ZOOPLANKTON	24
BENTHOS	23
MANGROVES	13
PHYTOPLANKTON	35
BUTTERFLIES	59

Date of designation
April 13, 2022

Thane Creek, a marine protected area spread across Thane, Mumbai, and Mumbai Suburban districts of Maharashtra, is one of the largest creeks in Asia. There are several sources of fresh water to the creek, of which river Ulhas is the largest, followed by many drainage channels from various suburban areas of Mumbai, Navi Mumbai & Thane. Thane creek is fringed by mangroves on both banks & comprises around 20% of the total Indian mangrove species. The high species diversity of birds in the wetland, presence of many globally important species, and the rich abundance of Lesser Flamingos and Greater Flamingos make this wetland globally significant. The mangrove forest acts as a natural shelter belt and protects the land from cyclones, tidal surges, seawater seepage and intrusions. The Koli community in Mumbai worships mangroves recognizing their importance as breeding and nursing grounds for marine organisms that the community relies on for sustenance.

Maharashtra

Designation Criteria	Wetland Type	Protection Status	Management Authority
1, 2, 3, 4, 5, 6, 7, 8	Intertidal forested wetlands, Estuarine waters	Flamingo Sanctuary, Reserve Forest	Forest Department of Maharashtra



LOCATION
Thane & Mumbai District

AREA
6,521.08 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

Spiritual and inspirational

Nature based tourism

Maintenance of hydrological regimes (groundwater recharge, water storage and delivery system)

Carbon sequestration

Pollination

Soil formation

Climate regulation

Coastal shoreline and riverbank stabilization

Food for humans

Biodiversity

Scientific and educational

Erosion protection

Water purification

Species of global conservation significance

Notable	Lesser Flamingo, Greater Flamingo, Golden Jackal, Indian Mongoose, Wild Boar, Flying Fox, Marsh Snake, Wart Snake, Rat Snake, Windowpane Oyster, Red Mangrove Clam, *Avicennia marina* , *Aegeiceras corniculatum*
Endangered	Great Knot, Indian Skimmer
Vulnerable	River Tern, Greater Spotted Eagle, Mozambique tilapia

THREATS

Significance

Low | Medium | High

Salinization

Aircraft flight paths

Tourism

Aquaculture

Shipping lanes

Storms and flooding

Fishing and harvesting aquatic resources

Drainage

Roads and railroads

Invasive species

Encroachment

Water release

Pollution

Loktak Lake

SPECIES RICHNESS

BIRDS	116
FISHES	54
MAMMALS	22
REPTILES & AMPHIBIANS	68
PLANTS	200+

Date of designation
March 23, 1990

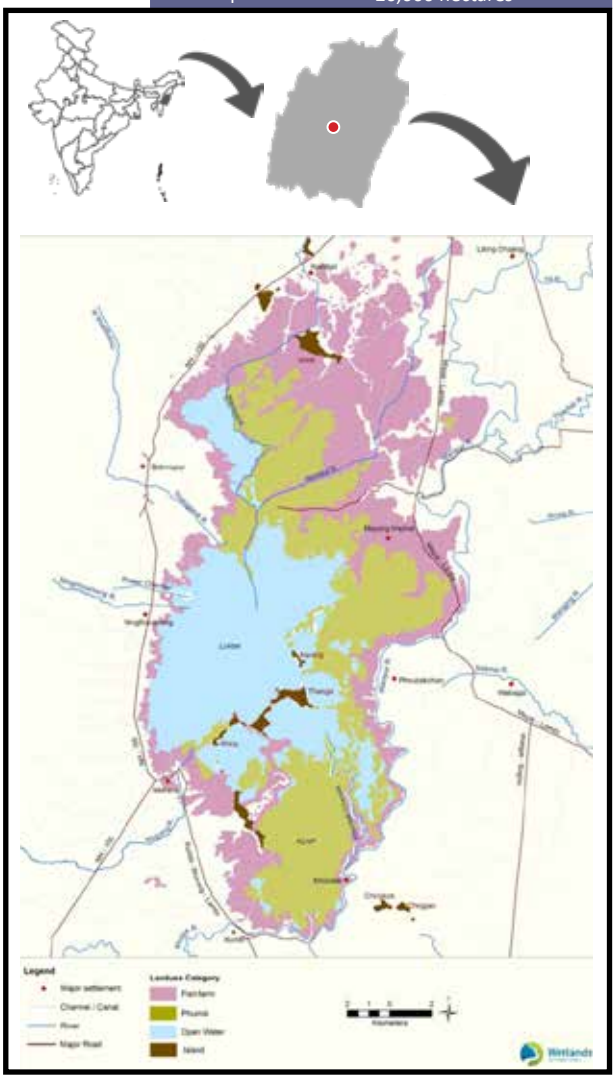
Loktak, the largest freshwater wetland in North East India, spans an area of 260 km^2 and has an average height of 800–2070 m above the mean sea level. Phumdi, floating mats of vegetation, are a characteristic feature of the wetland. Loktak is divided into three zones: the northern zone, the central zone, and the southern zone. The south zone of Loktak forms the Keibul Lamjao National Park, composed of a continuous mass of floating phumdis and the natural habitat of globally endangered ungulate Sangai deer. The phumdi mass in the northern zone acts as a nutrient sink, thus, helping maintain the water quality of the wetland. The main open water area is the central zone, which is relatively free from phumdi. Loktak is considered the lifeline of people of Manipur, owing to its socio-economic and cultural significance. The wetland plays an essential role in providing ecological and economic security to the region. Loktak is an important source of water, fisheries, and vegetation, providing sustenance to a large population dependent upon lake resources for their sustenance. The water from the wetland is used for irrigation, domestic purposes, and power generation. The vegetation is harvested for use as food, fodder, fiber, fuel, handicrafts, and medicinal purposes. Loktak is the major water source for the 105 MW hydropower project, the single largest source of electricity for the northeastern region.

Manipur

Designation Criteria	Wetland Type	Protection Status	Management Authority
1,2	Freshwater marsh	40 km^2 in southern part designated as Keibul LamjaoNational Park.Wetland notified under Manipur Loktak Lake (Protection) Act, 2006	Loktak Development Authority

LOCATION
Bishnupur District

AREA
26,600 hectares



VALUES AND BENEFITS

Significance

Low | Medium | High

- Tourism & recreation
- Source of drinking water
- Water for 105 MW hydropower
- Groundwater recharge
- Lifecycle maintenance
- Medicinal & ornamental plants
- Protection from floods
- Purifies wastewater
- Livelihood for 5,000 fishers
- Carbon sink
- Scientific and educational importance
- Revered as Loktak Ima

Species of global conservation significance

Notable	Manipur Brow-antlered Deer or *Sangai*
Endangered	Manipur Brow-antlered Deer, Hog Deer, Dhole, Red Jasper Barb, Keeled Box Turtle
Vulnerable	Lesser Adjutant, Sarus Crane, Common Pochard, Hooded Crane, Common Carp, Amboina Box Turtle, King Cobra, Burmese Python

THREATS

Significance

Low | Medium | High

- Siltation
- Pollution
- Unsustainable water abstraction for hydropower
- Spread of Phumdi
- Fragmentation by roads
- Water regime alteration by Ithai barrage

N. Zachhua

Pala Wetland

SPECIES RICHNESS

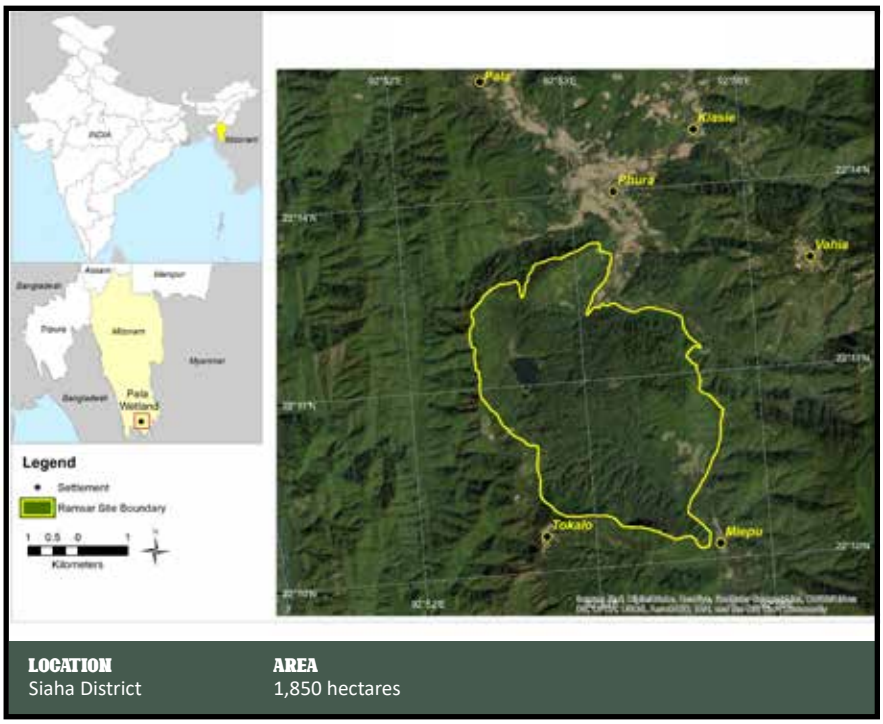
BIRDS	22
FISHES	3
MAMMALS	7
REPTILES & AMPHIBIANS	32
PLANTS	227

Date of designation
August 31, 2021

Pala is the largest natural wetland located at an altitude of 275-589 meters (above mean sea level) in the Siaha district of Mizoram. The oval-shaped Ramsar Site is revered by the local Mara people and has a deep connection with their history. It is believed that the Mara tribe first settled in and around this wetland after leaving Myanmar (formerly Burma). According to oral history, Pala is said to have originated after the demise of an ancient humongous snake terrorizing the villagers. This origin story has been passed down through generations, instilling a sense of guardianship among the inhabitants towards the wetland and its vegetation. The wetland is a popular tourist site because of its distinctive assemblage and immaculate condition. Pala is the primary source of freshwater and fish for the villages at its fringe and the major irrigation water source for wet rice cultivation, horticulture, and other forms of agriculture.

Mizoram

Designation Criteria	Wetland Type	Management Authority
1, 2, 3, 4	Freshwater lake	Environment & Forest Department, Mizoram



LOCATION
Siaha District

AREA
1,850 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

Food for humans - fishes

Water use for irrigation and domestic use

Supports biodiversity

Groundwater recharge

Scientific studies

Nature based tourism

Spiritual and inspirational values

Species of global conservation significance

Notable	Elongated Tortoise, Asian Brown Tortoise, Black Soft-shelled Turtle, Sambar
Critically Endangered	Elongated Tortoise, Asian Brown Tortoise, Black Soft-shelled Turtle
Endangered	Hoolock Gibbon, Bengal Slow Loris, Phayre's Langur
Vulnerable	Asiatic Softshell Turtle, Sambar, Asian Black Bear

THREATS

Significance

Low

Medium

High

Livestock farming and ranching

Invasive species

Unsustainable biological resource extraction

Vegetation clearance

Roads and railroads

Ansupa Lake

SPECIES RICHNESS

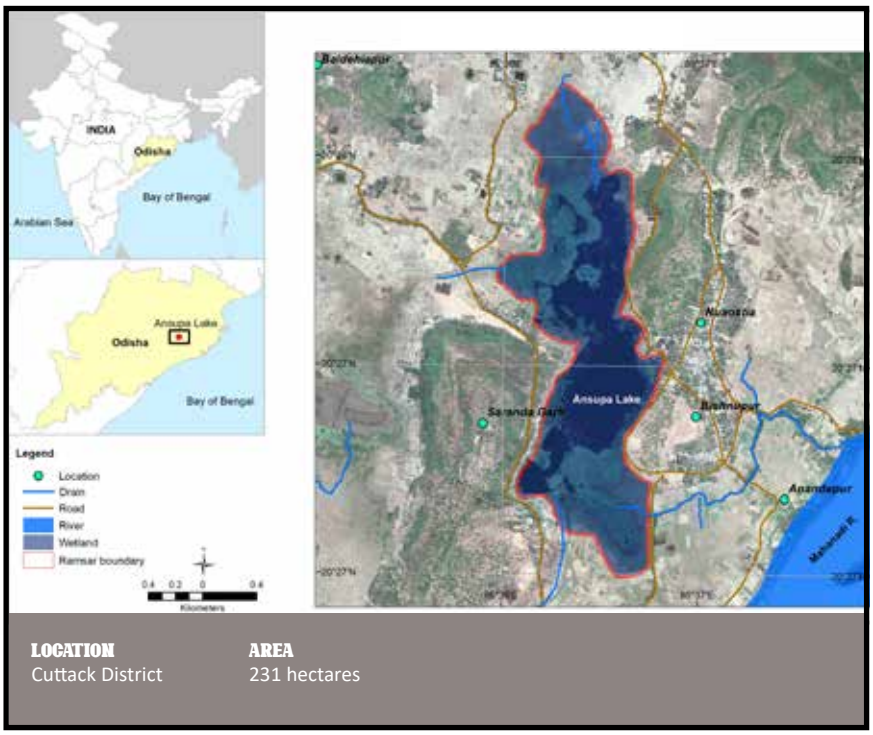
BIRDS	194
FISHES	61
MAMMALS	26
REPTILES & AMPHIBIANS	10
PLANTS	244

Date of designation
October 12, 2021

Ansupa is the largest freshwater wetland of Odisha situated in the Banki subdivision of Cuttack district. The oxbow wetland was formed due to the meandering of River Mahanadi. Ansupa is connected with the river on its southern side with a channel known as 'Kabula Nala' through which floodwater of river Mahanadi enters the wetland. The Ramsar Site was known as 'Ansapata'- a wetland formed out of a part of River Mahanadi and 'Hansapata'- a wetland that attracted hoards of wild swans. Ansupa sustains the freshwater demands of the surrounding areas and supports the livelihood of the local communities through fisheries and agriculture. The wetland has immense recreational and tourism potential since it is a significant wintering ground for migratory birds and is also known for its scenic beauty.

Odisha

Designation Criteria	Wetland Type	Management Authority
2, 7, 8	Permanent freshwater lake	Chilika Development Authority



LOCATION
Cuttack District

AREA
231 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

Groundwater recharge and discharge

Food for humans - fishes

Supports biodiversity

Water for domestic use

Spiritual and inspirational values

Nature based tourism and observation

Species of global conservation significance

Notable	Indian Skimmer, Black-bellied Tern, River Tern
Endangered	Magur, Indian Skimmer, Black-bellied Tern
Vulnerable	Common Carp, Freshwater Shark, River Tern

THREATS

Significance

Low

Medium

High

Pollution

Hydrological regime alteration

Unsustainable tourism

Spread of invasive species

Encroachment

Bhitarkanika Mangroves

SPECIES RICHNESS

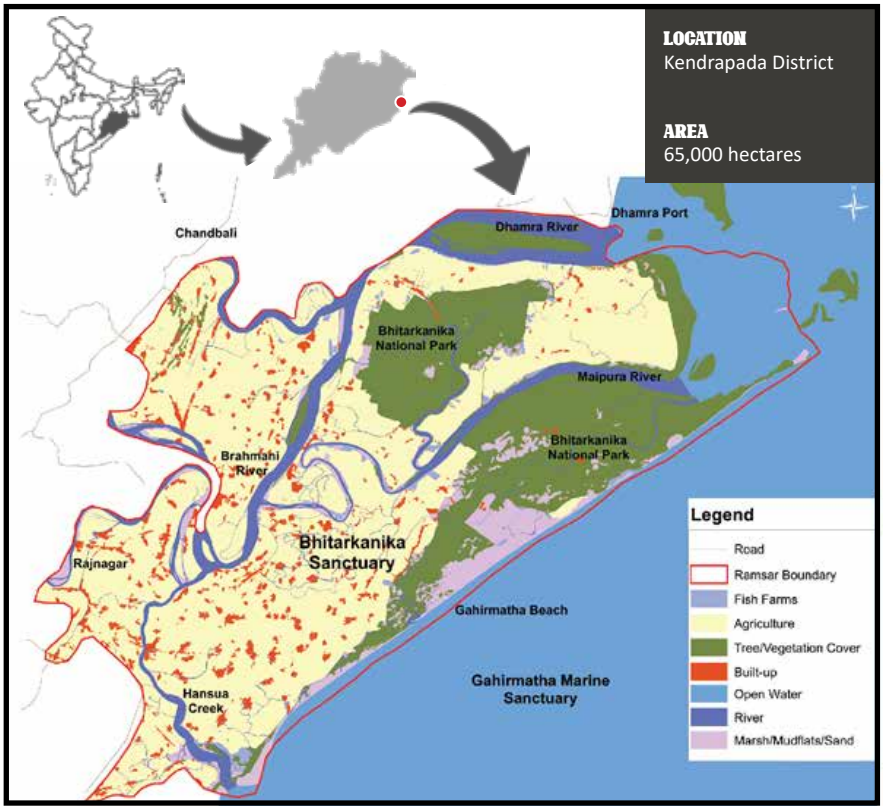
BIRDS	280
FISHES	33
MAMMALS	24
REPTILES & AMPHIBIANS	43
PLANTS	300+

Date of designation
August 19, 2002

Bhitarkanika mangroves are located within the estuarine region of Rivers Bramhani-Baitarani, in the northeastern part of the Kendrapara district of Odisha. The Ramsar Site is a designated Wildlife Sanctuary, the core of which forms the Bhitarkanika National Park. The wetland is a maze of mangroves, creeks, and mudflats. With 30 recorded true mangrove species in the wetland, Bhitarkanika is the most diverse mangrove ecosystem in the country. The floral diversity of the wetland is known to be the largest in India and the second largest, after Papua New Guinea, in the world. Bhitarkanika is home to the largest number of saltwater crocodiles in the Indian sub-continent. The breeding program at the wetland is among the most successful conservation initiatives in the country. The wetland serves as a mass nesting/egg laying ground for the vulnerable Olive Ridley turtles and is also the world's largest rookery. Bhitarkanika has a large heronry at Bagagahana / Mathaadia and buffers communities living along the shoreline from intense tropical storms.

Odisha

Designation Criteria	Wetland Type	Protection Status	Management Authority
2, 4, 5, 8	Mangroves & tidal flats	Wildlife Sanctuary	Mangrove Forest Division, Odisha



VALUES AND BENEFITS

Significance

Low | Medium | High

Buffers from cyclones and tidal surges

Prevents erosion

Ecotourism hotspot
60,000 tourists per year

Lifecycle maintenance

- Nesting site for 0.5 million Olive Ridley Turtles
- 1700+ Salt-water crocodiles (highest density of Saltwater crocodiles in India)
- 60+ mangrove species

Fisheries & aquaculture
Supports livelihoods such as agriculture, fishing and aquaculture

Carbon sink

Scientific and educational importance

Species of global conservation significance

Notable	Olive Ridley Sea Turtle, Salt-water Crocodile, *Avicennia sp.* and *Heritiera sp*.
Critically Endangered	Baer's Pochard, White-rumped Vulture
Endangered	Irrawaddy Dolphin, Black-bellied Tern
Vulnerable	Indo-Pacific Humpback Dolphin, Scrub Mahogany

THREATS

Significance

Low | Medium | High

Changes in freshwater flow

Expansion of and effluents from shrimp farms

Extreme events

Proposed expansion of Paradip and Dhamra ports

High fishing pressure

Harsh Ganapathi

Chilika Lake

SPECIES RICHNESS

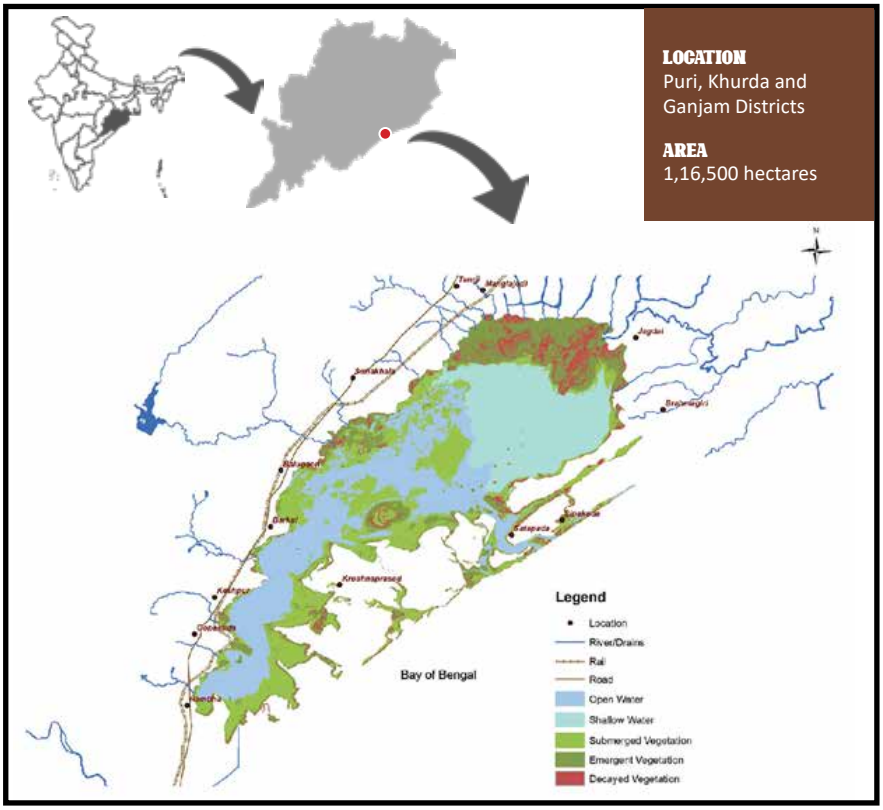
BIRDS	225
FISHES	300+
MAMMALS	18
REPTILES & AMPHIBIANS	37
PLANTS	900+

Date of designation
October 1, 1981

Chilika, the largest brackish water lagoon in Asia and the second largest coastal lagoon in the world, is the first Indian Ramsar site. The wetland is influenced by three hydrologic sub-systems, the Mahanadi distributaries, 52 rivulets, and streams draining into the lagoon from the western catchment and the Bay of Bengal. Also known as the lifeline of the state of Odisha, the wetland is an assemblage of marine, brackish and freshwater ecosystems and a hotspot of biodiversity. It is one of the few brackish water wetlands in the world which sustains the population of threatened Irrawaddy Dolphin. The lagoon is an avian grandeur and the wintering ground for more than one million migratory birds. The highly productive ecosystem of the lagoon, with its rich fishery resources, sustains the livelihood of more than 0.2 million fishers. A basin-scale restoration programme implemented in the 2000s by Chilika Development Authority has led to the rejuvenation of biodiversity, restoration of salinity regimes, and enhanced fisheries. The restoration was recognized with a Ramsar Conservation Award in 2002, and the lagoon was delisted from the Montreux Record.

