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# Bakhira Bird Sanctuary, Uttar Pradesh, India: An Overview

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**ABSTRACT:** The Bakhira Bird Sanctuary is the largest natural flood plain wetland of India in Sant Kabir Nagar district of Eastern Uttar Pradesh. The sanctuary was established in 1980. It is situated 44 km west of Gorakhpur city 18 km away from Khalilabad and 55 km away from Basti. It is a vast stretch of water body expanding over an area of 29 km<sup>2</sup>. This is an important lake of eastern UP, which provides a wintering and staging ground for a number of migratory waterfowls and a breeding ground for resident birds. This is also used for farming activities as it is connected to Bakhira Canal which covers the people of 15 km from its origin.

**KEYWORDS-** Bakhira, wetland, Gorakhpur, birds, canal

## I. INTRODUCTION

The sanctuary is named after the village Bakhira located adjacent to the lake along with as many as hundred and eight villages surrounding the lake within the 5 km radius. The villagers from the surrounding villages depend on the wetland for their livelihood in the form of fishing, agricultural activities and fuelwood collection from it. The Siberian birds travel across 5000 km to get to these wetlands at the time of winter's.

It was designated as a Ramsar Site on World Wetlands Day (2 February 2022).

### Bird migrations

Best time to visit to Bakhira lake is in winters Nov–Jan. During this time migratory birds from Tibet, China, Europe & Siberia come here, covering about 5000 km.<sup>[3]</sup>

### Tourism

By Road-1. Can be accessed via Gorakhpur-Khalilabad (35 km), through NH-28, then 17 km on Khalilabad-Bansi road 2. From Gorakhpur to Sahjanwa (20 km) on NH-28, then 23 km from Sahjanwa to Jaswal Bharwaliya & 3 km from Jaswal Bharwaliya village By Rail-Nearest railhead Khalilabad on Gorakhpur-Lucknow NER Railway Line By Air-Gorakhpur Airport 49 km<sup>[4]</sup>

### Attraction

The Grey-headed swamphen (*Porphyrio poliocephalus*) also called the Indian Purple moorhen or Purple Swamp-hen is one of the beautiful common water birds found in India. A handsome but clumsy purplish blue bird with long red legs and toes, bald red forehead and size resembling the village hen. This bird is a common breeding resident of this sanctuary and is locally coined with the name "Kaima". There are more than 30 species of fish found in the lake. However the dominant species are *Labeo rohita* and *Chana sp.*[1,2,3]

## II. DISCUSSION

This freshwater marsh in the Sant Kabir Nagar district is the largest natural floodplain wetland of eastern Uttar Pradesh. The Sanctuary was established in 1980 and is protected under the Wildlife Protection Act (1972); an "eco-sensitive zone" extends up to a kilometre around its boundary. The wetland is internationally important for its birdlife as it supports over 80 species. It provides a wintering ground for over 25 species which migrate on the Central Asian Flyway, some of which are threatened or near-threatened such as the endangered Egyptian vulture (*Neophron percnopterus*), the vulnerable greater spotted eagle (*Aquila clanga*), common pochard (*Aythya ferina*) and swamp francolin (*Francolinus gularis*), and the near-threatened oriental darter (*Anhinga melanogaster*) and woolly-necked stork (*Ciconia episcopus*). The wetland also supports 119 plant species and 45 species of fish: it is home to the vulnerable European carp (*Cyprinus carpio*) and the catfish *Wallago attu*, and the near-threatened Gangetic ailia (*Ailia coila*) and silver carp



(*Hypophthalmichthys molitrix*). The Site is also used for recreation and tourism and contributes to food supply and nutrient cycling.