Odisha

Designation Criteria	Wetland Type	Protection Status	Management Authority
2	Natural Lagoon	15.5 km^2 island Nalabana designated as Bird Sanctuary	Chilika Development Authority



VALUES AND BENEFITS

Significance

Low | Medium | High

- Stablises coastline
- Purifies water
- Several medicinal and ornamental resources
- ~12,500 MT of commercial fish harvested annually
- Over 0.5 millon tourists
- Scientific and educational values
- 10-17 tCO_2 blue carbon equivalent soaked by seagrass beds
- 70% of migratory fish and 100+ intercontinental migrant waterbirds
- Buffers communities from storms and cyclones
- Kalijai temple and several historical sites
- ~10,000 MT of plants harvested annually

Species of global conservation significance

Notable	Irrawaddy Dolphin
Critically Endangered	Scalloped Hammerhead, Smalltooth Sawfish, Ganges Shark
Endangered	Irrawaddy Dolphin, Winghead Shark, Longhead Eagle Ray
Vulnerable	Lesser White-Fronted Goose, Indian Skimmer, Woolly-Necked Stork, Great Knot, Common Pochard, Toli Shad

THREATS

Significance

Low | Medium | High

- Pollution from settlements
- Phragmites in northern sector
- Siltation
- Extreme events changes lagoon mouth
- Illegal aquaculture
- Unsustainable fish harvest
- Unsustainable tourism

Dayadra Mandal

Hirakud Reservoir

SPECIES RICHNESS

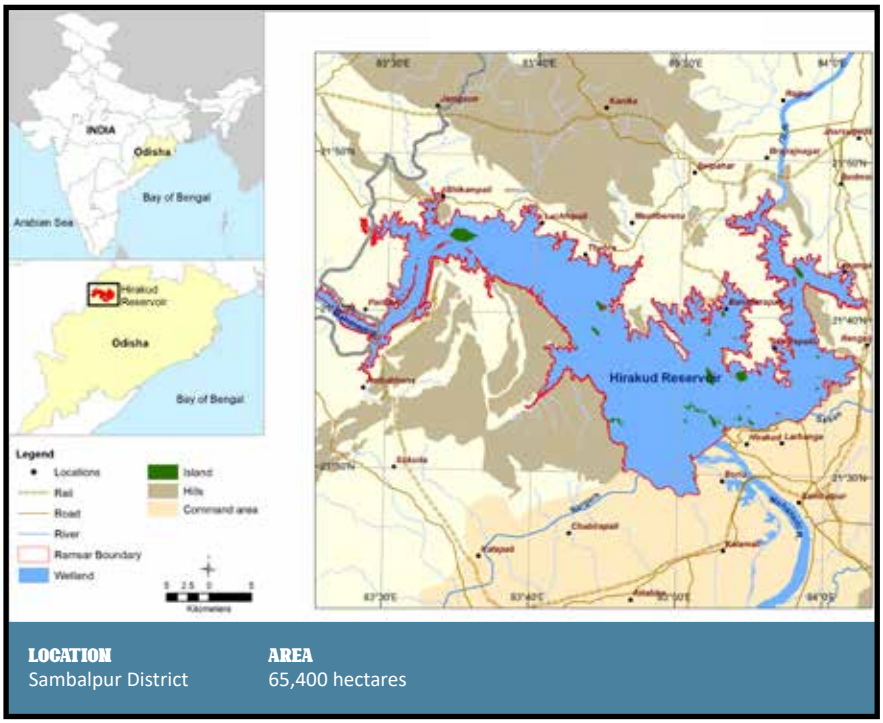
BIRDS	130
FISHES	54
REPTILES & AMPHIBIANS	7

Date of designation
October 12, 2021

Hirakud Reservoir, formed due to the damming of river Mahanadi at Sambalpur in 1957, is the largest and most significant water infrastructure in Odisha. It is said that 'Hirakud,' meaning Diamond (Hira) Island (Kud), was Sambalpur's traditional reserve for extracting diamonds from the sands of Mahanadi river. Spanning an area up to 700 km^2 when full, the Hirakud Reservoir provides water for generating ~300 MW hydropower through its two powerhouses at Burla and Chiplima; irrigating 462,100 ha culturable command area within Bargarh, Bolangir, Sambalpur and Subarnapur districts; and securing 9,500 km^2 of Mahanadi Delta region from floods. The gradient of habitats ranging from riverine to lacustrine, while moving towards the dam, enables the reservoir to support a range of floral and faunal species, including several of high conservation significance. Over 7,000 fisher households depend on the reservoir fisheries for livelihood. The vast open waterbody attracts a sizeable population of ducks, geese, and waders during winters, making it one of the major waterbird congregation areas in the state. The scenic surrounding of the reservoir, along with historically and culturally significant landmarks, marks its significance in cultural and recreation perspectives.

Odisha

Designation Criteria	Wetland Type	Management Authority
1, 2, 3, 4, 5, 6, 8	Freshwater lake, water storage area	Odisha Forest Department



LOCATION
Sambalpur District

AREA
65,400 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

Groundwater recharge and discharge

Food for humans - fishes

Supports biodiversity

Water for domestic use

Spiritual and inspirational values

Nature based tourism and observation

Species of global conservation significance

Notable	Northern Pintail, Common Pochard, Common Teal
Endangered	Black-bellied Tern, White-winged Duck, Palla's Fish-eagle, Indian Narrow-headed Softshell Turtle
Vulnerable	Lesser Adjutant, Sloth Bear, Leopard, Sambar

THREATS

Significance

Low

Medium

High

Siltation

Hydrological regime alteration

Unsustainable tourism

Spread of invasive species

Encroachment

Satkosia Gorge

SPECIES RICHNESS

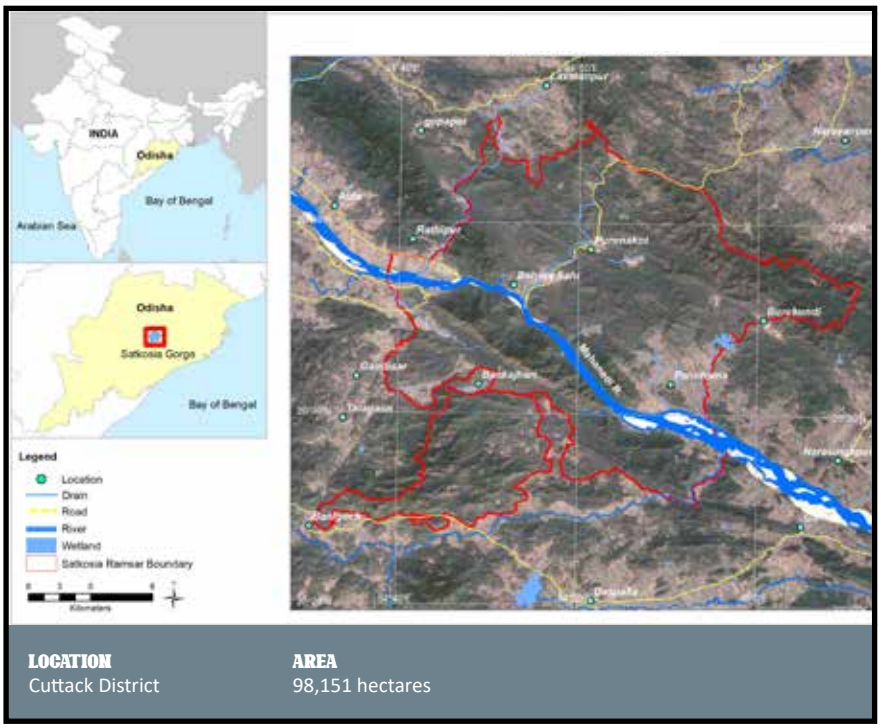
BIRDS	161
FISHES	183
MAMMALS	38
REPTILES	27
PLANTS	400

Date of designation
October 12, 2021

Satkosia spreads along the magnificent gorge over the mighty river Mahanadi across the Angul, Cuttack, Nayagarh, and Boud districts of Odisha. The wetland is a mosaic of rivers, marshes, and evergreen forests at the meeting point of two biogeographic regions, the Deccan Peninsula and the Eastern Ghats. Satkosia, the second-largest and second-oldest sanctuary in the country, supports a rich ecosystem, representing a diverse population of floral and faunal species. The name Satkosia originates from two words, 'sat' meaning seven and 'kos' meaning two miles, indicating the gorge's length as 14 miles or 22.4 km. The wetland aids in preserving a particular desired water depth that is essential for the survival of the endangered gharial population and the spawning of species of commercially significant carp and prawns. Satkosia is also known for providing various ecosystem services to surrounding communities, like fishing, groundwater recharging, climate regulation, and safety from floods. The Ramsar Site also offers recreational and tourism opportunities and supports spiritual and cultural practices.

Odisha

Designation Criteria	Wetland Type	Protection Status	Management Authority
2, 3, 4, 5, 7	River Stretch	Wildlife Sanctuary	Odisha Forest Department



LOCATION
Cuttack District

AREA
98,151 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

Groundwater recharge and discharge

Food for human - fishes

Supports biodiversity

Spiritual and inspirational values

Water for domestic use

Nature based tourism and observation

Species of global conservation significance

Notable	Bar-headed Goose, Brahminy Duck, Asian Elephant, Tiger
Critically Endangered	Red-crowned Roofed Turtle, Indian Gharial
Endangered	Indian Skimmer, Black-bellied Tern
Vulnerable	Indian River Tern

THREATS

Significance

Low

Medium

High

Siltation

Spread of invasive species

Hydrological regime alteration

Unsustainable tourism

Harsh Ganapathi

Tampara Lake

SPECIES RICHNESS

BIRDS **60**

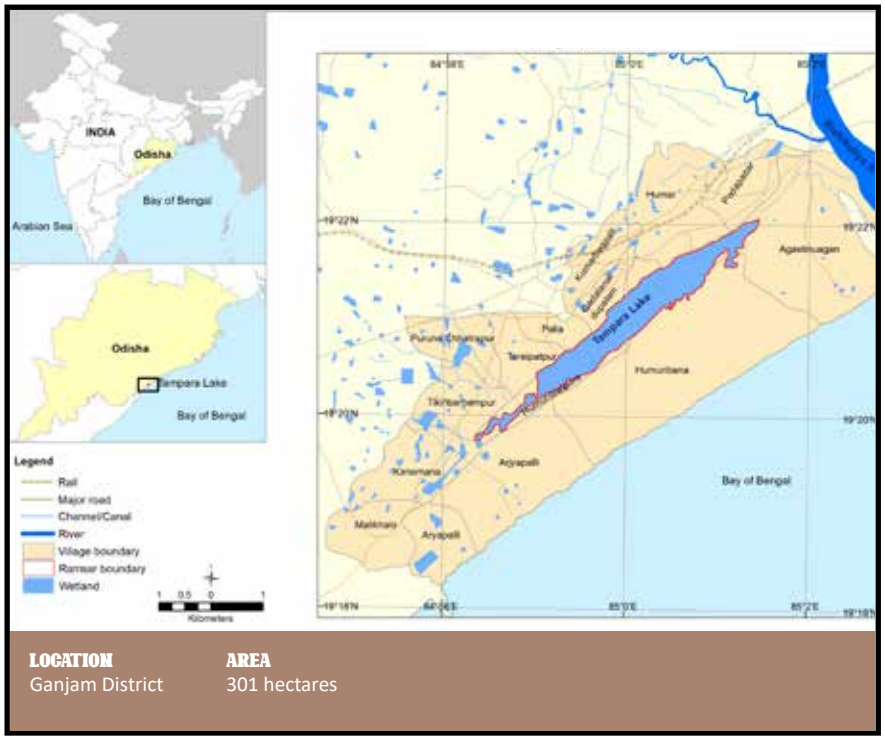
FISHES **46**

Date of designation
October 12, 2021

Tampara is among the most prominent freshwater wetlands in Odisha situated near Chatrapur town in the Ganjam district. The wetland lies within the Rushikulya river basin. In the year 1766 English East India Company took possession of the Ganjam district from the French during which explosives were used near Rushikulya leading to a depression near the river. The depression on the ground gradually filled with rainwater from catchment flow and was called "Tamp" by the British and subsequently termed "Tampra" by the locals. A narrow channel connecting Rushikulya river to Tampara was dredged later on for the transportation of goods which eventually helped to provide flood water of river Rushikulya to the wetland. Tampara acts as an important source of livelihood for the local communities. Along with fishes, the wetland also provides provisioning services like water for agriculture, and domestic use and is a well-known tourism and recreation site.

Odisha

Designation Criteria	Wetland Type	Management Authority
2, 3, 7, 8	Coastal freshwater lagoon	Odisha Forest Department



LOCATION
Ganjam District

AREA
301 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

Groundwater recharge and discharge

Food for humans - fishes

Supports biodiversity

Water for domestic use

Buffers floods

Nature based tourism and observation

Species of global conservation significance

Notable	Black-capped Kingfisher, Lesser Whistling Duck, Red-wattled Lapwing, Black-headed Ibis
Vulnerable	Common Pochard, Common Carp , River Tern

THREATS

Significance

Low

Medium

High

Siltation

Hydrological regime alteration

Unsustainable tourism

Spread of invasive species

Agriculture effluents

“

LET US PLEDGE
TO COLLECTIVELY
WORK TOWARDS
CONSERVING
PRECIOUS
ENVIRONMENT
RESOURCES. LET
US LIVE IN
HARMONY WITH
NATURE AND
KEEP OUR
BELOVED EARTH
CLEAN
AND GREEN.

”

- Hon’ble Prime Minister Shri Narendra Modi

“

WE, THE PRESENT GENERATION, HAVE THE RESPONSIBILITY TO ACT AS A TRUSTEE OF THE RICH NATURAL WEALTH FOR THE FUTURE GENERATIONS. THE ISSUE IS NOT MERELY ABOUT CLIMATE CHANGE; IT IS ABOUT CLIMATE JUSTICE.

”

- Hon’ble Prime Minister Shri Narendra Modi

Gitanjali Kanwar

Beas Conservation Reserve

SPECIES RICHNESS

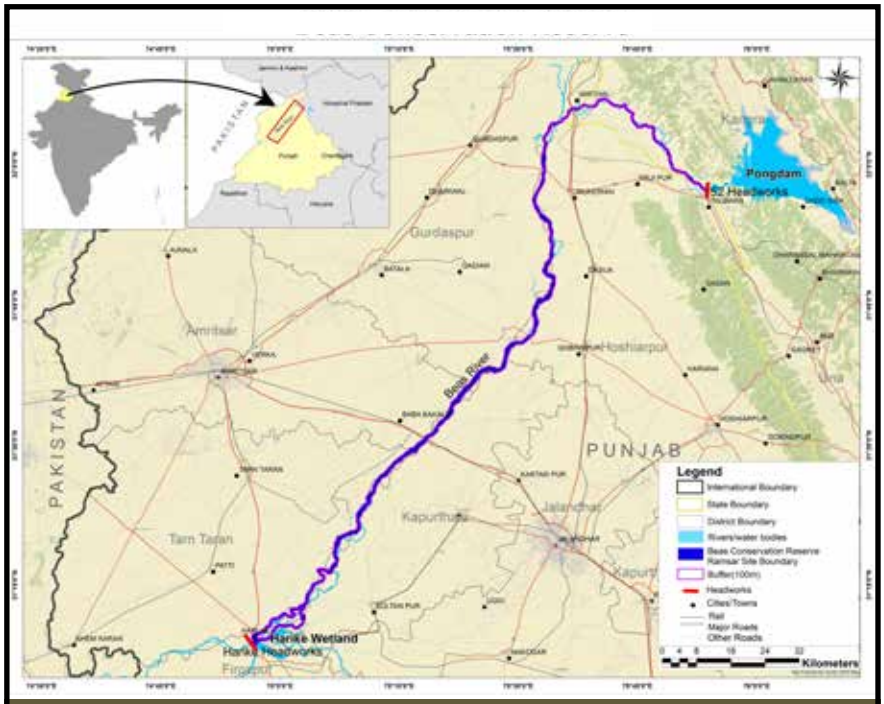
BIRDS	500
FISHES	90
TURTLE	7
PLANTS	20+

Date of designation
September 26, 2019

The Beas Conservation Reserve is a 185-kilometre stretch of the River Beas, located in north-western Punjab. The river meanders down from the Himalayan foothills to the Harike Headworks, diverting its course into several channels. River Beas is dotted with islands, sand bars, and braided channels, creating a complex environment supporting substantial biodiversity. The wetland also hosts the only known population of the endangered Indus river dolphin in India. In 2017, a programme was initiated to re-introduce the critically endangered gharial, with 47 individuals released into the river 30 years after their disappearance. The wetland provides vital habitat for a large number of birds and is a critical staging area for both summer and winter migratory waterbirds. The Ramsar Site also supports freshwater turtles like the Indian softshell turtle, Indian flap shell turtle, narrow-headed softshell turtle, spotted pond turtle, crowned river turtle, and brown roofed turtle.

Punjab

Designation Criteria	Wetland Type	Protection Status	Management Authority
2, 7	River Stretch	Conservation Reserve	Department of Forest & Wildlife Preservation, Punjab



LOCATION
Hoshiarpur, Amritsar, Gurdaspur, Kapurthala, Jalandhar and Tarn Taran Districts

AREA
6,428.9 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

Nutrient and sediment retention

Cultural and Spiritual values

Lifecycle maintenance Hosts the only population of the Indus River Dolphin in India

Scientific and educational importance

Maintenance of hydrological regime

Source of freshwater

Species of global conservation significance

Notable	Indus River Dolphin, Gharial
Critically Endangered	Gharial
Endangered	Indus River Dolphin, Spotted Pond Turtle, Hog Deer, Mahseer
Vulnerable	Common Pochard, Crowned River Turtle, Smooth-coated Otter, Indian Softshell Turtle, Common Carp, Wallago Catfish

THREATS

Significance

Low

Medium

High

Over-grazing

Water abstraction

Pollution due to domestic and industrial effluents

Spread of invasive species

Encroachment

Hydrological regime alteration

Gitanjali Kanwar

Harike Lake

SPECIES RICHNESS

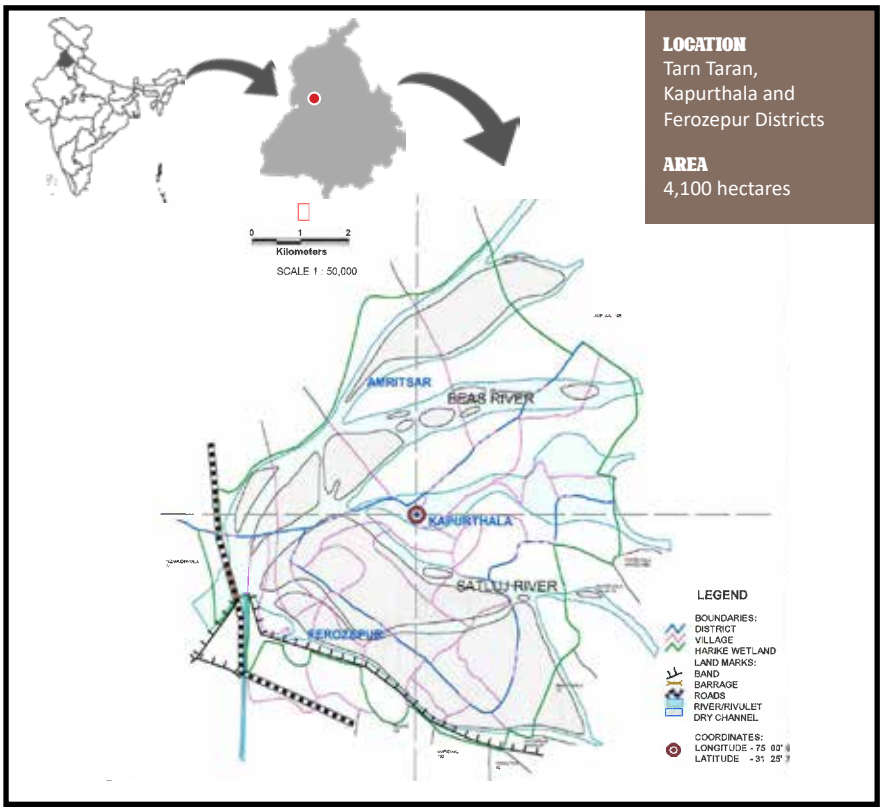
BIRDS	365
FISHES	90
MAMMALS	13
REPTILES	11
PLANTS	38

Date of designation
March 23, 1990

Harike, also known as Hari-ke-Pattan, is one of the largest wetlands in northern India. The wetland is situated at the confluence of two major rivers of Punjab, Sutlej, and Beas. Harike came into existence in 1953 due to the construction of a barrage on river Sutlej. The barrage is located 700 meters downstream of the confluence of the Beas and Sutlej rivers. This human-made riverine wetland was constructed to enhance water security for Punjab and nearby states. The rich biodiversity of the wetland plays a vital role in maintaining the hydrological balance in the catchment. Located close to the Indo-Pakistan border, Harike is in proximity to the Himalayas and the Indus-Sutlej River system that falls in the migratory route of many birds from western Himalayas, Central Asia and Siberia. The wetland also supports the population of endangered Indus River Dolphins, critically endangered Gharial, and endangered freshwater turtles and fishes.

Punjab

Designation Criteria	Wetland Type	Protection Status	Management Authority
1	Reservoir & water storage area	Wildlife Sanctuary	Department of Forest & Wildlife Preservation,Punjab



VALUES AND BENEFITS

Significance

Low | Medium | High

- Purifies wastewater
- Traps sediments
- Buffers flood
- Recharges groundwater
- Water for irrigation to southern Punjab and Rajasthan
- Scientific and educational values
- Cultural and spiritual importance
- Habitat for several migratory species
- Recreation and tourism

Species of global conservation significance

Notable	Indus River Dolphin, Smooth-coated Otter
Critically Endangered	Gharial, Red-crowned Roofed Turtle
Endangered	Indus River Dolphin, Black-bellied Tern, Egyptian Vulture, Indian Narrow-headed Softshell Turtle
Vulnerable	Smooth-coated Otter, Jerdon's Babbler, Lesser White-fronted Goose, Eastern Imperial Eagle, Common Pochard, Eurasian Carp

THREATS

Significance

Low | Medium | High

- Encroachment
- Water hyacinth proliferation
- Siltation
- Illegal fishing
- Pollution from upstream cities and towns

Kanjli

SPECIES RICHNESS

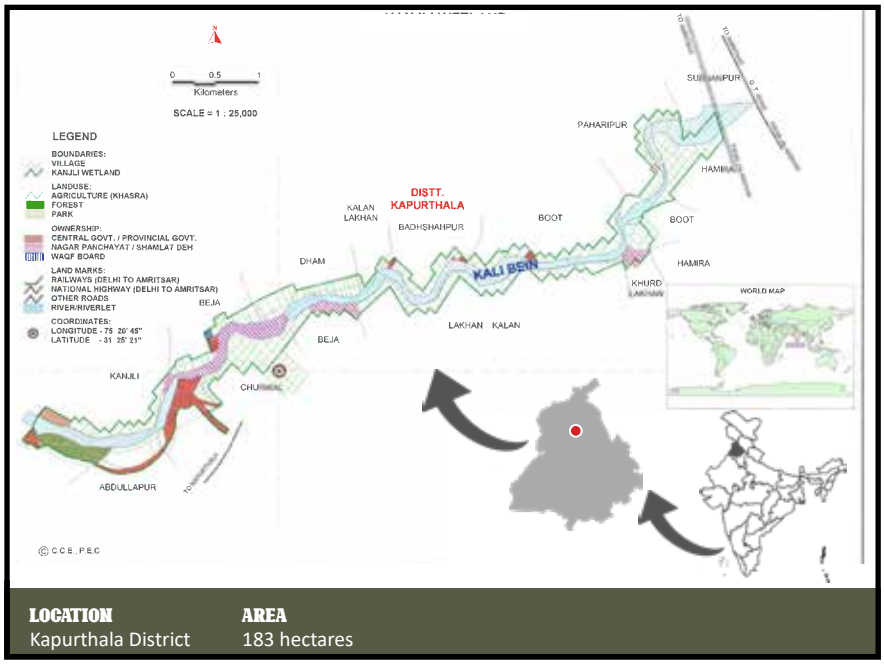
BIRDS	97
FISHES	11
MAMMALS	4
INVERTEBRATES TAXA	35

Date of designation
January 22, 2002

Kanjli is a human-made freshwater wetland spreading over 12 villages in the Kapurthala district of Punjab. The wetland came into existence in 1870 with the construction of the Head Regulator near village Kanjli on the Kali Bein rivulet. The Kali Bein rivulet travelling long after originating from Budha Barkat Regulator near village Dhanoa upstream in Hoshiarpur District feeds Kanjli and the wetland area. It moves towards Bakarke village, 10 km short of Harike Pattan Regulator and joins the river Beas. Kanjli acts as a groundwater discharging and recharging source and helps flood management. Kali Bein and Kanjli wetland have religious significance as they are associated with the first Guru of Sikhs, Shri Guru Nanak Dev Ji. The margins of the wetland also support a great variety of biodiversity including a large number of resident and migratory birds.

Punjab

Designation Criteria	Wetland Type	Protection Status	Management Authority
3	River stretch	Conservation Reserve	Department of Forest & Wildlife Preservation, Punjab



LOCATION
Kapurthala District

AREA
183 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

Purifies wastewater

Traps sediments

Recharges groundwater

Holy river associated with Guru Nanak Dev ji

Habitat for several migratory species

Scientific and educational values

Provides water for irrigation

Buffers floods

Recreation and tourism

Species of global conservation significance

Notable	*Utricularia sp.*
Vulnerable	Humped Bladderwort, Common Carp, Wallagu Catfish

THREATS

Significance

Low | Medium | High

Encroachment

Hydrological regime alteration

Siltation

Pollution from upstream cities and towns

Water hyacinth proliferation

Gitanjali Kanwar

SPECIES RICHNESS

BIRDS	131
FISHES	27
MAMMALS	16
REPTILES & AMPHIBIANS	21
PLANTS	130

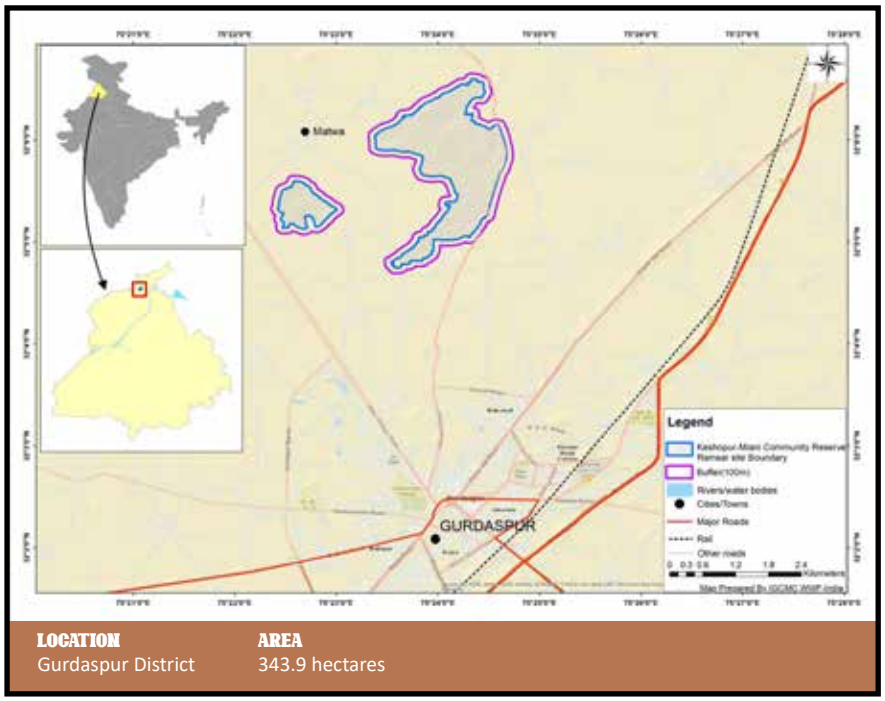
Keshopur-Miani Community Reserve

Date of designation
September 26, 2019

Keshopur-Miani Community Reserve is located in the Gurdaspur district of Punjab. It is India's first-ever notified community reserve under the Wildlife Protection Act, 1972 (amended 2002). The wetland lies in the former flood plains of the rivers Ravi and Beas and consists of a mosaic of natural marshes, aquaculture ponds, and agricultural wetlands where crops such as lotus and chestnut are cultivated. Keshopur-Miani is the only habitat for Sarus and common cranes in Punjab and hosts many resident and migratory birds both during the summer and winter seasons. The Ramsar Site plays an important ecological function such as recharging groundwater for sustaining agriculture, habitat for rare and endangered species, stabilisation of local climate, natural storage base for carbon, and natural sinks for pollutants.

Punjab

Designation Criteria	Wetland Type	Protection Status	Management Authority
2, 5	Marshes & aquaculture ponds	Community Reserve	Department of Forest & Wildlife Preservation, Punjab



LOCATION
Gurdaspur District

AREA
343.9 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

Tourism and recreation

Fodder

Recharges groundwater

Scientific and educational importance

Buffers flood

Lifecycle maintenance of migratory species

Supports Agro-ecology: Rice, Water Chestnut and other crops along with fisheries

Species of global conservation significance

Notable	Common Crane, Sarus Crane
Endangered	Spotted Pond Turtle, Black-bellied Tern
Vulnerable	Common Pochard, Sarus Crane, Greater Spotted Eagle, Indian Softshell Turtle, Common Carp

THREATS

Significance

Low

Medium

High

Pollution due to agricultural runoff

Invasive species

Drainage

SPECIES RICHNESS

BIRDS	154
FISHES	35
MAMMALS	9

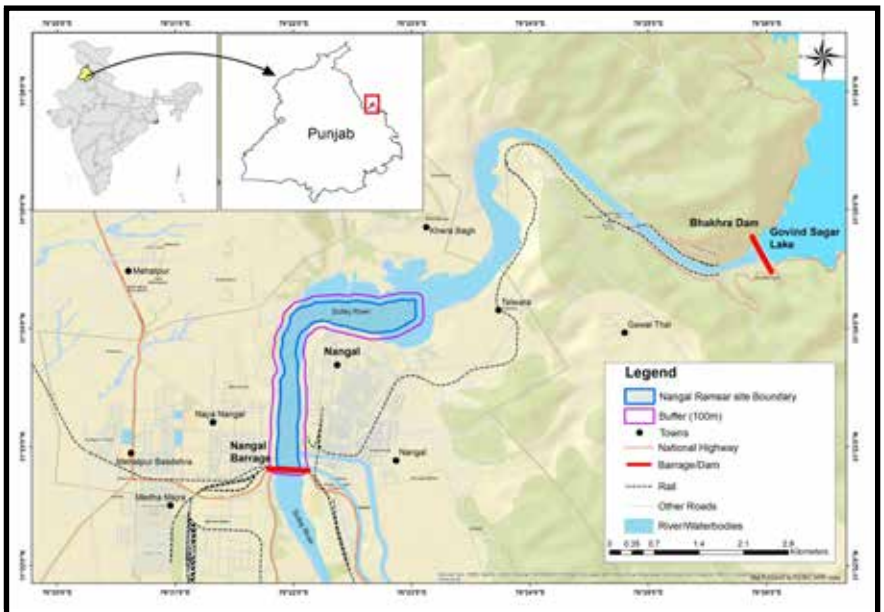
Nangal Wildlife Sanctuary

Date of designation
September 26, 2019

Nangal Wildlife Sanctuary is a human-made reservoir that came into existence due to the Bhakra-Nangal Project in 1961. The Bhakra-Nangal Dams are among India's first river valley multipurpose developmental projects immediately after independence. The Bhakra Dam is constructed across the river Sutlej and is the second highest dam in India. 13 km downstream of the Bhakra Dam, another dam was constructed across the Sutlej near the town of Nangal to use it as a backup in case of fluctuation of the Bhakra Dam water levels. The construction of this dam led to the formation of Nangal. Situated in the highly eco-sensitive Shivalik foothills, the reservoir's presence has attracted several resident and migratory birds, making it a vibrant wetland. Nangal is a very important and strategic refuelling base for long-route migratory birds. The Indian and Chinese Prime Ministers formalized the 'Five Principles of Peaceful Coexistence' on the banks of Nangal dam in 1954. More than half a million people downstream benefit from the reservoir as water flow is regulated, reducing the risks to both people and property from floods

Punjab

Designation Criteria	Wetland Type	Protection Status	Management Authority
2, 3	Reservoir	Wildlife Sanctuary	Department of Forest & Wildlife Preservation, Punjab



LOCATION
Rupnagar District

AREA
116 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

Source of freshwater

Buffers flood

Lifecycle maintenance of migratory birds

Groundwater recharge

Sediment and nutrient retention

Species of global conservation significance

Endangered	Egyptian Vulture, Black-bellied Tern, Hog Deer, Indian Pangolin
Vulnerable	Common Pochard, Leopard, Wallago Catfish, Burmese Python

THREATS

Significance

Low

Medium

High

Tourism pressure

Pollution (sewage inflow and garbage dumping)

Ropar

SPECIES RICHNESS

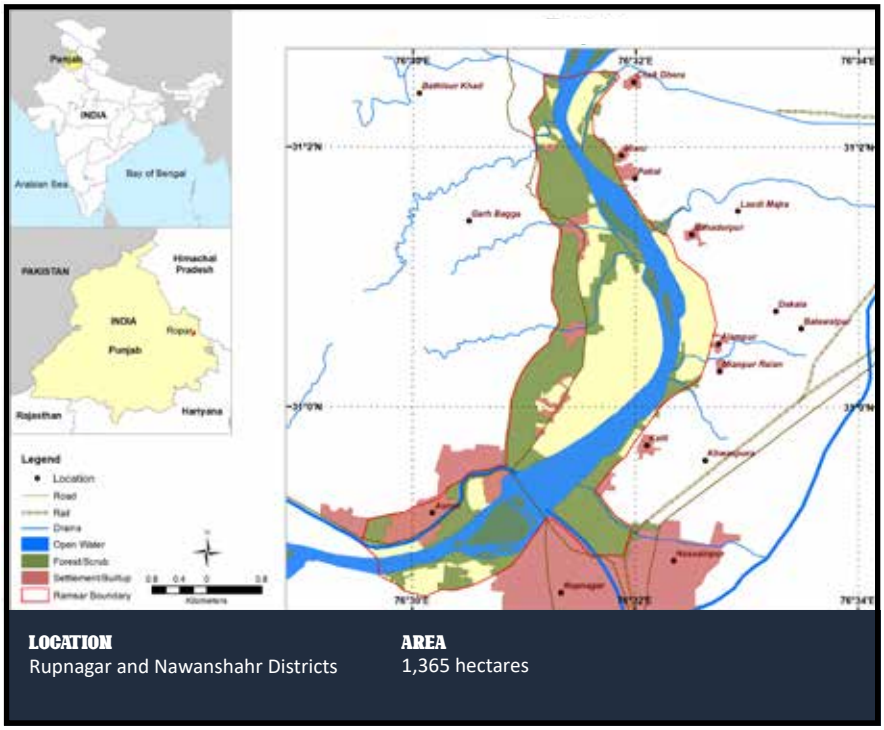
BIRDS	318
FISHES	35
MAMMALS	10
REPTILES & AMPHIBIANS	22
PLANTS	47

Date of designation
January 22, 2002

Ropar is a permanent freshwater human-made reservoir located in the North-West of Chandigarh, Punjab. The wetland came into existence after the construction of a barrage in 1952 to divert the River Sutlej for drinking and irrigation water supplies in parts of Punjab. The area is an important habitat for some threatened species in Shivalik Foothills, like the scaly anteater and Indian rock python. Areas including a vast stretch of water and a forest environment along the marshy zone are vital habitats for migratory birds. The diversity of floral and faunal components in this strategic ecosystem is of immense value to the region. This freshwater wetland falls on the migratory route of various birds and is regarded as an important stopover. Ropar plays a substantial hydrological role in recharging the aquifers and is also a source of water for irrigation, industry, and domestic use in far-off places by way of Sirhind and Bist Doab Canals.

Punjab

Designation Criteria	Wetland Type	Protection Status	Management Authority
2,3	Barrage/Water storage area	Conservation Reserve	Department of Forest & Wildlife Preservation, Punjab



LOCATION
Rupnagar and Nawanshahr Districts

AREA
1,365 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

Flood buffer

Purifies wastewater

Source of drinking water, irrigation for lower Sutlej Basin

Habitat for several migratory species

Traps sediments

Recharges groundwater

Scientific and educational value

Recreation and tourism adjoining historical site

Species of global conservation significance

Notable	Hog Deer, Indian Narrow-headed Softshell Turtle, Indian Pangolin
Vulnerable	Common Pochard, Mrigal Carp, Common Carp, Smooth Indian Otter, Sambar

THREATS

Significance

Low

Medium

High

Encroachment

Alteration in hydrological regimes

Siltation

Pollution from upstream cities and towns

Sand Mining

Keoladeo National Park

SPECIES RICHNESS

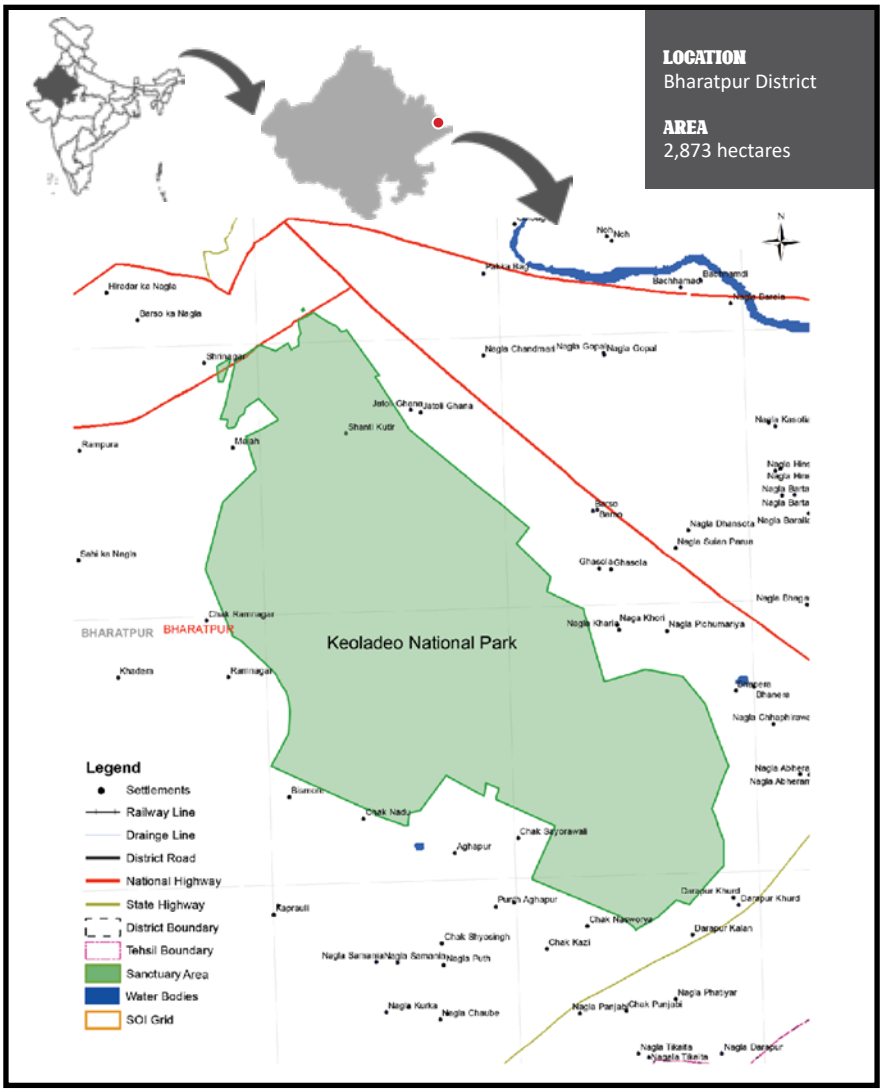
BIRDS	375
FISHES	57
MAMMALS	34
REPTILES & AMPHIBIANS	32
PLANTS	372

Date of designation
October 1, 1981

Keoladeo National Park lies at the confluence of the rivers Gambhir and Banganga in the Bharatpur district of Rajasthan. The wetland, locally known as Ghana, is a mosaic of grasslands, woodlands, woodland swamps, and wetlands. Keoladeo National Park is a significant wintering area for migratory birds from Central Asia, including the elusive and endangered Siberian Crane, the last known sighting of which at the site was in 2002. The ancient Keoladeo temple inside the park is revered by the local community. The wetland serves as a freshwater buffer in an arid zone and recharges groundwater aquifers in the surrounding areas. Keoladeo National Park is a world-famous tourist destination providing direct employment opportunities to nearly 400 people from local communities.

Rajasthan

Designation Criteria	Wetland Type	Protection Status	Management Authority	Other Designation
2	Freshwater marsh & swamp	National Park	Rajasthan Forest Department	UNESCO World Heritage Site



VALUES AND BENEFITS

Significance

Low | Medium | High

Groundwater recharge

Habitat for several migratory species

Tourism offers livelihood to local communities

Species of global conservation significance

Notable	Sarus Crane, Greater Spotted Eagle, Painted Stork, Hog Deer
Endangered	Greater Adjutant, Hog Deer
Vulnerable	Common Pochard, Woolly-Necked Stork, Sarus Crane, Lesser Adjutant, Greater Spotted Eagle, Smooth-Coated Otter, Sambar

THREATS

Significance

Low | Medium | High

Hydrological regime alteration

Invasive species proliferation like Water hyacinth, Knot grass, Mesquite and African Catfish

Encroachment

SPECIES RICHNESS

BIRDS	71
MAMMALS	6
PLANTS	49

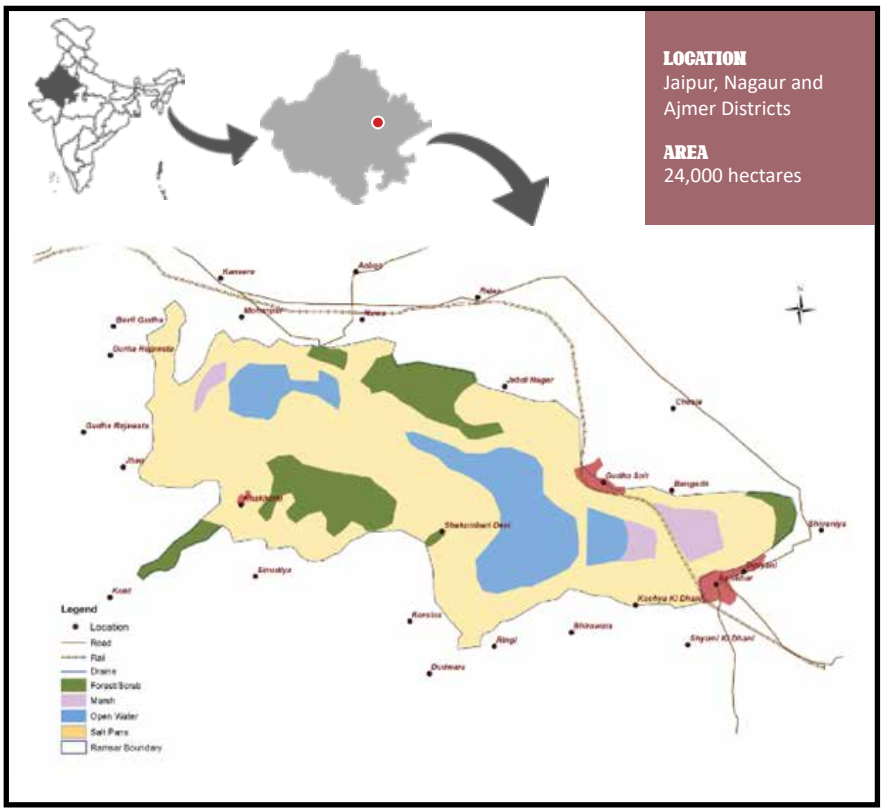
Sambhar Lake

Date of designation
March 23, 1990

Sambhar is a shallow natural saline wetland located in Rajasthan's Jaipur, Nagaur, and Ajmer districts, close to the desert fringe line. The wetland is famous for harbouring lesser flamingos in large numbers, next only to Rann of Kutch in the country. The waders congregate at the site in appreciable numbers especially pochards, coots, and other waterbirds.The vegetation present in the catchment area is primarily xerophytic. The wetland is significant as it provides a habitat for migratory waterbirds, is an important tourist destination, and is also an important site for salt production in the country. Sambhar is also famous for the ancient Shakambari Devi temple, which is revered by people of the surrounding villages and is the venue for a famous religious fair in the month of August. The temple has cultural and spiritual significance attached, and it is believed that the deity of the temple protects the wetland.

Rajasthan

Designation Criteria	Wetland Type	Management Authority
1	Natural Saline lake	Rajasthan State Wetlands Authority



LOCATION
Jaipur, Nagaur and Ajmer Districts

AREA
24,000 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

Tourism destination

~5% of country's salt production

Lifecycle of migratory waterbirds

Scientific and educational values

Ancient temple of Shakambari Devi

Species of global conservation significance

Notable	Lesser and Greater Flamingo, Demoiselle Crane
Endangered	Egyptian Vulture
Vulnerable	Common Pochard

THREATS

Significance

Low

Medium

High

Regime fragmentation by roads and railways

Hyper-salinity

Illegal salt mining

SPECIES RICHNESS

BIRDS 50

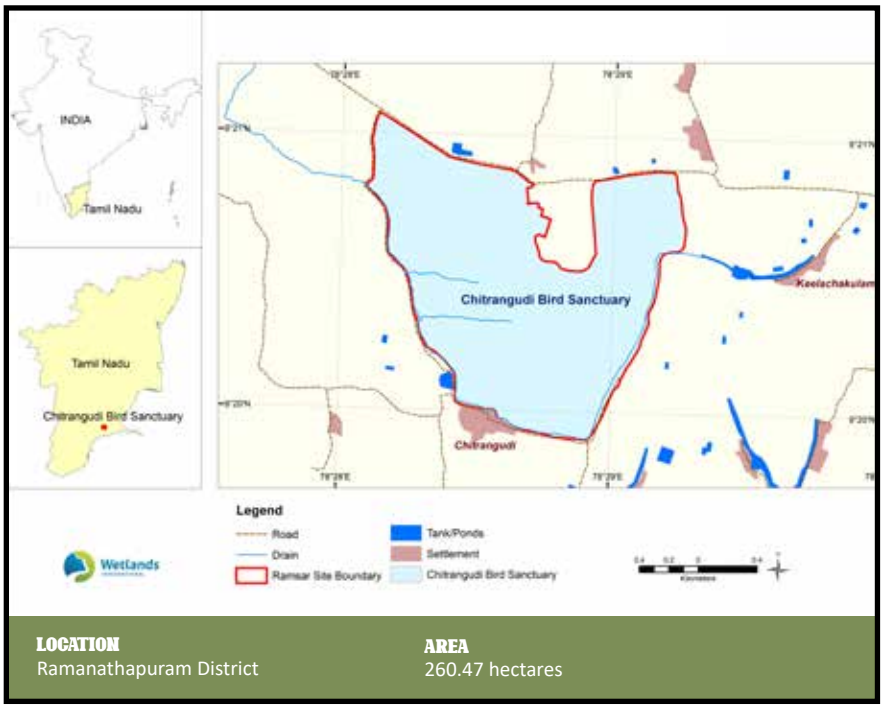
Chitrangudi Bird Sanctuary

Date of designation
November 8, 2021

Chitrangudi Bird Sanctuary, locally known as Chitrangudi Kanmoli, is located in the Ramanathapuram district of Tamil Nadu. An aerial view of the sanctuary presents a crescent or fishtail shape. The primary water sources for the wetland are rainfall, groundwater, and surrounding runoff from the catchment area and the Vaigai and Gundaru Rivers. Therefore, water is primarily intermittent in nature with frequent occasions of drying, which help in replenishing the groundwater. Even though it is an inland wetland, it is biogeographically near the coastal region. Collective characteristics of nutrient and sediment inflows put together facilitate sediment trapping and provide stabilization of the shoreline. The most remarkable feature of the sanctuary is the prominent growth of Babul trees, with the first Babul plantation done by the Farm forestry division in 1979. The wetland is surrounded by agricultural fields, where different crops are grown throughout the year. Plant remains and grains scattered after harvesting along with the water in the wetland allures avifauna to the regions. The wetland is an ideal habitat for winter migratory birds. The wetland plays the primary role of buffering by acting as a sponge during floods and extreme rainfall and is a significant source of groundwater recharge.

Tamil Nadu

Designation Criteria	Wetland Type	Protection Status	Management Authority
3, 4, 6	Pond	Bird Sanctuary	Tamil Nadu Forest Department



LOCATION
Ramanathapuram District

AREA
260.47 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

- Temples and religious institutions in the bank
- Fresh water (irrigation)
- Groundwater recharge
- Pollination
- Soil formation
- Biodiversity
- Climate regulation
- Controls pests and disease
- Flood buffer, stabilization of shoreline
- Erosion protection
- Sink for sediments
- Carbon Sequestration
- Nutrient cycling
- Food for water birds (fish)
- Recreation and tourism

Species of global conservation significance

Notable : Spot Billed Pelican, Painted Stork, Indian Peafowl, Black-headed Ibis, Oriental Darter

THREATS

Significance

Low | Medium | High

- Encroachment
- Vegetation clearance/ land conversion
- Water abstraction
- Fishing and harvesting aquatic resources
- Recreational and tourism activities
- Salinization
- Livestock grazing
- Pollution
- Climate change and severe weather (droughts, storms and flooding)
- Invasive non-native species

Tamil Nadu State Wetland Authority

SPECIES RICHNESS

BIRDS	160+
FISHES	450+
CORALS	117
SEA TURTLES	5
PLANTS	450+
MANGROVES	17
SEAWEED	181

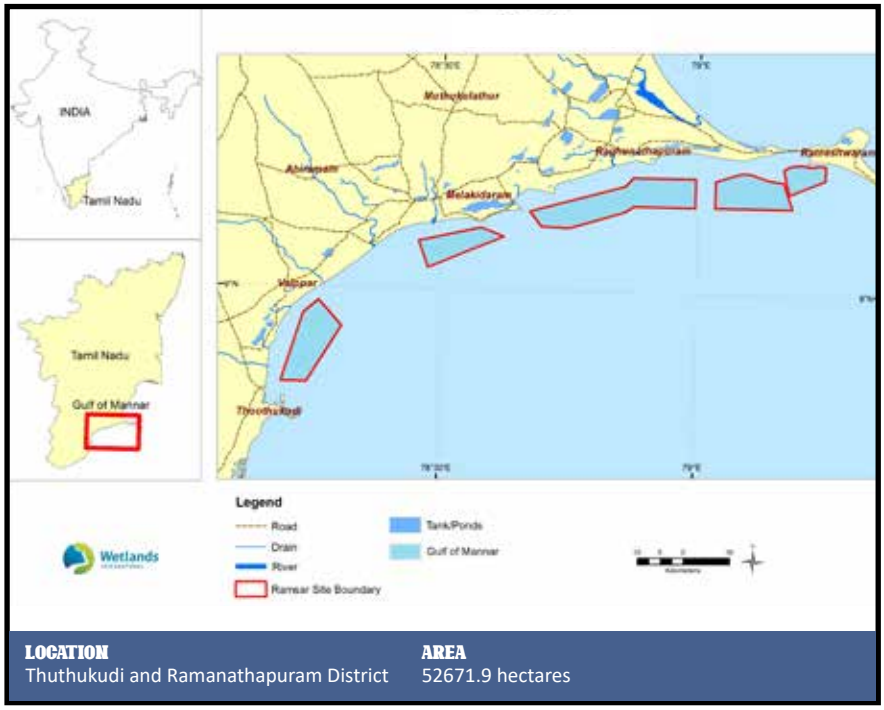
Gulf of Mannar Marine Biosphere Reserve

Date of designation
April 8, 2022

Located at the southeastern tip of India, the Gulf of Mannar Marine Biosphere Reserve is the first Marine Biosphere Reserve in South and South-East Asia, running down south from Rameswaram to Kanyakumari in Tamil Nadu. The importance of the Gulf of Mannar region dates back to the 2nd Century AD because of its highly productive pearl banks and religious significance. The wetland houses a wide range of floral and faunal species representing primitive to higher forms making it one of the richest coastal regions in India. This habitat is the feeding ground for the largest endangered marine mammal, dugong, and sea turtles. This area is also the last refuge of an invertebrate, the unique 'living fossil' Balanoglossus that links vertebrates and invertebrates. The Gulf of Mannar is also a significant surviving natural habitat for dugongs globally. Fishery resources in the inshore waters had been the sole occupations and livelihoods for several thousand families living along the coast of the Gulf of Mannar for centuries.

Tamil Nadu

Designation Criteria	Wetland Type	Protection Status	Management Authority
1, 2, 3, 4, 5, 6, 7, 8, 9	Permanent shallow marine waters	National Park	Tamil Nadu Forest Department



LOCATION
Thuthukudi and Ramanathapuram District

AREA
52671.9 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

- Pollution control and detoxification
- Food for humans
- Maintenance of hydrological regimes (groundwater recharge, water storage and delivery system)
- Biochemical products (extraction of material from biota)
- Nutrient cycling
- Coastal shoreline stabilization and storm protection
- Climate regulation
- Flood control
- Nature based tourism
- Carbon sequestration
- Biodiversity
- Scientific and educational
- Erosion protection
- Soil formation
- Hazard reduction

Species of global conservation significance

Notable	Dugong, Olive Ridley Sea Turtle, Leatherback Sea Turtle
Critically Endangered	Spoon-billed Sandpiper, Hawksbill Sea Turtle, Pondicherry Shark, Sharpnose Guitarfish, Largetooth Fish, Longcomb Sawfish, *Rhina ancylostoma*
Endangered	*Chelonia mydas*, Spotted Eagle Ray, Mottled Eagle Ray, Knifetooth Sawfish, Whitecheek Shark, Winghead Shark, Bramble Shark
Vulnerable	Dugong, Loggerhead Sea Turtle, False Killer Whale, Banded Eagle Ray, Common Thresher, *Narcine timlei*

THREATS

Significance

Low | Medium | High

- Recreational and tourism activities
- Water abstraction, release
- Shipping lanes
- Aquaculture
- Industrial encroachment
- Pollution
- Invasive non-native species
- Drainage
- Logging and wood harvesting
- Temp extremes
- Land conversion
- Storms and flooding
- Droughts
- Earthquake, tsunami
- Mining and quarrying
- Fishing and harvesting aquatic resources

Tamil Nadu State Wetland Authority

SPECIES RICHNESS

BIRDS ..... **20+**

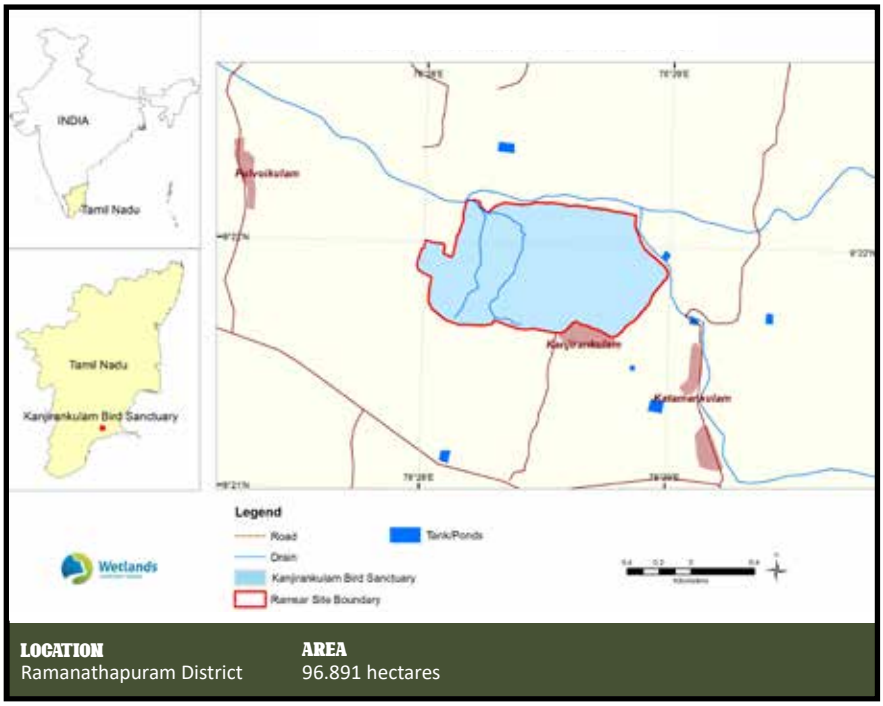
Kanjirankulam Bird Sanctuary

Date of designation
April 8, 2022

Kanjirankulam Bird Sanctuary, also known as Kanjirankulam Kanmai, is located in the Mudukulathur Ramanathapuram District of Tamil Nadu. The wetland serves as a nesting site for several migratory heron species that roost in the prominent growth of babul trees. Located on the tail end of River Gundar, a biodiversity hotspot, Kanjirankulam was carved out of the Raghunada Cauvery canal that the Maravar Kings dug out. It is a near homogenous tank-like structure with dense overgrowth of Prosopis and intermittent plantations of Acacia nilotica. The North Western portion of the wetland retains water even during summer. The wetland provides a wide spectrum of ecosystem services to the fringe population, including hydrological regulation of floods and droughts, carbon sequestration and climate regulation, and storm protection. Local villagers representing indigenous races of India have a symbiotic relationship with the bird communities residing in the wetland.

Tamil Nadu

Designation Criteria	Wetland Type	Protection Status	Management Authority
2, 3, 6, 7, 8	Freshwater marsh	Bird Sanctuary	Public Works Department, Tamil Nadu Forest Department



LOCATION
Ramanathapuram District

AREA
96.891 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

- Fresh water for drinking, irrigation
- Fuel wood
- Maintenance of hydrological regimes (groundwater recharge, water storage and delivery system)
- Climate regulation
- Erosion protection

Nutrient cycling

Carbon sequestration

Soil formation

Biodiversity

Nature based tourism

Scientific and educational

Species of global conservation significance

Notable	Spot-billed Pelican, Oriental Darter, Painted Stork, Black-headed Ibis
Endangered	River Tern, Spotted Greenshark, *Tephrosia purpurea*
Vulnerable	River Tern

THREATS

Significance

Low

Medium

High

- Human intrusion and disturbance
- Livestock farming and ranching
- Gathering terrestrial plants , Logging
- Land conversion
- Invasive non-native species
- Drainage
- Water abstraction, release
- Encroachment
- Drought, storm flood

P. Jeganatha

Karaivetti Bird Sanctuary

SPECIES RICHNESS

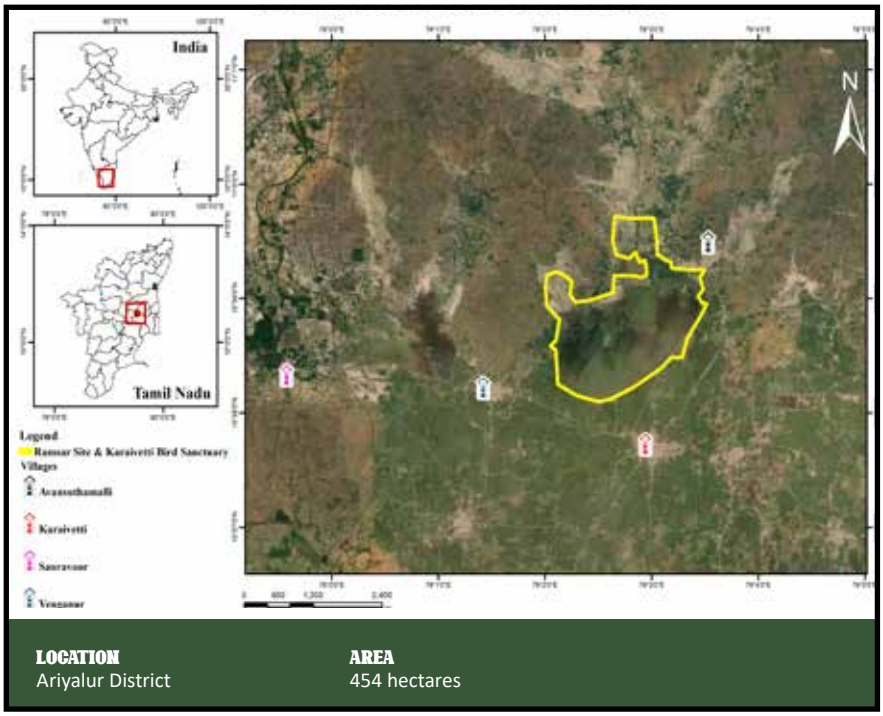
BIRDS	198
MAMMALS	10
REPTILES & AMPHIBIANS	29
PLANTS	165
BUTTERFLIES	82

Date of designation
May 24, 2023

Karaivetti Bird Sanctuary is one of the largest inland wetlands of Tamil Nadu. The wetland is supplemented by the northeast monsoon and Mettur Dam through the Pullambadi canal. Karaivetti lies in the Central Asian Flyway and is an important breeding and foraging site for both resident and migratory birds. It has recorded one of the largest congregations of waterbirds among all the wetlands in Tamil Nadu. Considering its importance as a bird habitat, the Government of Tamil Nadu declared Karaivetti a bird sanctuary in 1999. The Site also provides a breeding habitat for the vulnerable Indian flap-shelled turtle. During the driest period, between July and October, the water level of the Site is maintained with water from the Mettur Dam. The water from the wetland is used to irrigate about 4,000 hectares of surrounding farmland.

Tamil Nadu

Designation Criteria	Wetland Type	Protection Status	Management Authority
2, 3, 4, 5, 6	Permanent freshwater lakes	Bird Sanctuary	District Forest Office, Ariyalur Division



LOCATION
Ariyalur District

AREA
454 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

Drinking water for humans and/or livestock

Groundwater recharge and discharge

Local climate regulation

Water storage and delivery

Biodiversity

Support for pollinators

Flood control, flood storage

Nutrient cycling

Nature observation and nature-based tourism

Species of global conservation significance

Notable	Oriental Darter, Curlew Sandpiper, Asian Woollyneck, Spot-billed Pelican, Black-headed Ibis, Black-tailed Godwit, Pallid Harrier, Painted Stork
Vulnerable	Indian Flapshell Turtle, Bonnet Macaque, Common Pochard, River Tern, Indian Spotted Eagle, Greater Spotted Eagle

THREATS

Significance

Low | Medium | High

Water abstraction

Drainage

Water releases

Livestock farming and ranching

Fishing and harvesting aquatic resources

Recreational and tourism activities

Vegetation clearance/ land conversion

Invasive non-native/ alien species

Pollution

Habitat shifting and alteration

Droughts

Temperature extremes

Storms and flooding

SPECIES RICHNESS

BIRDS **49**

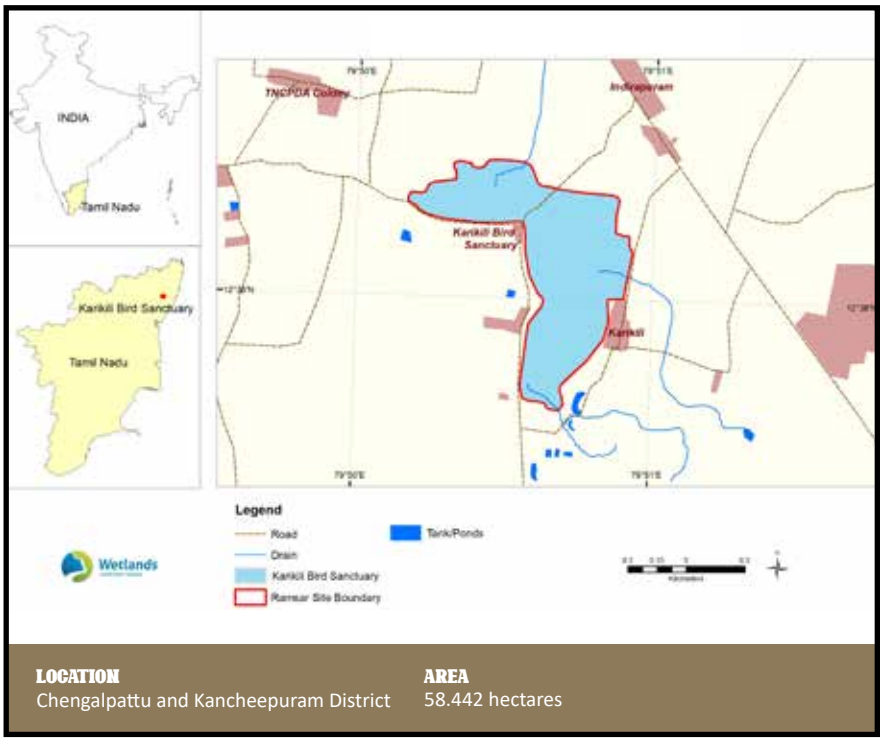
Karikili Bird Sanctuary

Date of designation
April 8, 2022

Karikili Bird Sanctuary comprises two rain-fed non-perennial irrigation tanks, spreading over an area of more than 58 hectares. These are old water storage reservoirs constructed for irrigation in the Chengalpet plains. The wetland is flat or gently undulating and lies near low ridged, rocky hillocks. Rainfall varies significantly from year to year, from 400 mm to almost 1,700 mm, flooding the wetland in the monsoon months from July to September. Karikili provides a habitat for a variety of resident and migratory birds, most of them waterbirds and a few species of scavengers. The wetland also supports several mammals, reptiles, and amphibians, such as the jungle cat, bonnet macaque, jackal, python, sand boa, and frogs. Karikili Bird Sanctuary has a history of people cooperating in protecting waterbirds, as their guano enables the supply of nutrient-enriched water to crop fields.

Tamil Nadu

Designation Criteria	Wetland Type	Protection Status	Management Authority
3, 4, 6, 7	Water Storage area/ reservoir	Bird Sanctuary	Tamil Nadu Forest Department



LOCATION
Chengalpattu and Kancheepuram District

AREA
58.442 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

- Food for humans
- Fresh water for drinking, irrigation
- Maintenance of hydrological regimes (groundwater recharge, water storage and delivery system)
- Nutrient cycling
- Spiritual and inspirational
- Biological control of pests and disease
- Climate regulation
- Nature based tourism
- Sediment retention
- Biodiversity
- Hazard reduction
- Erosion protection
- Pollination

Species of global conservation significance

Notable	Garganey Teal, Common Teal, Shoveller, Pintail Duck, Stilts, Sandpoper, Spoonbil, White Ibis, Night Heron, Jungle Cat, Grey Mongoose, Palm Civet, Flying Fox
Endangered	Spotted Greenshark, Nilgiri White-breasted Laughing Thrush, Nilgiri Chilappan
Vulnerable	Mrigal Carp, Common Pochard

THREATS

Significance

Low | Medium | High

- Encroachment
- Fishing and harvesting aquatic resources
- Non-timber crops
- Invasive non-native species

Tamil Nadu Forest Department

Kazhuveli Bird Sanctuary

SPECIES RICHNESS

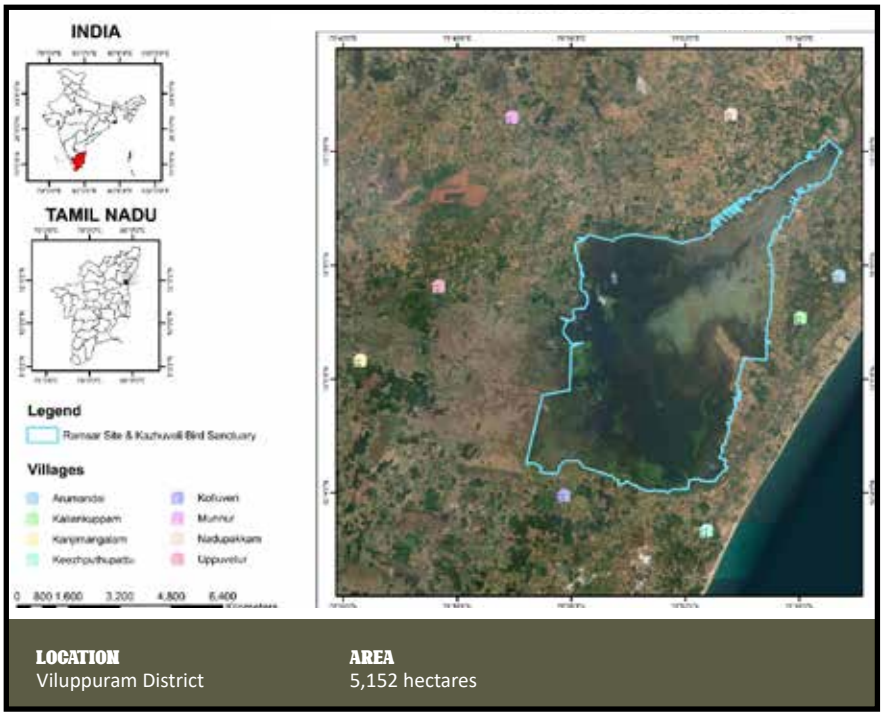
BIRDS	229
FISHES	84
MAMMALS	14
REPTILES & AMPHIBIANS	52
PLANTS	242
BUTTERFLIES	72

Date of designation
January 16, 2024

The Kazhuveli Bird Sanctuary is situated on the Coromandel Coast in Villupuram district, Tamil Nadu. The sanctuary is a brackish, shallow wetland connected to the Bay of Bengal via the Uppukalli Creek and the Edayanthittu Estuary. Kazhuveli is one of the most ecologically significant wetlands, known for its rich biodiversity, and ranks as one of the largest wetlands in peninsular India. The wetland can be divided into three distinct sections based on its water characteristics: the estuarine region with brackish water, the Uppukalli creek that brings in seawater, and the Kazhuveli basin, which is freshwater. The wetland lies along the Central Asian Flyway, making it a crucial stopover for migratory bird species. It also serves as a vital breeding ground for resident birds as well as fish species and plays an important role in recharging the local aquifers. In the brackish water zones, there are patches of highly degraded mangroves, predominantly consisting of *Avicennia* species. Historically, this area was home to Tropical Dry Evergreen Forests. Additionally, large stretches of reed beds (*Typha angustata*) can be found, covering several hundred hectares of the sanctuary.

Tamil Nadu

Designation Criteria	Wetland Type	Protection Status	Management Authority
1, 2, 3, 4, 6, 7, 8	Coastal brackish/ saline lagoons	Bird Sanctuary	District Forest Officer, Villupuram Division



LOCATION
Viluppuram District

AREA
5,152 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

Drinking water for humans and/or livestock

Livestock fodder

Nature observation and nature-based tourism

Food for humans

Biodiversity

Nutrient cycling

Local climate regulation/ buffering of change

Species of global conservation significance

Notable	Pallid Harrier, Oriental Darter, Great Thick-knee, Painted Stork, Asian Woollyneck, Red-headed Falcon, Spot-billed Pelican, Curlew Sandpiper
Endangered	Indian Pangolin
Vulnerable	Eastern Imperial Eagle, Indian Spotted Eagle, Greater Spotted Eagle, Common pochard, River tern, Indian Flapshell Turtle, Indian Star Tortoise, Bonnet Macaque

THREATS

Significance

Low | Medium | High

Salinisation

Livestock farming

Mining and quarrying

Pollution

Canalisation and river regulation

Fishing and harvesting aquatic resources

Dams and water management/use

Vegetation clearance/ land conversion

Invasive non-native/ alien species

Storms and flooding

SPECIES RICHNESS

ANIMALS 92

PLANTS 69

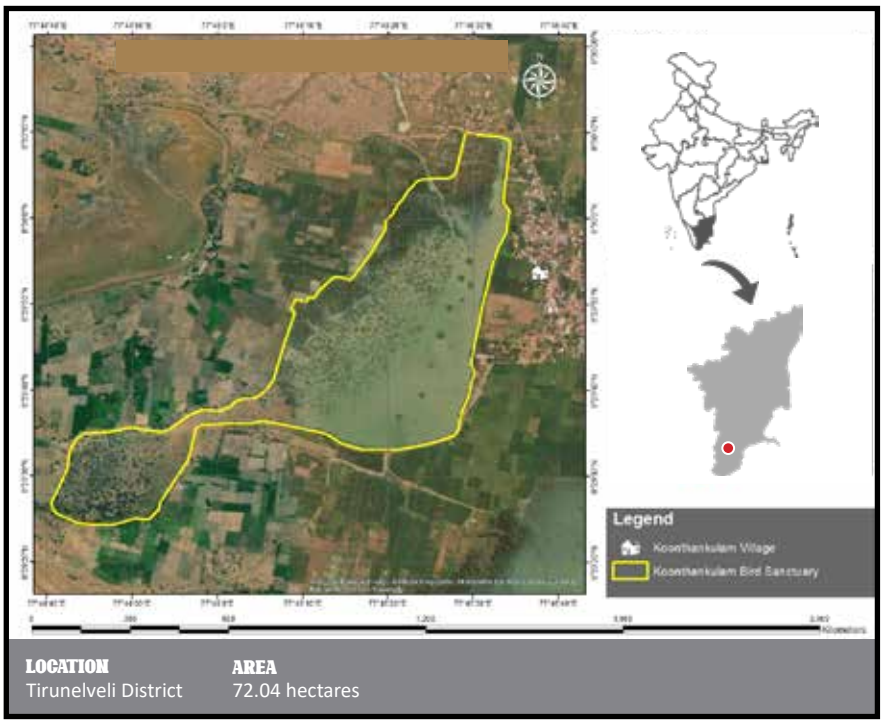
Koonthankulam Bird Sanctuary

Date of designation
November 8, 2021

Koonthankulam Bird Sanctuary, or Kunthankulam, is an important human-made wetland in the Tirunelveli district of Tamil Nadu. The Ramsar Site consists of irrigation tanks interconnected by a network of canals built a few centuries ago and fed by rivers from the Western Ghats Mountain range. Koonthankulam is the largest reserve for breeding resident and migratory water birds in South India. The water from the wetland is not used for drinking purposes. Koonthankulam plays the primary role of buffering by acting as a sponge during events of floods and extreme rainfall and is a major source of groundwater recharge. There is significant runoff from the surrounding catchment area, and the wetland acts as a sink for sediments

Tamil Nadu

Designation Criteria	Wetland Type	Protection Status	Management Authority
3, 4, 5, 6	Pond	Bird Sanctuary	Tamil Nadu Forest Department



LOCATION
Tirunelveli District

AREA
72.04 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

- Food for humans
- Fresh water
- Maintenance of hydrological regimes
- Erosion protection
- Biodiversity
- Spiritual and inspirational
- Hazard reduction
- Climate regulation
- Pollination
- Soil formation
- Recreation and tourism
- Nutrient cycling

Species of global conservation significance

Notable — Spot-billed Pelican, Painted Stork, Black-headed Ibis, Greater Flamingo

THREATS

Significance

Low | Medium | High

- Encroachment
- Water release
- Water abstraction
- Fishing and harvesting aquatic resources
- Recreational and tourism activities
- Climate change and severe weather (droughts, storms and flooding)
- Drainage
- Pollution
- Livestock farming and ranching
- Invasive non-native species

“

FOR US, PROTECTION OF ENVIRONMENT IS AN ARTICLE OF FAITH. WE HAVE NATURAL RESOURCES BECAUSE OUR PREVIOUS GENERATIONS PROTECTED THESE RESOURCES. WE MUST DO THE SAME FOR OUR FUTURE GENERATIONS.

”

- Hon’ble Prime Minister Shri Narendra Modi

“

WE HAVE TO MOVE TOWARDS 'ZERO-DEFECT AND ZERO EFFECT. ZERO DEFECT IN PRODUCTION WITH NO ADVERSE EFFECT ON THE ENVIRONMENT.

”

- Hon’ble Prime Minister Shri Narendra Modi

© Tamil Nadu Forest Department

SPECIES RICHNESS

BIRDS	177
REPTILES & AMPHIBIANS	44
PLANTS	118+
INSECTS	97

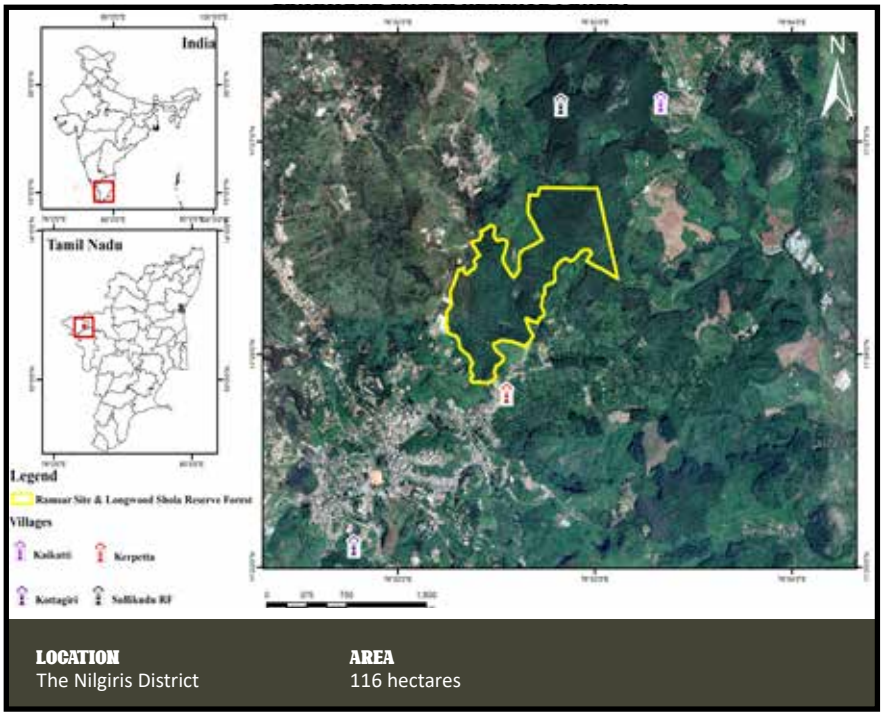
Longwood Shola Reserve Forest

Date of designation
May 24, 2023

The Longwood Shola Reserve Forest lies near the town of Kothagiri, adjacent to the eastern slopes of the Nilgiri mountain range. The Site features intermittent freshwater marshes and streams nested within a "shola" (a tropical montane forest of southern India usually found in patches separated by grasslands). This Site is the only natural shola forest remaining in the vicinity of Kothagiri and has very high species endemism. The Longwood Shola Reserve Forest harbours a variety of endemic flora and fauna. It helps to protect the surrounding area from adverse climate conditions and also controls soil erosion. The site is a major water source for Kotagiri and forms an integral part of the fragile Nilgiri ecosystem. The water from the Ramsar Site is used for agricultural purposes in the nearby villages. Thus, the Ramsar Site is important in providing food security and livelihood for the local people.

Tamil Nadu

Designation Criteria	Wetland Type	Protection Status	Management Authority
1, 2, 3, 4	Freshwater marsh	Reserve Forest	District Forest Officer, Nilgiris Forest Division



LOCATION
The Nilgiris District

AREA
116 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

Nature observation and nature-based tourism

Drinking water for humans and/or livestock

Groundwater recharge and discharge

Carbon sequestration

Nutrient cycling

Local climate regulation

Scientific and educational

Accumulation of organic matter

Biodiversity

Source of water for agriculture and industry

Pollination

Species of global conservation significance

Notable	Nilgiri Chilappan, Nilgiri Sholakili, Blue Hawklet, Nilgiri Torrent Dart, Stream Ruby, Wayanad Bambootail
Endangered	*Psychotria nilgiriensis var. astephana, Actinodaphne bourneae, Cinnamomum wightii*
Vulnerable	Nilgiri Woodpigeon, *Cayratia pedata*, Kurunjaval

THREATS

Significance

Low

Medium

High

Drainage

Roads and railroads

Water releases

Canalisation and river regulation

Human interference and disturbance

Commercial and industrial areas

Tourism and recreation activities

Pollution

Logging and wood harvesting

Hunting and collecting terrestrial animals

Invasive non-native/ alien species

Tamil Nadu Forest Department

Nanjarayan Bird Sanctuary

SPECIES RICHNESS

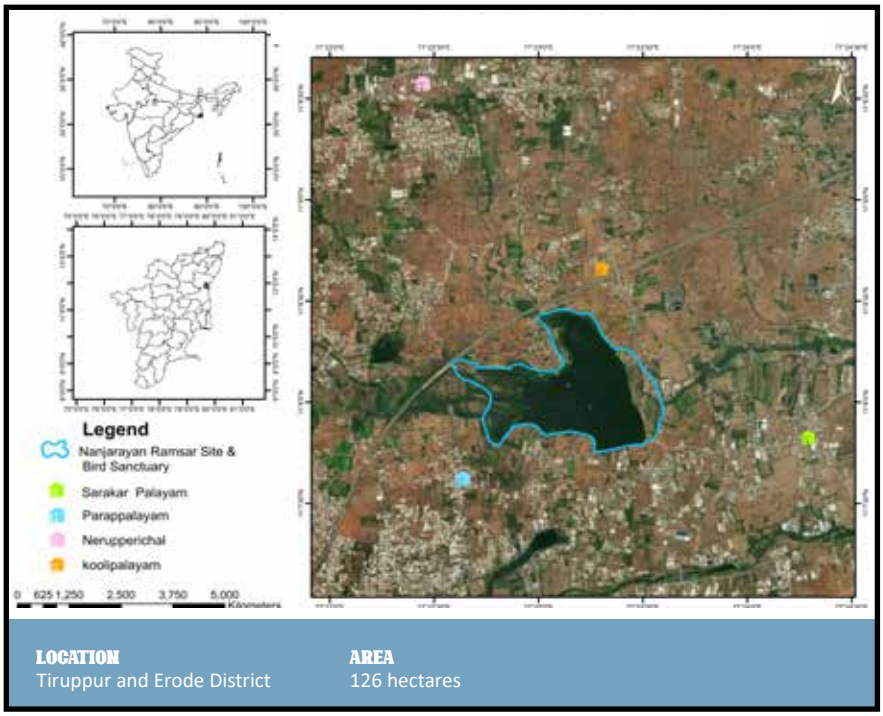
BIRDS	191
MAMMALS	11
REPTILES & AMPHIBIANS	28
PLANTS	77
BUTTERFLIES	87

Date of designation
January 16, 2024

The Nanjarayan Bird Sanctuary is situated in the northeastern part of Uthukuli Taluk, in Tiruppur District, Tamil Nadu. The primary water source for the reservoir is the Nallar River. Named after King Nanjarayan, who renovated the tank 400 years ago to enhance agricultural practices, the sanctuary provides a vital feeding and nesting area for resident bird species. It is also a crucial feeding ground for migratory birds during their seasonal journeys. Furthermore, this wetland is an important water source for local agriculture and significantly contributes to groundwater recharge. The local community has established a strong collaboration with the forest department to manage and sustainably protect the wetland and its surrounding environment.

Tamil Nadu

Designation Criteria	Wetland Type	Protection Status	Management Authority
2, 3, 4, 6	Permanent freshwater lakes	Bird Sanctuary	Tamil Nadu Forest Department, Tiruppur District



LOCATION
Tiruppur and Erode District

AREA
126 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

Food for humans

Drinking water for humans and/or livestock

Groundwater recharge and discharge

Storage and delivery of water as part of water supply systems for agriculture and industry

Local climate regulation/ buffering of change

Biodiversity

Regulation of greenhouse gases, temperature, precipitation and other climactic processes

Storage, recycling, processing and acquisition of nutrients

Species of global conservation significance

Notable	Black-tailed Godwit, Oriental Darter, Painted Stork, Spot-billed Pelican, Asian Woollyneck, Bengal Monitor Lizard, Indian Flying Fox
Vulnerable	River Tern, Indian Flapshell Turtle

THREATS

Significance

Low | Medium | High

Canalization and river regulation

Drainage

Aquaculture

Dams and water management/use

Pollution

Invasive non-native/ alien species

Jayshree Vencatesan

Pallikaranai Marsh Reserve Forest

SPECIES RICHNESS

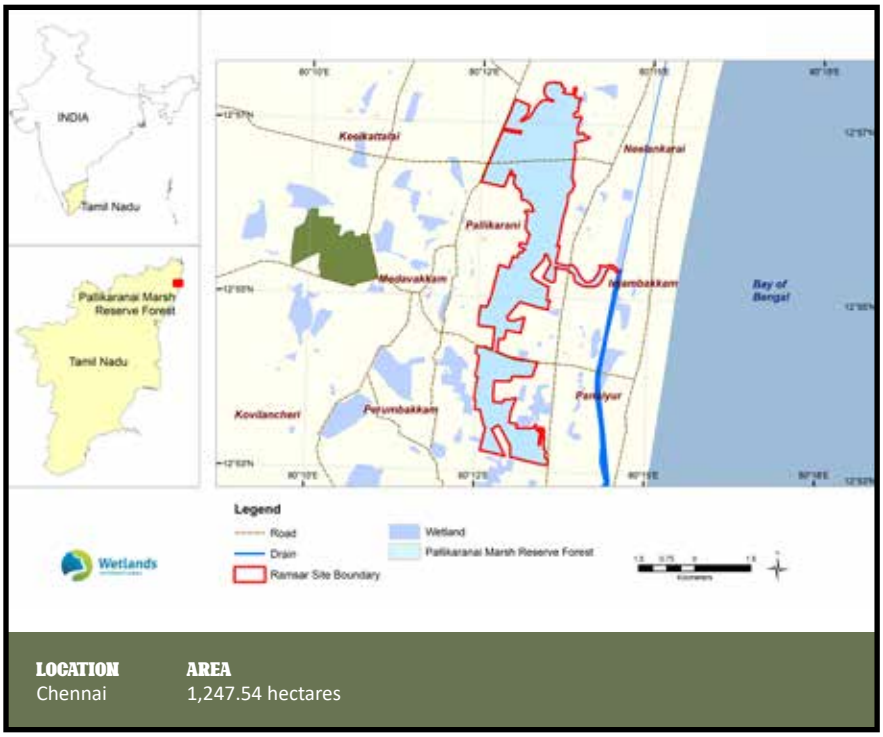
BIRDS	165
FISHES	50
MAMMALS	10
REPTILES & AMPHIBIANS	31
PLANTS	114

Date of designation
April 8, 2022

Pallikaranai Marsh is located in the Kanchipuram district and is Chennai's last remaining natural wetlands. It is locally known as Kazhuveli which means a marsh or waterlogged area. The adjoining wetlands discharge water as an overflow or through a drainage network. About 54 large and small satellite human-made wetlands are located around Pallikaranai marsh, which release surplus water during monsoons. The wetland situated serves as an aquatic buffer of the flood-prone Chennai and Chengalpattu districts, soaking up water during wet periods and releasing it during dry spells. Pallikaranai also serves as a foraging ground for migratory birds. Inhabitants of seven surrounding villages partially depend on the wetland for their subsistence.

Tamil Nadu

Designation Criteria	Wetland Type	Protection Status	Management Authority
1, 2, 3, 4, 6, 7, 8	Intertidal marsh, saline & brackish water marsh	Reserve forest	Tamil Nadu State Wetland Authority



LOCATION
Chennai

AREA
1,247.54 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

Buffers floods

Nutrient retention

Carbon sink

Tourism & recreation

Scientific and educational importance

Supports biodiversity

Species of global conservation significance

Notable	Purple Swamphen, Black-winged Stilt, Spot-billed Pelican, Black-headed Ibis
Endangered	Black-bellied Tern, Great Knot
Vulnerable	Indian Flap-shelled Turtle, Greater Spotted Eagle, Common Pochard

THREATS

Significance

Low

Medium

High

Pollution

Encroachment

Invasive species

Hydrological regime alteration

Harsh Ganapathi

Pichavaram Mangrove

SPECIES RICHNESS

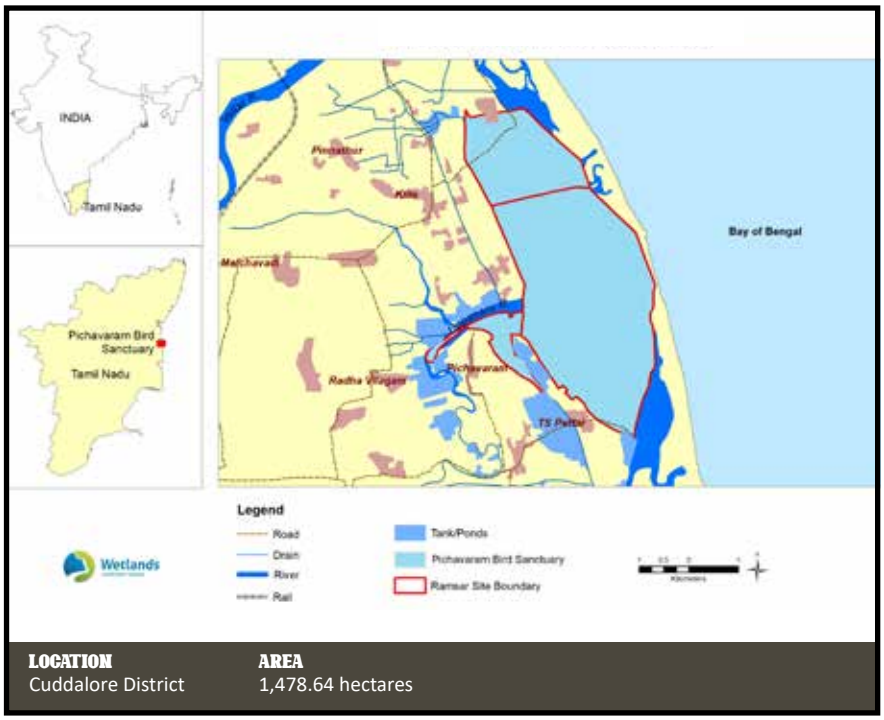
BIRDS	115
FISHES	200
MAMMALS	16
PLANTS	86

Date of designation
April 8, 2022

Pichavaram mangrove is located between two prominent estuaries, the Vellar and the Coleroon. The Vellar-Coleroon estuarine complex forms the Killai backwater and Pichavaram mangroves. The Pichavaram forest offers waterscape, backwater cruises, and another very rare sight – the mangrove forest trees that are permanently rooted in a few feet of water. Pichavaram support unique diversity of flora and fauna. The mangrove ecosystem acts as a bio-shield during natural disasters, holds and stabilizes shorelines, retards erosion, acts as a buffer zone between land and sea, and helps adapt to climate change. The wetland supports livelihoods of around 1000 families through fisheries and are revered by the local communities. According to the Sthala Purana, the Sthala Vriksham in Chidambaram Lord Nataraja Temple was the mangrove species Excoecaria agallocha commonly known as Tillai, worshipped since the 18th Century. The region used to be called Tillai Vanam.

Tamil Nadu

Designation Criteria	Wetland Type	Protection Status	Management Authority
1, 2, 3, 4, 5, 6, 7, 8	Intertidal Forested Wetland	Reserve Forest	Tamil Nadu Forest Department



LOCATION
Cuddalore District

AREA
1,478.64 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

- Food for humans
- Fresh water for drinking, irrigation
- Hazard reduction
- Erosion protection
- Nutrient cycling
- Scientific and educational
- Historical and archaeological
- Carbon sequestration
- Biodiversity
- Nature based tourism

Species of global conservation significance

Notable	Spot-billed Pelican, Black-necked Stork, White-necked Stork, White Ibis, Asian Dowitcher, Oriental Darter
Critically Endangered	Great White-bellied Heron, Spoon-billed Sandpiper
Endangered	Spotted Greenshark
Vulnerable	*Tecticornia Indica Ciliolata, Tecticornia Indica Indica, Ditylenchus Dipsaci*, Smooth-coated Otter, Bonnet Macaque, Olive Ridley Turtle

THREATS

Significance

Low | Medium | High

- Encroachment
- Livestock farming and ranching
- Mining and quarrying
- Hunting and collecting terrestrial animals
- Pollution
- Salinization
- Gathering terrestrial plant, logging and wood harvesting
- Fishing and harvesting aquatic resources
- Land conversion
- Invasive non-native species

Point Calimere Wildlife and Bird Sanctuary

SPECIES RICHNESS

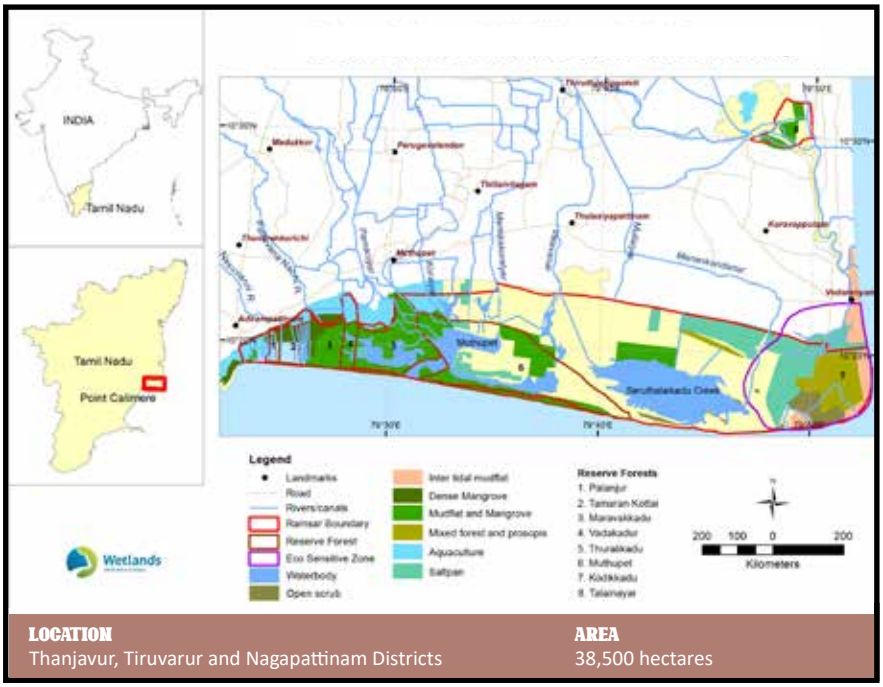
BIRDS	260
FISHES	70
MAMMALS	14
REPTILES & AMPHIBIANS	37
PLANTS	364

Date of designation
August 19, 2002

Point Calimere Wildlife & Bird Sanctuary is located along the Palk Strait in three districts of Tamil Nadu, namely Nagapattinam, Tiruvarur, and Thanjavur. This site is a mosaic of mangroves, mudflats, tropical dry evergreen forest, tidal creeks and lagoon, beach, dunes, backwaters, grassland, salt pans, fishing canals, and aquaculture. The Point Calimere region was first identified as an area of high significance in the conservation of birds by late Dr Salim Ali in 1962. The wetland coast has been a regular nesting site of the endangered Olive Ridley Turtle. Dolphins and Dugongs are frequently sighted along the wetland coast. The livelihoods of the local communities are intrinsically linked to the wetland. The locals accrue their revenue from its natural resources, especially fish, salt products, firewood, forest produce, and grazing lands for livestock. The Point Calimere Wildlife and Bird Sanctuary, along with the great Vedaranyam Swamp and the mangrove forests of Thalainayar Reserve Forest, act as bioshield during tsunamis, floods, and cyclones.

Tamil Nadu

Designation Criteria	Wetland Type	Protection Status	Management Authority
2, 5, 6, 8	Mangrove swamps, lagoons, mudflats, salt pans	Part notified as Wildlife Sanctuary and Reserve Forest	Tamil Nadu State Wetland Authority



LOCATION
Thanjavur, Tiruvarur and Nagapattinam Districts

AREA
38,500 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

Ecotourism hotspot

Scientific and educational importance

- Wintering ground for waterbirds
- Nesting site for Olive Ridley Turtles
- Largest Blackbuck population in Tamil Nadu
- ~200 species of medicinal plants

Blue Carbon sink 120 km² of Muthupet mangrove wetland

~100 MT annual fish catch

Sites of historical importance such as Ramar Padam, Modi mandapam and Chola lighthouse

Nearly 40 km² under salt production

Species of global conservation significance

Notable	Blackbuck, Spot-billed Pelican
Critically Endangered	Spoon-billed Sandpiper, Hawksbill Turtle
Endangered	Green Turtle
Vulnerable	Star Tortoise

THREATS

Significance

Low | Medium | High

Salinization

Siltation

Pollution from Settlements

Illegal aquaculture and unsustainable fish harvest

SPECIES RICHNESS

BIRDS	250
FISHES	69
PLANTS	110+

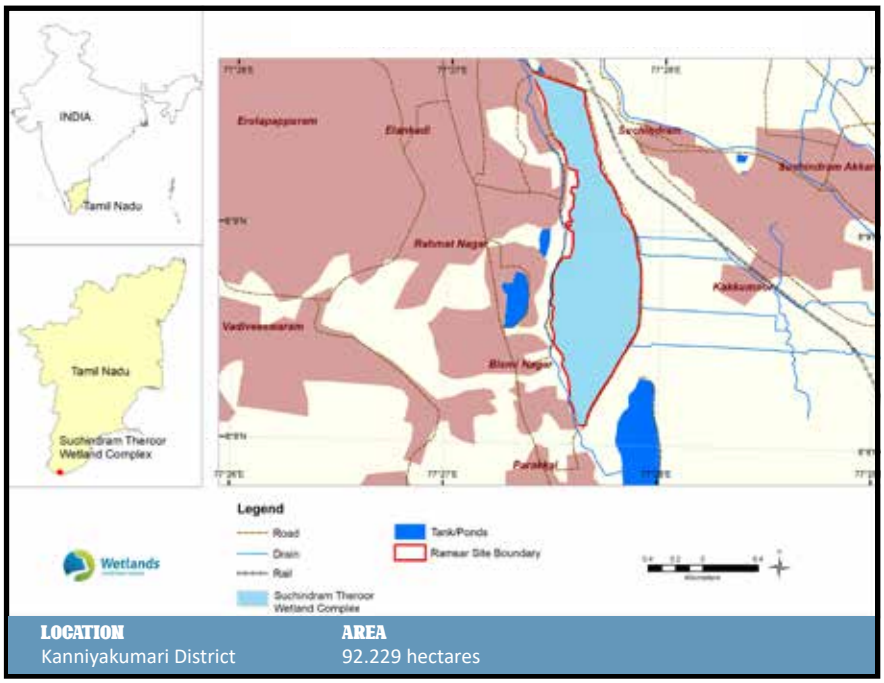
Suchindram Theroor Wetland Complex

Date of designation
April 8, 2022

Suchindram-Theroor-Wetland Complex is located in the Kanyakumari district of Tamil Nadu. The Theroor and Suchindrum are the two human-made tanks created primarily for irrigation. These two wetlands receive water from the Kodayar river basin in the Western Ghats. The wetland complex has a diverse habitat, including large and deep reservoirs with many inlets and surrounding agricultural fields, which provide suitable bird nesting and foraging habitats. This diversity of habitats enables the wetland to act as an important breeding site for some important bird species. Suchindram Theroor have five temples and one church along its bank, adding to its spiritual significance. While agriculture is practiced around the wetland, no commercial fishing activities are undertaken. Theroor and Suchindram also act as a sponge during events of floods and extreme rainfall and are a major source of groundwater recharge.

Tamil Nadu

Designation Criteria	Wetland Type	Protection Status	Management Authority
2, 3, 4, 5, 6, 7	Water storage areas/ Reservoirs	Conservation Reserve	Tamil Nadu Forest Department



LOCATION
Kanniyakumari District

AREA
92.229 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

- Food for humans
- Fresh water for drinking, irrigation
- Climate regulation
- Maintenance of hydrological regimes (groundwater recharge, water storage and delivery system)
- Soil formation
- Spiritual and inspirational
- Scientific and educational
- Carbon sequestration
- Nature based tourism
- Biodiversity
- Nurtient cycling

Species of global conservation significance

Notable	*Indotristicha ramosissima*, Jungle Myna, Common Myna, Blyth's Reed Warbler, Common Sandpiper, Common Kingfisher, *Commelina caroliniana*
Endangered	*Tephrosia purpurea, Tringa guttifer,* Spotted Greenshank
Vulnerable	River Tern

THREATS

Significance

Low | Medium | High

- Recreational and tourism activities
- Livestock farming and ranching
- Drainage
- Storms and flooding
- Fishing and harvesting aquatic resources
- Invasive non-native species
- Non-timber crops
- Droughts
- Pollution
- Water release
- Gathering terrestrial plants
- Encroachment

Tamil Nadu State Wetland Authority

SPECIES RICHNESS

BIRDS **104**

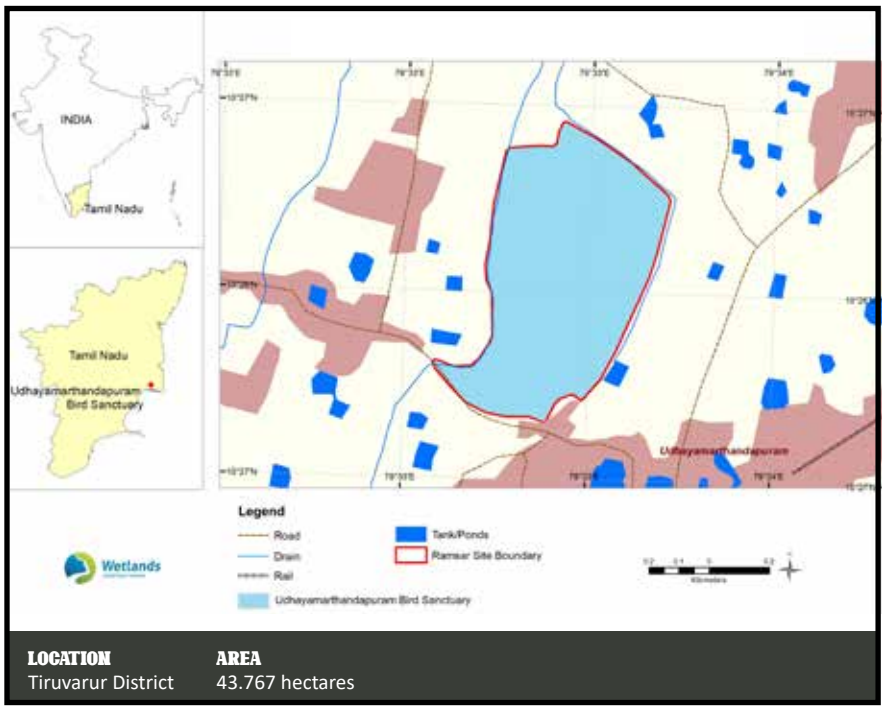
Udhayamarthandapuram Bird Sanctuary

Date of designation
April 8, 2022

Udayamarthandapuram is one of the important Bird Sanctuaries in Tamil Nadu, located one km off East Coast Road connecting Chennai and Kanyakumari. The primary sources of water for the wetland are rainfall, the surrounding runoff from the catchment area & the Mettur dam. Udhayamarthandapuram is an important roosting site for local migrants and resident waterbirds and feeding and wintering grounds for the long distant migrant water bird such as Ducks and Waders. The Ramsar Site provides the surrounding communities with fresh water for domestic usage, livestock and agriculture as it stores the floodwaters during the monsoon and maintains surface water flow during drier periods. It also helps replenish groundwater and feeds surrounding smaller wetlands and agricultural land.

Tamil Nadu

Designation Criteria	Wetland Type	Protection Status	Management Authority
2, 3, 4, 5	Water storage areas/ Reservoirs	Bird Sanctuary	Tamil Nadu Forest Department



LOCATION
Tiruvarur District

AREA
43.767 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

- Food for humans
- Fresh water for drinking, irrigation
- Maintenance of hydrological regimes (groundwater recharge, water storage and delivery system)
- Scientific and educational
- Erosion protection
- Coastal shoreline stabilization
- Water storage and network
- Soil formation
- Nature based tourism
- Biodiversity
- Climate regulation
- Nurtient cycling
- Flood control

Species of global conservation significance

Notable	Oriental Darter, Glossy Ibis, Grey Heron, Eurasian Spoonbill, Eurasian Wigeon, Northern Pintail
Endangered	*Tephrosia purpurea*

THREATS

Significance

Low | Medium | High

- Recreational and tourism activities
- Fishing and harvesting aquatic resources
- Pollution
- Land conversion
- Livestock farming and ranching
- Water release
- Invasive non-native species
- Droughts
- Drainage
- Salinization
- Water abstraction
- Encroachment
- Storms and flooding
- Habitat shifting and alteration

Suchita Awasthi

SPECIES RICHNESS

BIRDS ..... **118+**

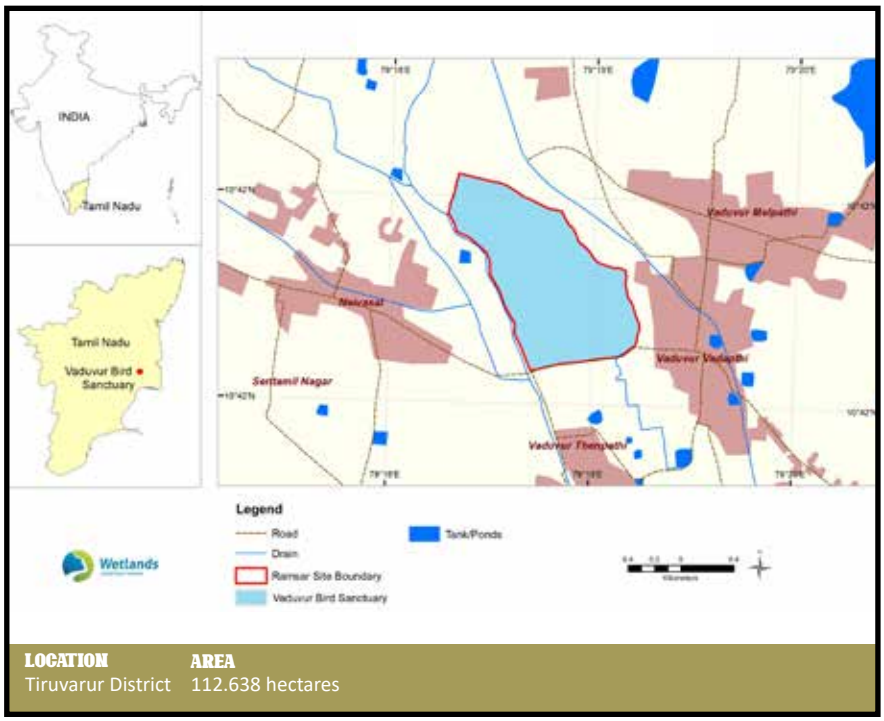
Vaduvur Bird Sanctuary

Date of designation
April 8, 2022

Vaduvur bird sanctuary is a large human-made irrigation tank located in the Thiruvarur district of Tamil Nadu. The wetland is an abode for migratory birds as it provides a suitable environment for food, shelter, and breeding ground. The surrounding vast agricultural fields and abundance of aquatic insects attract numerous birds. Vaduvur is part of the Cauvery delta and hence is dependent on the release of water from the Mettur dam. Apart from providing suitable habitats for plants and animals, Vaduvur provides water for irrigation, a buffer from extreme hydrological events such as drought and floods, influences the microclimate, and expands the range of recreational opportunities. Sri Kodandaramaswamy temple, located in Vaduvuragraharam village just opposite the eastern end of the wetland, is revered by the local people.

Tamil Nadu

Designation Criteria	Wetland Type	Protection Status	Management Authority
2, 3, 4, 5, 6	Water storage area/ Reservoir	Bird Sanctuary	Tamil Nadu Forest Department



LOCATION
Tiruvarur District

AREA
112.638 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

- Food for humans
- Fresh water for drinking, irrigation
- Maintenance of hydrological regimes (groundwater recharge, water storage and delivery system)
- Biological control of pests and disease
- Flood control
- Soil formation
- Climate regulation
- Pollination
- Nature based tourism
- Biodiversity
- Nutrient cycling
- Erosion protection

Species of global conservation significance

Notable	Northern Pintail, Asian Openbill Stork, African Darter, Black-headed Ibis, Grey Heron, Purple Heron
Endangered	*Tephrosia purpurea, Achyranthes aspera*

THREATS

Significance

Low | Medium | High

- Recreational and tourism activities
- Livestock farming and ranching
- Drainage
- Storms and flooding
- Fishing and harvesting aquatic resources
- Water release
- Salinization
- Habitat shifting and alteration
- Pollution
- Invasive non-native species
- Water abstraction
- Land conversion
- Droughts
- Encroachment

SPECIES RICHNESS

BIRDS **68**

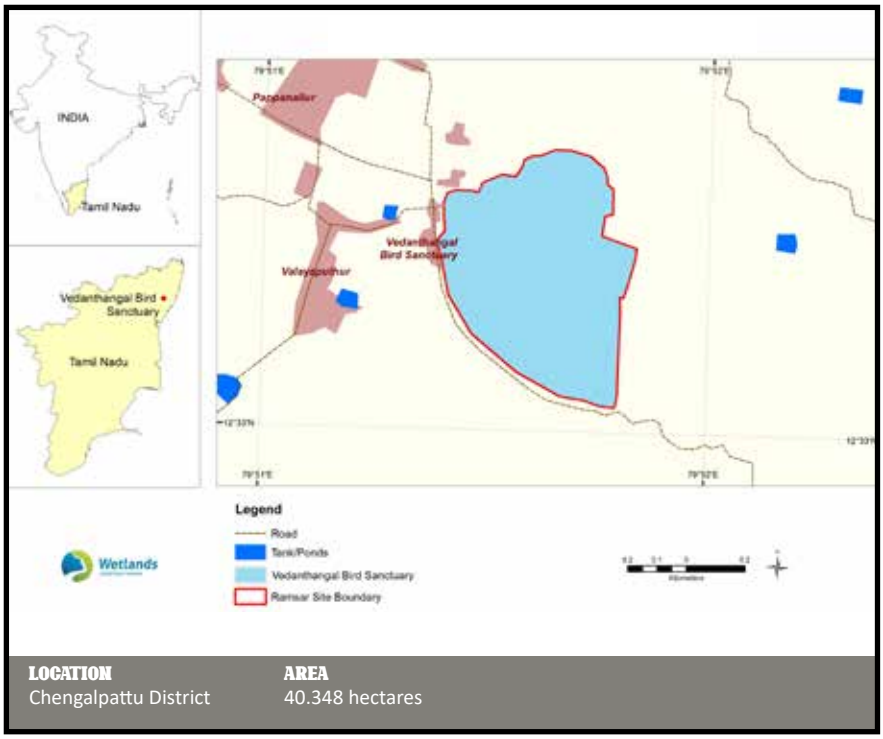
Vedanthangal Bird Sanctuary

Date of designation
April 8, 2022

Vedathangal, located in the Chengalpattu district of Tamil Nadu, is one of the oldest bird-protected areas in the country. The wetland is a people-protected waterbird area, the history of which goes back to centuries where locals have been protecting this heronry and, in return, have benefited from the manure-rich water from the wetland, which increases the agriculture yield multi-folds. At the end of the 18th century, the local villagers of Vedanthangal obtained a 'Cowle' from the first Collector of Chengalpet, recognizing their right to safeguard the nesting colony in their tank from those seeking to shoot the birds. In 1936, the Collector officially recognized the place as a protected area. Vedathangal also plays a vital role in nutrient cycling and groundwater recharge, influencing irrigation activities in the immediate vicinity. Within the immediate periphery of the sanctuary, there is an old Amman temple that attracts a number of devotees.

Tamil Nadu

Designation Criteria	Wetland Type	Protection Status	Management Authority
2, 3, 4, 5, 6, 7, 8	Intertidal forested wetland	Bird Sanctuary	Tamil Nadu Forest Department



LOCATION
Chengalpattu District

AREA
40.348 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

- Food for humans
- Biological control of pests and disease
- Fresh water for drinking, irrigation
- Pollination
- Maintenance of hydrological regimes (groundwater recharge, water storage and delivery system)
- Nutrient cycling
- Sediment retention
- Hazard reduction
- Climate regulation
- Spiritual and inspirational
- Carbon sequestration
- Biodiversity
- Nature based tourism
- Erosion protection
- Flood control

Species of global conservation significance

Notable	Spot-billed Pelican, Asian Openbill Stork, Painted Stork, Greater Spotted Eagle
Vulnerable	Mrigal Carp, Greater Spotted Eagle

THREATS

Significance

Low | Medium | High

- Encroachment
- Fishing and harvesting aquatic resources
- Non-timber crops

Vellode Bird Sanctuary

SPECIES RICHNESS

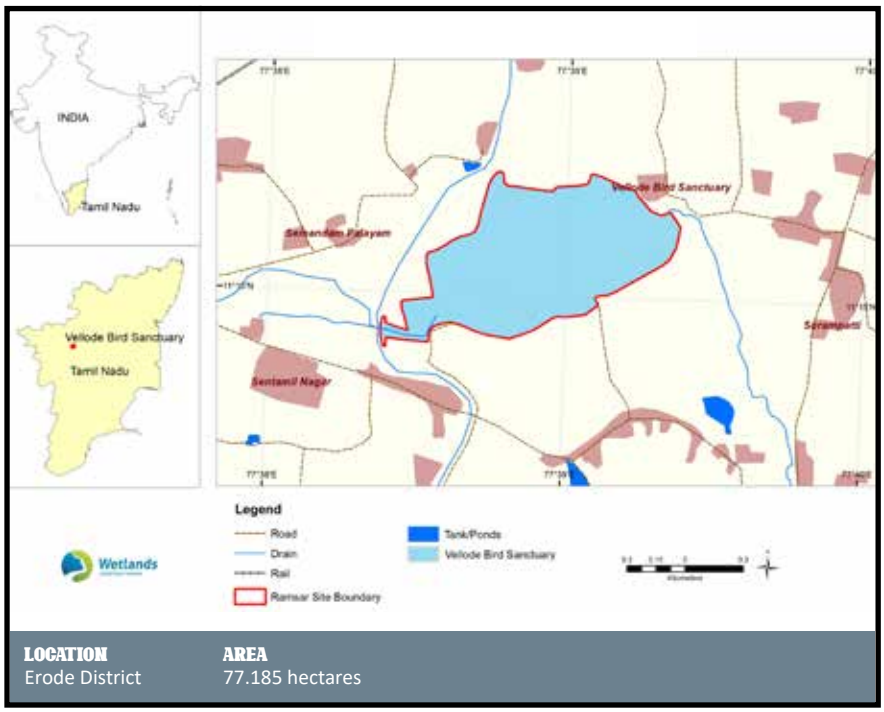
BIRDS	148
FISHES	12
MAMMALS	5
REPTILES & AMPHIBIANS	18
PLANTS	146

Date of designation
April 8, 2022

Vellode Bird Sanctuary, also known as Periyakulam Yeri, is a human-made tank located in the Erode District of Tamil Nadu. The wetland supports a large number of resident and migratory birds due to the abundant food resources it provides from neighbouring agricultural fields. Vellode is an important staging and breeding ground for migratory and resident waterbirds on the Central Asian Flyway. The wetland provides drinking water and fish to local communities, and the manure-rich water from the wetland increases the agriculture yield multi-folds. The wetland plays the primary role of buffering by acting as a sponge during events of floods and extreme rainfall and is a significant source of groundwater recharge. An old Karupparayan temple located in the immediate periphery of the Vellode Bird Sanctuary attracts a number of devotees.

Tamil Nadu

Designation Criteria	Wetland Type	Protection Status	Management Authority
2, 3, 5	Freshwater marsh, water storage area/reservoir	Bird Sanctuary	Tamil Nadu Forest Department



LOCATION
Erode District

AREA
77.185 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

Food for humans

Fresh water for drinking, irrigation

Maintenance of hydrological regimes (groundwater recharge, water storage and delivery system)

Biological control of pests and disease

Climate regulation

Nutrient cycling

Pollination

Soil formation

Nature based tourism

Biodiversity

Erosion protection

Species of global conservation significance

Notable	Grey Heron, Oriental Darter, Asian Openbill Stork, Spot-billed Pelican, River Tern, Black-headed Ibis, Northern Shoveler
Endangered	*Tephrosia purpurea*
Vulnerable	River Tern, *Cayratia pedata, Commelina tricolor*

THREATS

Significance

Low

Medium

High

Recreational and tourism activities

Livestock farming and ranching

Vegetation clearance/land conversion

Storms and flooding

Droughts

Invasive non-native species

Salinization

Fishing and harvesting aquatic resources

Pollution

Water release

Water abstraction

Encroachment

© Tamil Nadu State Wetland Authority

SPECIES RICHNESS

BIRDS	250
PLANTS	5

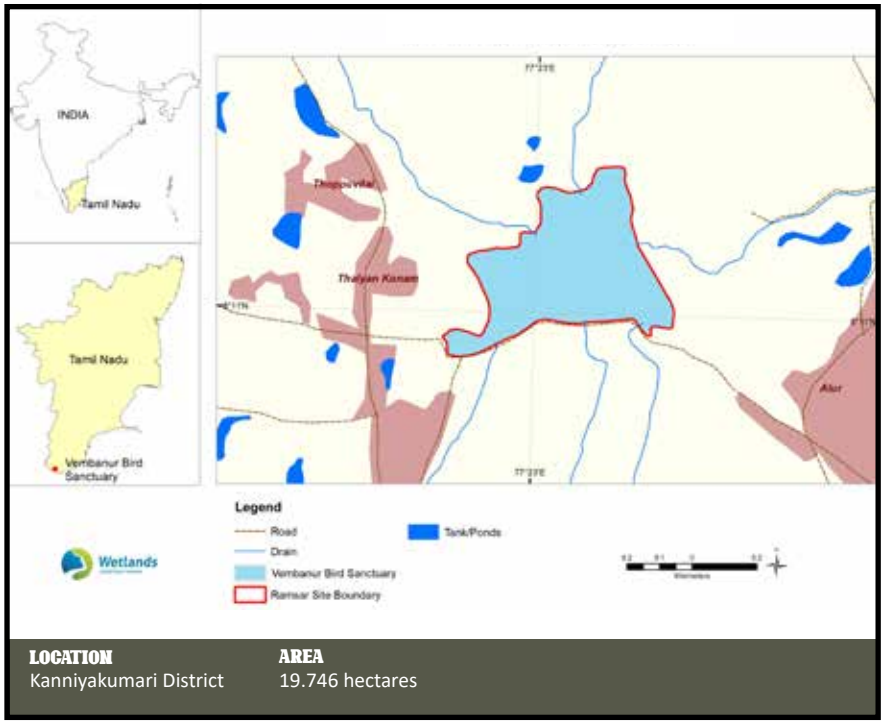
Vembannur Wetland Complex

Date of designation
April 8, 2022

Vembannur is a human-made perennial irrigation tank in Kanniyakumari District of Tamil Nadu. According to legend, the tank was built during the reign of Veeranarayana, a Pandyan king. The tank and the Therrakal canal were built to draw water for irrigation from the Pazhayar river. Vembannur provides suitable habitat to several waterbird species. The wetland supports more than 2,000 hectares of agricultural land on which more than 1,000 families depend. It also supplies fish and drinking water to local communities while moderating the impacts of drought and floods, influencing the local microclimate, enhancing the beauty of the landscape, and providing many recreational opportunities. Four temples and three mosques located in the vicinity of the wetland add to Vembannur's spiritual significance.

Tamil Nadu

Designation Criteria	Wetland Type	Management Authority
2, 3, 4, 6	Water storage area/reservoir	Tamil Nadu Forest Department



LOCATION
Kanniyakumari District

AREA
19.746 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

Food for humans

Fresh water for drinking, irrigation

Accumulation of organic matter

Maintenance of hydrological regimes (groundwater recharge, water storage and delivery system)

Biological control of pests and disease

Pollination

Nature based tourism

Climate regulation

Hazard reduction

Carbon sequestration

Biodiversity

Nutrient cycling

Sediment retention

Erosion protection

Species of global conservation significance

Notable	Garganey, Oriental Darter, Spot-billed Pelican, Black-headed Ibis, Northern Pintail, Common Teal, Spot-billed Duck
Endangered	*Tephrosia purpurea, Tringa guttifer*
Vulnerable	River Tern

THREATS

Significance

Low | Medium | High

Recreational and tourism activities

Livestock farming and ranching

Drainage

Hazard (Drought, storm, flood)

Fishing and harvesting aquatic resources

Invasive non-native species

Salinization

Water release

Water abstraction

Land conversion

Pollution

Encroachment

Dhritiman Mukherjee

SPECIES RICHNESS

FISHES	50+
PLANTS	13

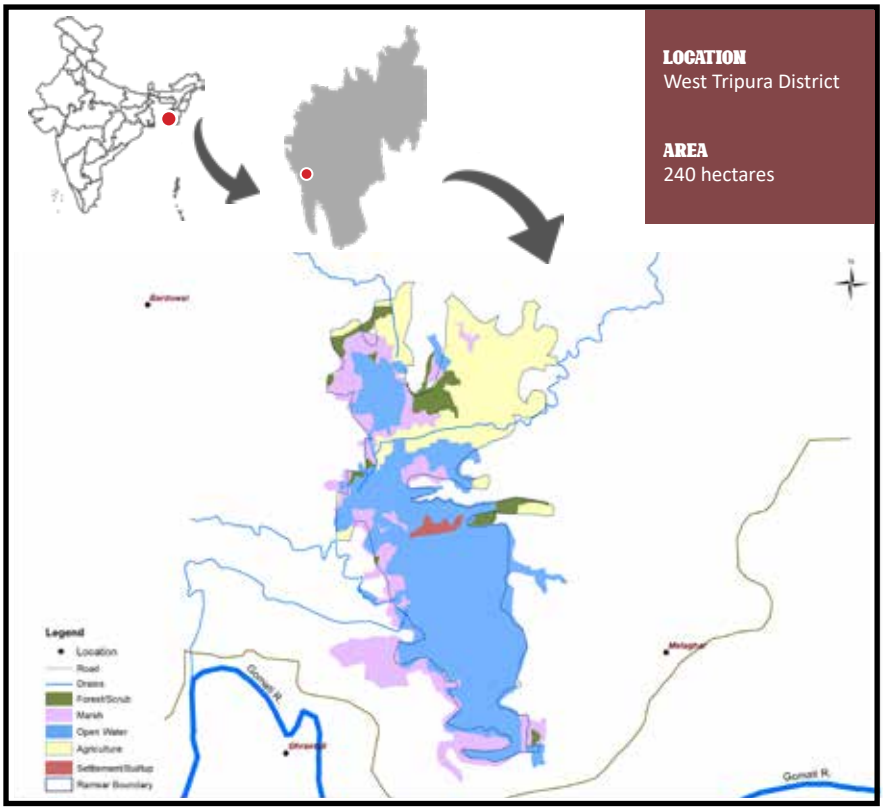
Rudrasagar Lake

Date of designation
November 8, 2005

Rudrasagar is located in the Melaghar area under the Sonamura sub-division of Sepahijala district of Tripura. This floodplain wetland of river Gumti receives inflows from three perennial streams: Oacherra, Durlavnaraya cherra, and Kemtalicherra. The wetland is regularly flooded with 4-5 times the annual peak, assisting in groundwater recharge. Rudrasagar is famous for 'Neermahal,' the Royal Palace of Agartala, located amid the lake. Maharaja Bir Bikram Kishore Manikya, the ruler of Tripura in pre-independent India, constructed the Palace in the northern part of the wetland and used it as a summer resort. The surrounding seasonal wetlands are used for paddy cultivation. Over 2,000 families derive livelihoods from fisheries and agriculture-related activities in the wetland. Rudrasagar supports large congregations of waterbirds, both resident and migratory.

Tripura

Designation Criteria	Wetland Type	Management Authority
2, 3, 8	Freshwater lake & marshes	Department of Fisheries, Government of Tripura



VALUES AND BENEFITS

Significance

Low | Medium | High

Provides medicinal and ornamental resources

Freshwater for domestic use and irrigation

Buffers floods

Cultural services valued at 33000 US dollars.

Neermahal is a tourist attraction, having 3,00,000+ visitors annually

Source of fisheries

Species of global conservation significance

Critically Endangered	Baer's Pochard
Endangered	Three-striped Roofed Turtle, Greater Adjutant
Vulnerable	Common Pochard, Lesser Adjutant, Common Carp, Wallago Catfish

THREATS

Significance

Low

Medium

High

Hydrological regime alteration

Encroachment

Siltation

Invasive species

Regime fragmentation by roads

Pollution/disposal of urban sewage

Chandan Pratik

SPECIES RICHNESS

BIRDS	80
FISHES	45
PLANTS	119

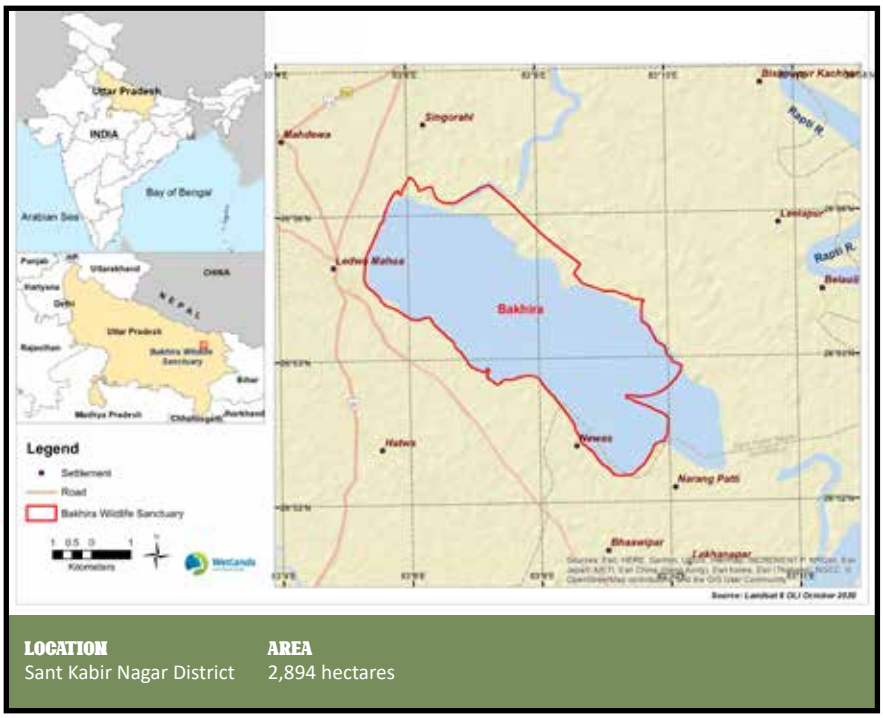
Bakhira Wildlife Sanctuary

Date of designation
June 29, 2021

Bakhira Wildlife Sanctuary is a freshwater wetland located 44 km from Gorakhpur Town in Sant Kabir Nagar District of Uttar Pradesh. Forming the core of the Sanctuary, the Ramsar site is one of the prominent wetlands of the Gangetic Basin. The sanctuary and the wetland have drawn their name from the village Bakhira in the vicinity. The terrain of the wetland is primarily flat with an average elevation of 100 meters above mean sea level, characteristic of a typical terai landscape. Precipitation and inflows from river Ami are the wetland's primary water sources. The site is known to support the breeding population of purple moorhens and act as a congregation site for Sarus cranes.

Uttar Pradesh

Designation Criteria	Wetland Type	Protection Status	Management Authority
2, 3, 4, 8	Freshwater marsh	Wildlife Sanctuary	Uttar Pradesh Forest Department



LOCATION
Sant Kabir Nagar District

AREA
2,894 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

Groundwater recharge

Nutrient cycling

Food for humans - fishes

Supports biodiversity

Nature based tourism

Species of global conservation significance

Notable	Purple Swamphen, Sarus Crane
Endangered	Egyptian Vulture
Vulnerable	Swamp Francolin, Greater Spotted Eagle, Common Pochard, Sarus Crane

THREATS

Significance

Low

Medium

High

Invasive species

Drainage

Unsustainable fishing and harvesting of aquatic resources

Haiderpur Wetland

SPECIES RICHNESS

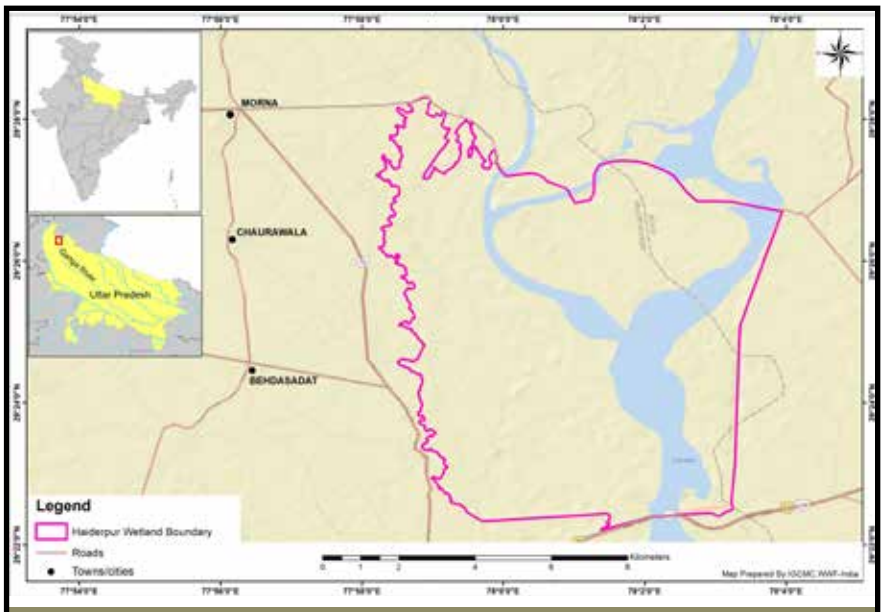
BIRDS	300
FISHES	40
MAMMALS	10

Date of designation
April 13, 2021

Haiderpur is a floodplain wetland of River Ganga located near the Bijnor Barrage, falling in Muzaffarnagar and Bijnor districts of Uttar Pradesh. Towards the east of the wetland is the river Ganga, to the west is Nizampur and Haiderpur Reserved Forest, and Bijnor Barrage on the south of the wetland. The wetland came into existence in 1984 after the construction of Madhya Ganga Barrage on river Ganga, about 10 km west of Bijnor city, and is located within the boundaries of Hastinapur Wildlife Sanctuary. It comprises various deep upstream reservoirs, shallow flooded land, and stretches of river (Ganga and Solani). This diverse aquatic habitat thrives with life forms and provides a significant abode, especially for migratory waterbirds. Haiderpur is not only significant ecologically but also supports the local communities which depend on the wetland for fisheries and livelihood options like water chestnut cultivation.

Uttar Pradesh

Designation Criteria	Wetland Type	Protection Status	Management Authority
2, 3, 4, 5, 6	Water storage area/ reservoir	Wildlife Sanctuary	Uttar Pradesh Forest Department



LOCATION
Bijnor Barrage between Muzaffarnagar and Bijnor Districts

AREA
6,908 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

Socio cultural significance

Source of drinking water

Water Chestnut cultivation

Source for irrigation

Capture fisheries

Groundwater recharge

Species of global conservation significance

Notable	Sarus Crane, Indian Skimmer, Smooth-coated Otter, Swamp Deer, Greylag Goose, Bar-headed Goose
Critically Endangered	Gharial
Endangered	Indian Hog Deer, Indian Narrow-headed Softshell Turtle, Steppe Eagle, Indian Skimmer, Black-bellied Tern
Vulnerable	Marsh Crocodile, Lesser White-fronted Goose, Tawny Eagle, Common Pochard

THREATS

Significance

Low | Medium | High

Catchment Degradation

Flow fluctuations

Excessive use of fertilizer and pesticides in Water Chestnut cultivation

Invasive weeds

Inflow of chemical rich agricultural residue

Uttar Pradesh State Wetlands Authority

Nawabganj Bird Sanctuary

SPECIES RICHNESS

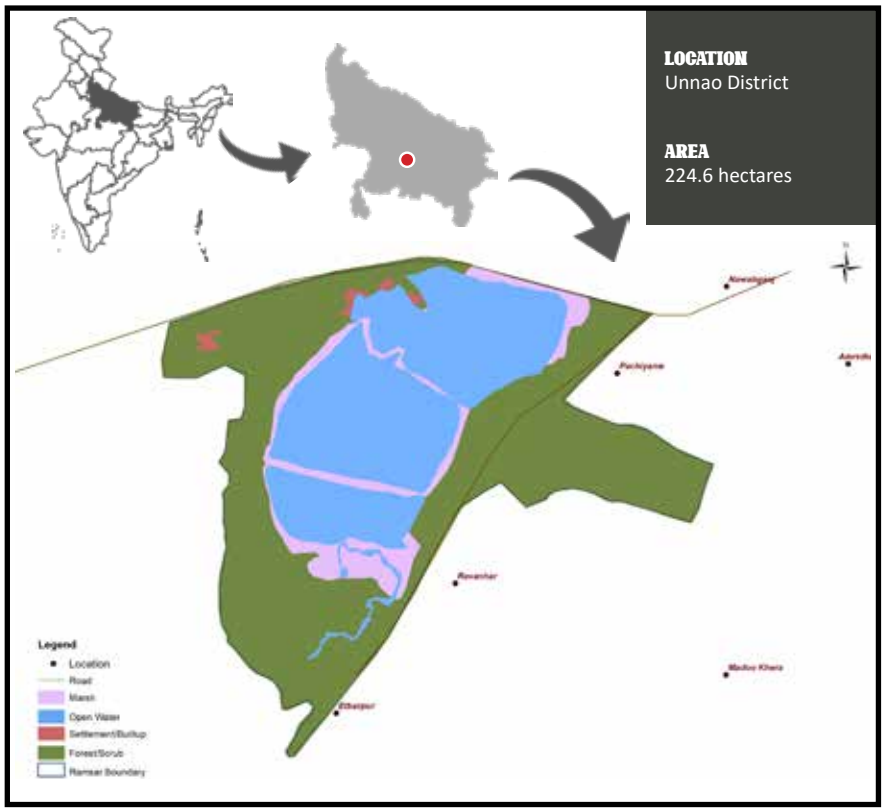
BIRDS	220
FISHES	20
PLANTS	200

Date of designation
September 19, 2019

Nawabganj is a shallow marshland located 45 kilometres from Lucknow in Uttar Pradesh. The wetland is surrounded by plantations and agricultural fields and is fed by monsoon runoff and water from Sarda Canal. The Ramsar Site supports recreation and tourism activities as well as local biodiversity. The wetland is an important wintering site for several migratory bird species of the Central Asian flyway. Nawabganj contributes to moderating temperature, maintaining humidity, carbon sequestration through aquatic vegetation, buffering floods, and maintaining gene pool through the area's aquatic biodiversity.

Uttar Pradesh

Designation Criteria	Wetland Type	Protection Status	Management Authority
2, 3, 4, 5, 6	Marsh	Bird Sanctuary	Uttar Pradesh State Wetland Authority



VALUES AND BENEFITS

Significance

Low | Medium | High

Buffers floods

Groundwater recharge

Habitat for several migratory species

Scientific and educational values

Recreation and tourism

Species of global conservation significance

Endangered	Palla's Fish-eagle, Egyptian Vulture
Vulnerable	Greater Spotted Eagle, Common Pochard, Lesser Adjutant

THREATS

Significance

Low | Medium | High

Pollution

Canalization

Invasive species

Siltation

“

RESPECT FOR NATURE IS AN INTEGRAL PART OF OUR CULTURE, AND HAS BEEN PASSED ACROSS GENERATIONS. PROTECTION OF ENVIRONMENT COMES NATURALLY TO US.

”

- Hon’ble Prime Minister Shri Narendra Modi

“

IT MUST BE OUR DUTY TO PROTECT THE ENVIRONMENT SO THAT THE BENEFITS COULD BE PASSED ONTO FUTURE GENERATIONS. ON WORLD ENVIRONMENT DAY, THE GLOBAL CAMPAIGN OF CONNECTING WITH NATURE SHOULD BE OUR OWN TOO.

”

- Hon’ble Prime Minister Shri Narendra Modi

Abu Arshad Khan

SPECIES RICHNESS

BIRDS	37
MAMMALS	18
REPTILES & AMPHIBIANS	2
PLANTS	37

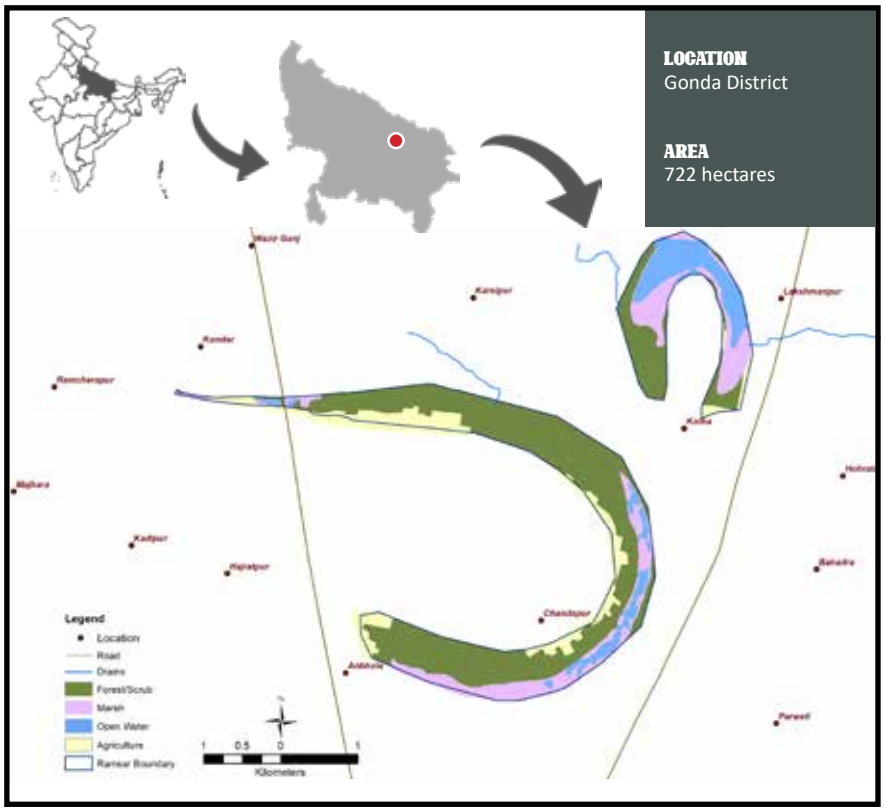
Parvati Arga Bird Sanctuary

Date of designation
December 2, 2019

Parvati Arga Bird Sanctuary is situated in the Gonda District of Uttar Pradesh. The Ramsar Site is one of the largest natural floodplain wetlands in the state, comprising two horseshoe-shaped oxbow wetlands. Formed in the Terai region of Gangetic plains, the wetland harbours a rich floral and faunal diversity. These wetlands are characteristic of Uttar Pradesh and offer exceptional habitats for waterbirds, providing roosting and breeding sites with over 100,000 birds documented in annual counts. Parvati Arga is a refuge for some of India's threatened vulture species: the critically endangered white-rumped vulture and Indian vulture, and the endangered Egyptian vulture have all been recorded. The wetland is also critical in maintaining hydrological regimes, ensuring groundwater recharge and discharge. The ancient temples around Parvati Arga provide religious significance and thus contribute to tourism.

Uttar Pradesh

Designation Criteria	Wetland Type	Protection Status	Management Authority
2, 3, 4, 5, 8	Freshwater marshes	Bird Sanctuary	Uttar Pradesh State Wetland Authority



VALUES AND BENEFITS

Significance

Low | Medium | High

Recharges groundwater

Scientific and educational importance

Maintenance of lifecycles of migratory birds and fish

Buffers floods

Water for agriculture

Cultural and spiritual importance

Species of global conservation significance

Notable	Sarus Crane
Critically Endangered	White-rumped Vulture, Indian Vulture
Endangered	Egyptian Vulture
Vulnerable	Greater Spotted Eagle, Common Pochard, Sarus Crane

THREATS

Significance

Low | Medium | High

Tourism pressure

Regime fragmentation through roads

Pollution from agricultural run-off

Invasive species

Saman Bird Sanctuary

SPECIES RICHNESS

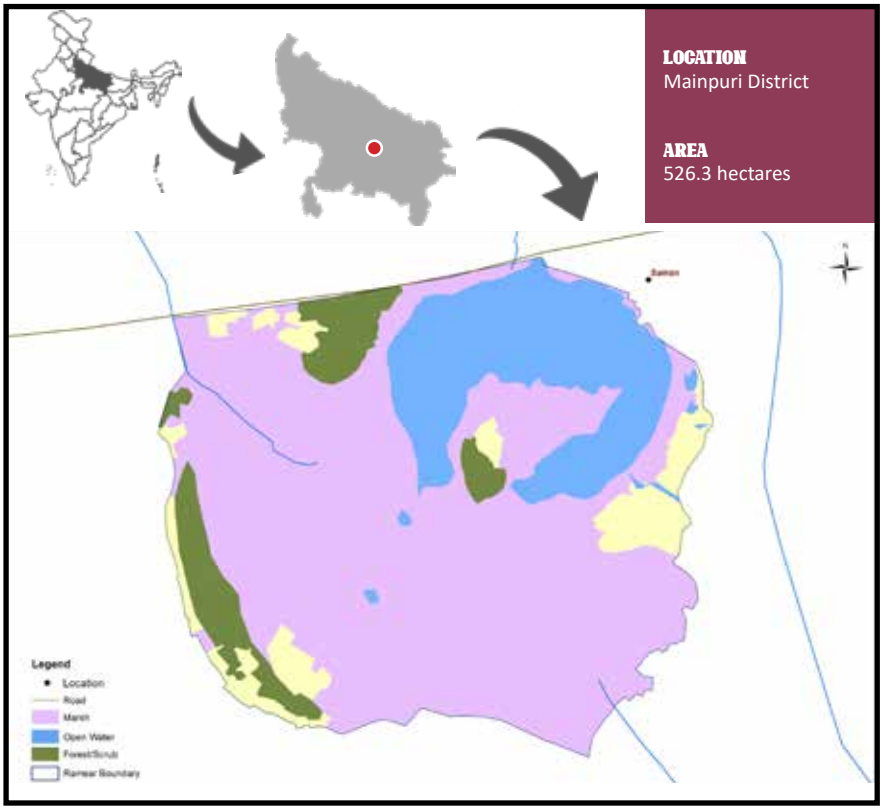
BIRDS	187
MAMMALS	11
PLANTS	154

Date of designation
December 2, 2019

Saman Bird Sanctuary in the Mainpuri district of Uttar Pradesh is a seasonal oxbow wetland on the river Ganga floodplain. It relies heavily on the south-western monsoon in July and August, which provides the vast majority of annual rainfall. The wetland regularly provides refuge to large numbers of waterbirds and is particularly important as a wintering site for many migrants, including the greylag goose. Vulnerable species such as the Sarus crane are also found. Ecosystem services provided by the wetland include the supply of fresh water for agriculture, recreation, and nature-based tourism based on the vast diversity of birds.

Uttar Pradesh

Designation Criteria	Wetland Type	Protection Status	Management Authority
2, 3, 4, 5, 6	Freshwater marsh	Bird Sanctuary	Uttar Pradesh State Wetland Authority



VALUES AND BENEFITS

Significance

Low | Medium | High

Water for agriculture

Tourism and recreation

Habitat for migratory waterbirds

Recharges groundwater

Species of global conservation significance

Notable	Sarus Crane
Endangered	Palla's Fish-eagle, Egyptian Vulture
Vulnerable	Greater Spotted Eagle, Sarus Crane

THREATS

Significance

Low

Medium

High

Over grazing and feral dogs

Intensive agriculture

Pollution

Spread of invasive species

Encroachment

Abu Arshad Khan

SPECIES RICHNESS

BIRDS	250
FISHES	46
PLANTS	149

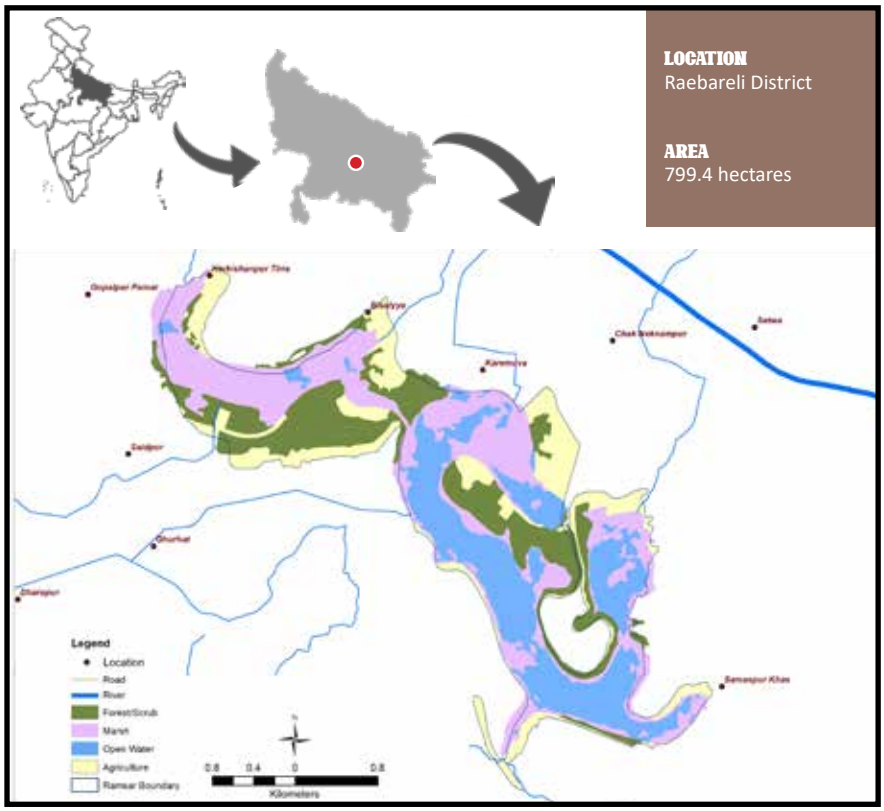
Samaspur Bird Sanctuary

Date of designation
October 3, 2019

Samaspur Bird Sanctuary is a lowland marsh in Salon tehsil of Raebareli district of Uttar Pradesh. This S-shaped Ramsar Site comprises six connected wetlands, Samaspur, Mamani, Gorwa, Hasanpur, Hakganj, and Rohnia. The wetland is perennial and receives water from the Sharda canal supplemented by monsoon run-off. Samaspur is a hotspot of biological diversity and is an important site for migratory bird species arriving in the winter. The wetland contributes to moderating temperature, maintaining humidity, carbon sequestration through aquatic vegetation, and maintaining gene pool through the area's aquatic biodiversity. Samaspur also helps in controlling floods in the area.

Uttar Pradesh

Designation Criteria	Wetland Type	Protection Status	Management Authority
2, 3, 4, 5, 6, 7	Freshwater marsh	Bird Sanctuary	Uttar Pradesh State Wetland Authority



VALUES AND BENEFITS

Significance

Low | Medium | High

Recharges groundwater

Buffers floods

Fodder

Fisheries

Water for agriculture

Species of global conservation significance

Notable	Sarus Crane
Vulnerable	Greater Spotted Eagle, Common Pochard, Sarus Crane

THREATS

Significance

Low | Medium | High

Siltation

Pollution

Over-grazing

Drainage

Spread of invasive species

Intensive agriculture

Abu Arshad Khan

Sandi Bird Sanctuary

SPECIES RICHNESS

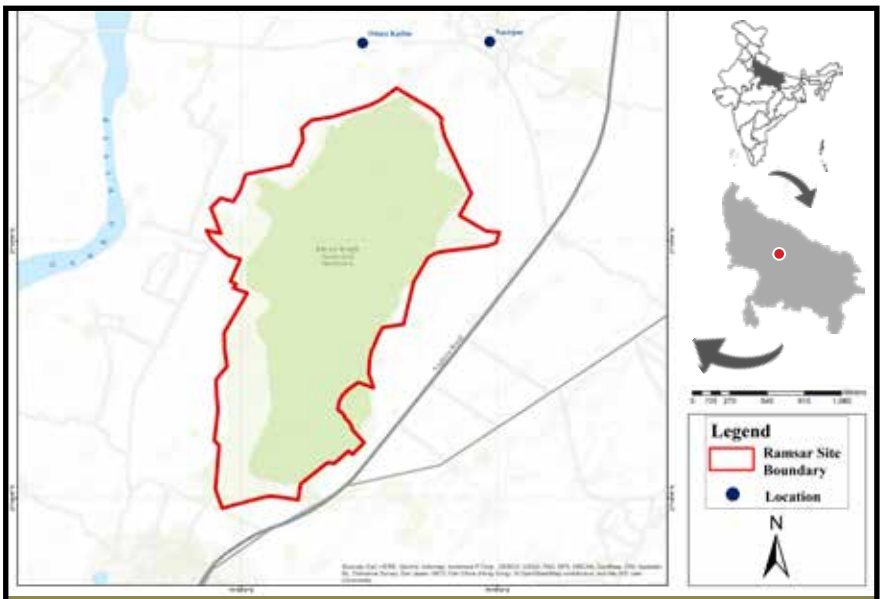
BIRDS	150
FISHES	13
MAMMALS	19
REPTILES & AMPHIBIANS	18
PLANTS	209

Date of designation
September 26, 2019

Sandi Bird Sanctuary is a freshwater swamp located in the Hardoi district of Uttar Pradesh and represents the ecosystems characteristic of the Indo-Gangetic Plains. The wetland provides varied habitats for several species of flora and fauna. The primary water source for the wetland is monsoon rains flowing through natural watercourses. Sandi is particularly rich in aquatic plants such as duckweed and water chestnut and is home to a resident flock of around 200 Sarus cranes. Thick stands of cattails on the fringes provide suitable breeding habitats for resident waterbirds. The wetland is a popular recreational and tourism destination and supports surrounding farmers as a source of livestock fodder. Sandi also creates a barrier to floods for nearby villages and agricultural fields.

Uttar Pradesh

Designation Criteria	Wetland Type	Protection Status	Management Authority
2, 3, 4, 5, 6, 7	Freshwater Marsh	Bird Sanctuary	Uttar Pradesh State Wetland Authority



LOCATION
Hardoi District

AREA
308.5 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

Water for agriculture

Tourism and recreation

Maintenance of lifecycles of migratory birds

Recharges groundwater

Fisheries for livestock

Buffers floods

Species of global conservation significance

Notable	Sarus Crane
Vulnerable	Greater Spotted Eagle, Sarus Crane

THREATS

Significance

Low

Medium

High

Spread of invasive species

Over-grazing

Pollution

Water abstraction

Encroachment

Uttar Pradesh State Wetlands Authority

Sarsai Nawar Jheel

SPECIES RICHNESS

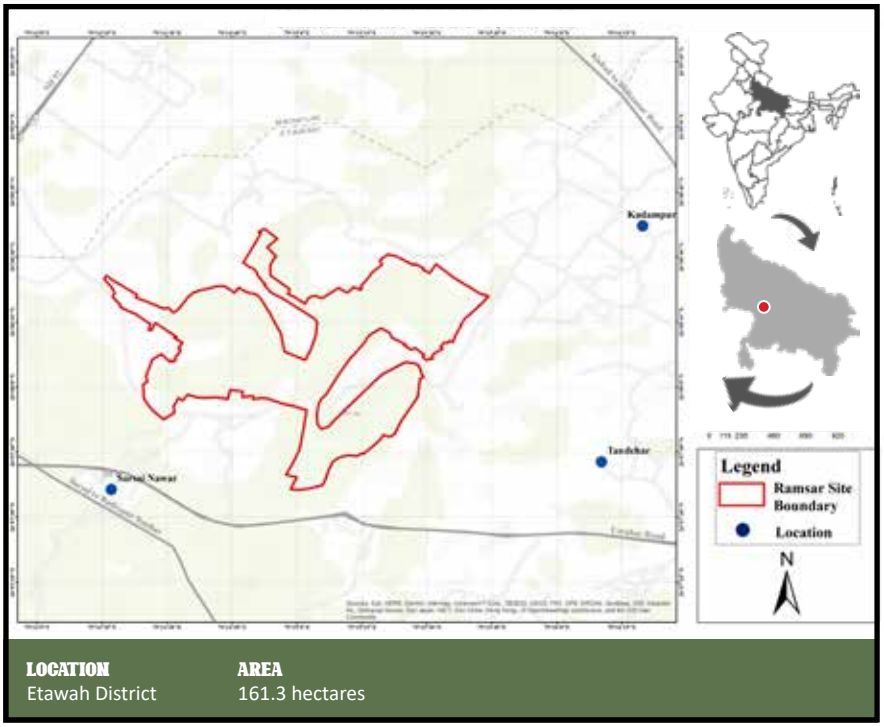
BIRDS	250
FISHES	46
PLANTS	246

Date of designation
September 19, 2019

Sarsai Nawar Jheel is a permanent marsh in the Indo-Gangetic floodplain landscape of the Etawah district of Uttar Pradesh. It is an example of co-habitation of humans and wildlife since the farming practices across most of the wetland play important roles in sustaining the waterbird habitats. The wetland derives its name from the Sarus crane and is considered the roosting area of the region's largest flock of Sarus cranes, consisting of nearly 400 individuals. Sarsai Nawar is also a site of spiritual and religious significance. Thousands of pilgrims visit the nearby Hajari Mahadev temple each year, particularly during the Shivaratri festival in the first week of March.

Uttar Pradesh

Designation Criteria	Wetland Type	Management Authority
2, 3, 5, 7, 8	Marsh	Uttar Pradesh State Wetland Authority



LOCATION
Etawah District

AREA
161.3 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

Scientific and educational value

Lifecycle maintenance of fish and water birds

Hajari Mahadev Temple is revered in the region

Recharges groundwater

Water for irrigation

Species of global conservation significance

Notable	Sarus Crane
Critically Endangered	White-rumped Vulture
Endangered	Palla's Fish-eagle
Vulnerable	Greater Spotted Eagle, Sarus Crane

THREATS

Significance

Low | Medium | High

Encroachment

Intensive agriculture

Invasive species

Hydrological regime alteration

Diwaker Saxena

SPECIES RICHNESS

BIRDS	330
FISHES	60
MAMMALS	5
REPTILES & AMPHIBIANS	24
PLANTS	252

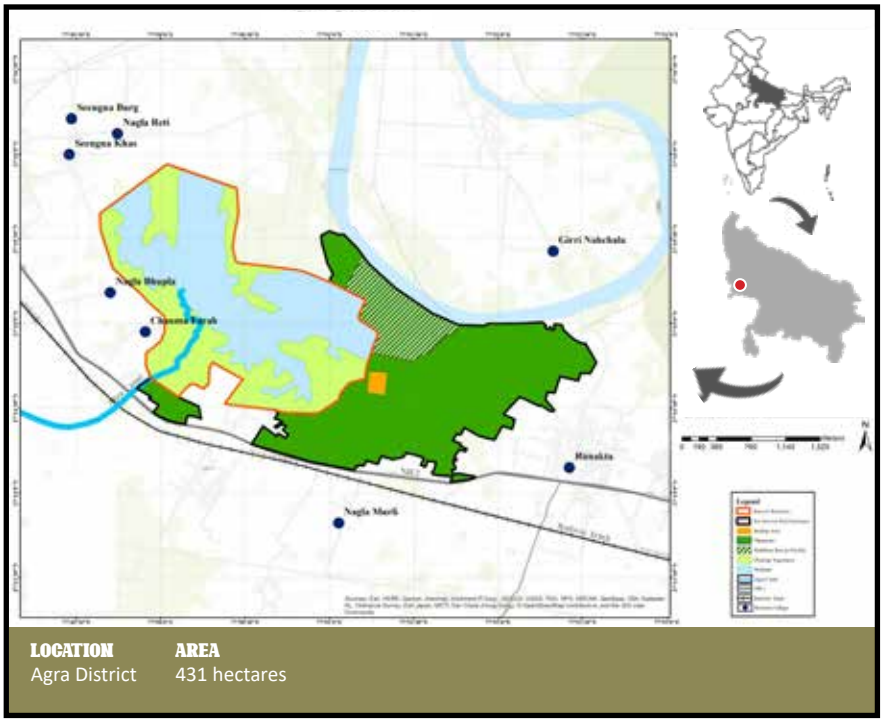
Sur Sarovar

Date of designation
August 21, 2020

Sur Sarovar, also known as Keetham Lake, is a human-made reservoir along the River Yamuna, 20 km from Agra City in Uttar Pradesh. Constructed by the British to meet the water requirements of the city of Agra during the summer months, the primary source of water for the wetland is Agra Canal. Sur Sarovar comprises a mosaic of habitats that support a rich diversity of flora and fauna. The Ramsar Site is important for bird species that migrate on the Central Asian flyway. Unique for scenic beauty and rich assemblage of fauna and flora, the wetland has been named after Surdas - the great poet of Hindi literature– whose place of birth is said to be within the boundary of this Sur Sarovar. A temple complex dedicated to Surdas is present within the complex, thereby making Sur Sarovar a culturally significant wetland. Though initially planned to supply water to the city of Agra, it was subsequently embanked to work as a reservoir. The wetland is also a source of water for the Mathura oil refinery.

Uttar Pradesh

Designation Criteria	Wetland Type	Protection Status	Management Authority
2, 3, 4, 5, 6, 7	Water storage area/ reservoir	Bird Sanctuary	Uttar Pradesh Forest Department



LOCATION
Agra District

AREA
431 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

Hazard reduction

Scientific and education value

Source of freshwater

Lifecycle maintenance

Maintenance of hydrological regimes

Recreation and tourism

Cultural and spiritual importance

Species of global conservation significance

Notable	Indian Pangolin, Sarus Crane
Endangered	Hog Deer, Indian Pangolin
Vulnerable	Common Carp, Long-whiskered Catfish, Greater Spotted Eagle, Sarus Crane, Lesser Adjutant

THREATS

Significance

Low

Medium

High

Hydrological regime alteration

Fishing and harvesting aquatic resources

Pollution from household sewage, urban wastewater

Invasive species

Unsustainable tourism

Livestock farming and ranching

Harsh Ganapathi

Upper Ganga River

SPECIES RICHNESS

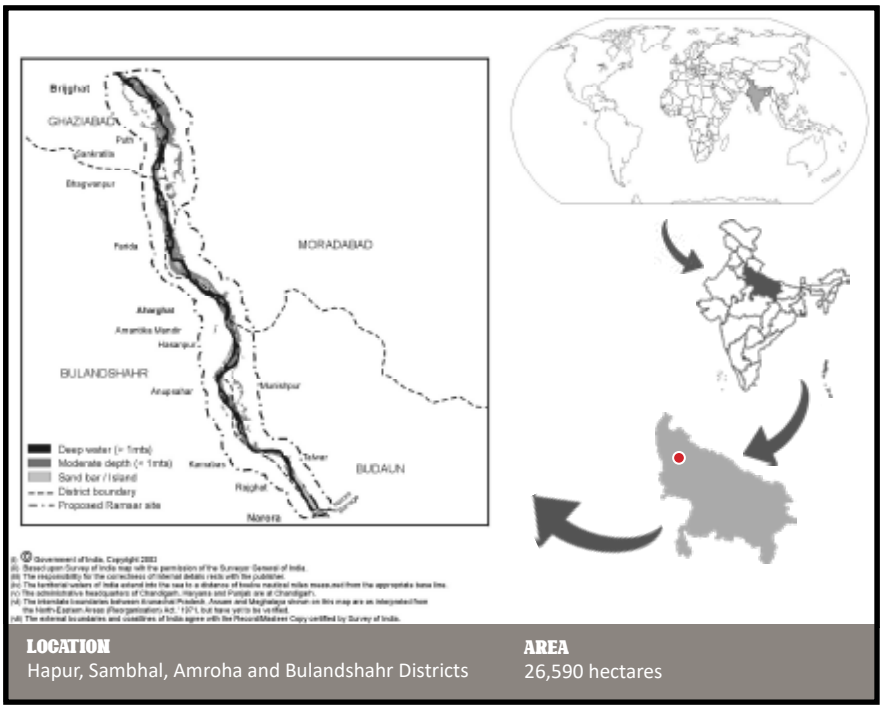
BIRDS	100+
FISHES	82
REPTILES	12

Date of designation
November 8, 2005

Upper Ganga is a shallow river stretch of the Ganges with intermittent small stretches of deep-water pools and reservoirs upstream from barrages. The entire river stretch from Brijghat to Narora is classified into different habitat types depending on the nature of the bank and the river depth during the dry season. All the habitat types have been formed due to barrages, deep pools, and shallow zones in the stretch. The wetland has high Hindu religious importance for thousands of pilgrims and is used for cremation and holy baths for spiritual purification. The Upper Ganga River supports rich biodiversity. The important fauna of the Ramsar site includes the Gangetic River Dolphin, gharials, freshwater turtles, many species of fish, and waterbirds. In addition, the wetland also supports millions of farmers through irrigation.

Uttar Pradesh

Designation Criteria	Wetland Type	Management Authority
2, 3, 4, 5, 7	River Stretch	Uttar Pradesh State Wetland Authority



LOCATION
Hapur, Sambhal, Amroha and Bulandshahr Districts

AREA
26,590 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

Tourism and recreation

Groundwater recharge

Buffers floods

Support fisheries

Provides water for irrigation

Traps sediment and water purification

Bathing ghats having religious values namely Brijghat, Anoopshahr Ghat and Rajghat

Habitat for migratory species

Species of global conservation significance

Notable	Gangetic Dolphin
Critically Endangered	Gharial, Red-crowned Roofed Turtle
Endangered	Pallas's Fish-eagle, Gangetic Dolphin
Vulnerable	Wolly-necked Stork

THREATS

Significance

Low | Medium | High

Tourism pressure

Hydrological regime alteration

Siltation

High pressure on wetland resources

Spread of invasive species

Encroachment

Pollution due to agricultural runoff

Mining

Harsh Ganapathi

Asan Conservation Reserve

SPECIES RICHNESS

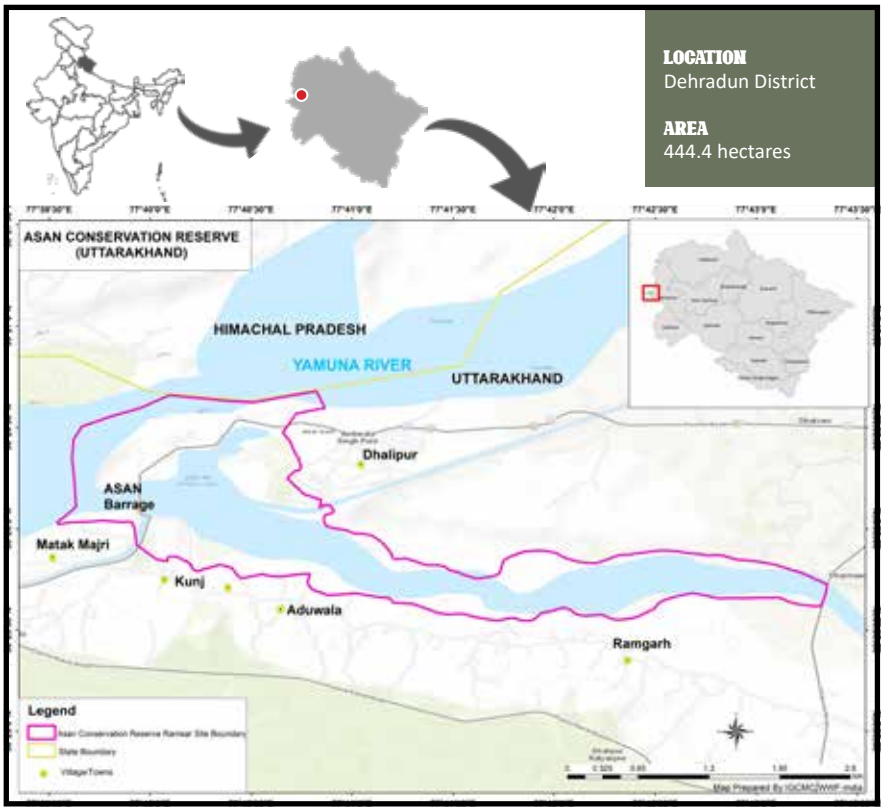
BIRDS	330
FISHES	49
MAMMALS	20
REPTILES & AMPHIBIANS	5
PLANTS	30

Date of designation
July 21, 2020

Asan Conservation Reserve is located at the confluence of rivers Yamuna and Asan in the Dehradun District of Uttarakhand. The damming of the Asan river near the confluence in 1967 resulted in water stagnation and siltation upstream, thus providing an ideal habitat for many migratory and resident waterbirds. The wetland is one of the best sites for the congregation of Brahminy Ducks. Asan has a year-round availability of freshwater owing to a constant inflow of water through the Yamuna canal and Asan River. The outflow is through the Yamuna canal, which feeds two hydroelectric generating stations downstream. The villages Dhalipur, Kunja, Kunja Grant, Kulhal, and Dhakrani lie in the reserve's vicinity, but their dependence on the reserve is minimal. However, the residents have high aspirations for the reserve as a potential source of livelihood.

Uttarakhand

Designation Criteria	Wetland Type	Protection Status	Management Authority
2, 3, 4, 6, 8	Barrage/ Freshwater reservoir	Conservation Reserve	Uttarakhand Forest Department



VALUES AND BENEFITS

Significance

Low | Medium | High

Water for energy production

Tourism and recreation

Habitat for migratory birds

Scientific and educational importance

Recharges groundwater

Species of global conservation significance

Notable	Himalayan Mahseer
Critically Endangered	Baer's Pochard, White-rumped Vulture, Red-headed Vulture
Endangered	Steppe Eagle, Egyptian Vulture, Black-bellied Tern, Copper Mahseer, Himalayan Salmon, Yellowfin Mahseer, Wayanad Mahseer
Vulnerable	Lesser White-fronted Goose, Common Pochard, Marbled Duck

THREATS

Significance

Low | Medium | High

Regime fragmentation
Encroachment

Pollution/ disposal of urban drainage

Siltation

Spread of invasive species

Hydrological regime alteration

East Kolkata Wetlands

SPECIES RICHNESS

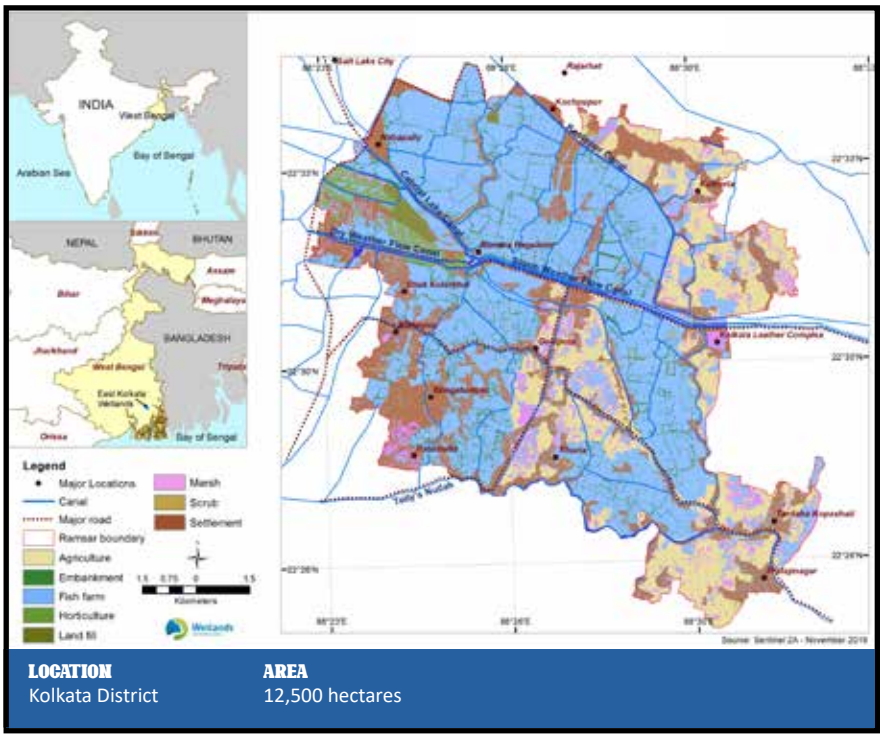
BIRDS	267
FISHES	45
MAMMALS	20
REPTILES & AMPHIBIANS	49
PLANTS	120

Date of designation
August 19, 2002

The East Kolkata Wetlands (EKW), located on the eastern fringes of Kolkata city, sustain one of the world's largest integrated resource recovery systems based on a combination of aquaculture, agriculture, and horticulture. The existing wetland regime is a remnant of a series of brackish wetlands connected to the freshwater and marine environments of the Gangetic Delta and the Bay of Bengal, in an ecological continuum with the Sundarbans. EKW is a critical natural infrastructure for Kolkata City. The wetland treats over 900 million litres of sewage generated by Kolkata Municipal Corporation every day (approximately 65% of the total sewage generated in the metropolitan area) saving the city nearly Rs. 4,680 million annually in terms of treatment costs saved, as well as providing a much-needed flood buffer on the periurban interface. As the nutrient-rich effluent moves through a maze of fish farms, horticulture and agriculture systems, it is progressively cleaned, and nutrients are redirected to produce annually 20,000 MT of fish and 50,000 MT of vegetables and irrigate 4700 ha of paddy lands. Over 60% of carbon from wastewater is also locked in various forms in the production process, thus reducing harmful Green House Gas emissions from the region.

West Bengal

Designation Criteria	Wetland Type	Protection Status	Management Authority
1	Aquaculture ponds & wastewater treatment areas	Protected under the East Kolkata Wetlands(Conservation & Management) Act, 2006	East Kolkata Wetlands Management Authority



LOCATION
Kolkata District

AREA
12,500 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

Livelihoods for 20,000+ families

Largest assemblage of sewage fed fisheries

Treats Kolkata City's sewage

Scientific and educational value

Recreation and tourism

Climate regulation

Species of global conservation significance

Notable	Catla, Rohu, Common Water Monitor
Critically Endangered	Baer's Pochard
Vulnerable	Indian Spotted Eagle, Wood Snipe, Common Carp

THREATS

Significance

Low

Medium

High

Pollution

Siltation

Encroachment

Sundarban Wetland

SPECIES RICHNESS

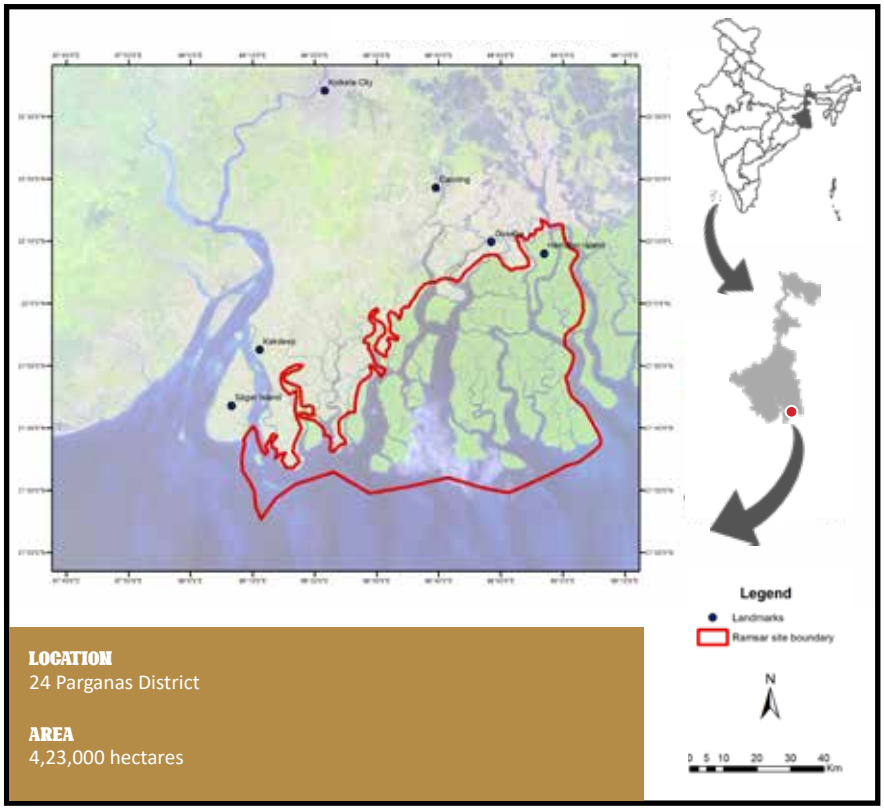
BIRDS	356
FISHES	350
MAMMALS	50
REPTILES & AMPHIBIANS	72
PLANTS	280+
INSECTS	753

Date of designation
January 30, 2019

Sundarban Wetland is located within the largest mangrove forest in the world, the Sunderbans, which encompasses hundreds of islands and a maze of rivers, rivulets, and creeks in the delta of the rivers Ganges and Brahmaputra. The name 'Sundarban' means 'beautiful forest', and it is believed to be derived from a mangrove tree species 'Sundari' (Heritiera fomes). The Indian Sundarban, covering the southwesternmost part of the delta, constitutes over 60% of the country's total mangrove forest area and includes 90% of Indian mangrove species. The mangrove forests protect the hinterland from storms, cyclones, tidal surges, seepage and intrusion of saltwater inland and into waterways. They serve as nurseries for shellfish and finfish and sustain the fisheries of the entire eastern coast. The Sundarban Tiger Reserve is situated within the Site and part of it has been declared a critical tiger habitat and also a Tiger Conservation Landscape of global importance. The Sundarbans are the only mangrove habitat that supports a significant population of tigers, and they have unique aquatic hunting skills.

West Bengal

Designation Criteria	Wetland Type	Protection Status	Management Authority	Other Designations
2, 3, 7, 8	Mangrove swaps, mud flats, lagoons	National Park	West Bengal Forest Department	UNESCO World Heritage Site UNESCO Biosphere Reserve



LOCATION
24 Parganas District

AREA
4,23,000 hectares

VALUES AND BENEFITS

Significance

Low | Medium | High

- Recreation and tourism
- Wild honey
- Fodder
- Fisheries
- Tropical cyclone buffer
- Scientific and educational values
- Shoreline protection
- Habitat for several migratory species
- Blue carbon sink

Species of global conservation significance

Notable	Bengal Tiger, Sundari
Critically Endangered	Ganges Shark, Northern River Terrapin, Spoon-billed Sandpiper
Endangered	Irrawaddy Dolphin, Greater Adjutant
Vulnerable	Lesser Adjutant, Masked Finfoot, Estuarine Crocodile, Smooth-coated Otter

THREATS

Significance

Low | Medium | High

- Pollution
- Salinization
- Prawn larva collection
- Encroachment
- Coastal erosion
- High tourism pressure

Compilation team

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Suchita Awasthi

India's wetlands are testimony to our ethos of living in harmony with nature and also give an important message of sustainable development.

-Hon'ble Prime Minister Shri Narendra Modi

WETLANDS OF INDIA PORTAL

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Wetlands International

WWF

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