The Uttar Pradesh government is all set to establish a 50 MW solar plant in the heart of the Bakhira bird sanctuary, a Ramsar site touted as India's largest natural floodplain wetland in Sant Kabir Nagar district, officials aware of the development said. The move stems from a proposal by the district magistrate of Sant Kabir Nagar to the Uttar Pradesh New & Renewable Energy Development Agency (UPNEDA), recommending the installation of a ground-mounted or floating solar plant in the Bakhira lake area, which is an eco-sensitive zone and is being developed as an attractive tourist destination. "We are exploring the possibility of setting up a 50 MW solar plant in the Bakhira lake area in Sant Kabir Nagar district under the UP government's solar policy," UPNEDA director Anupam Shukla said. "Soon bids will be invited from interested developers to set up the plant that may be floating or ground-mounted, depending on the feasibility report," he added.

The UPNEDA has asked the Lucknow Solar Power Development Corporation Ltd (LSPDCL) to conduct a feasibility study to find out the suitability of the establishment of a solar plant in the Bakhira area and also suggest which kind of plant, floating (on water) or ground-mounted, will be more suitable given the geographical topography of the place. Formed in 2015, the LSPDCL is a joint venture of the UPNEDA and the Solar Energy Corporation of India (SECI).[4,5,6]

According to Narendra Singh, the UPNEDA project officer, the DM, Sant Kabir Nagar has recommended the installation of a 50 MW floating or ground-mounted solar plant/park in the Bakhira lake area to produce green energy for lighting and other purposes in the sanctuary. "Currently, there is only one floating solar power plant in the state, and it is 20 MW set up by the NTPC in Auraya," he said.

Making a case for the installation of a solar plant, DM Sant Kabir Nagar, in his letter to the UPNEDA, said that the Bakhira bird sanctuary was being developed as an attractive eco-tourism and agro-tourism hotspot with a strict ban on prohibited activities and encouragement of permitted ones to attract tourists. The Bakhira sanctuary, he pointed out, was last year also declared a Ramsar site. A Ramsar site is a wetland designated to be of international importance under the Ramsar Convention signed in Iran in 1971. Currently, there are 75 Ramsar sites in India.

A Ramsar site is a wetland site designated to be of international importance under the Ramsar Convention,[1] also known as "The Convention on Wetlands", an international environmental treaty signed on 2 February 1971 in Ramsar, Iran, under the auspices of UNESCO. It came into force on 21 December 1975, when it was ratified by a sufficient number of nations. It provides for national action and international cooperation regarding the conservation of wetlands, and wise sustainable use of their resources.[1] Ramsar identifies wetlands of international importance, especially those providing waterfowl habitat.

As of November 2023, there are 2,500 Ramsar sites around the world, protecting 257,106,360 hectares (635,323,700 acres), and 172 national governments are participating.

#### Ramsar site criteria

A wetland can be considered internationally important if any of the following nine criteria apply:[3]

Criterion 1: "it contains a representative, rare, or unique example of a natural or near-natural wetland type found within the appropriate biogeographic region."

Criterion 2: "it supports vulnerable, endangered, or critically endangered species or threatened ecological communities."

Criterion 3: "it supports populations of plant and/or animal species important for maintaining the biological diversity of a particular biogeographic region."

Criterion 4: "it supports plant and/or animal species at a critical stage in their life cycles, or provides refuge during adverse conditions."

Criterion 5: "it regularly supports 20,000 or more waterbirds."

Criterion 6: "it regularly supports 1% of the individuals in a population of one species or subspecies of waterbird."



Criterion 7: "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: "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."

Criterion 9: "it regularly supports 1% of the individuals in a population of one species or subspecies of wetland-dependent non-avian animal species."

The Ramsar Convention on Wetlands of International Importance Especially as Waterfowl Habitat is an international treaty for the conservation and sustainable use of Ramsar sites (wetlands).[2] It is also known as the Convention on Wetlands. It is named after the city of Ramsar in Iran, where the convention was signed in 1971.

Every three years, representatives of the contracting parties meet as the Conference of the Contracting Parties (COP), the policy-making organ of the convention which adopts decisions (site designations, resolutions and recommendations) to administer the work of the convention and improve the way in which the parties are able to implement its objectives.[3] In 2022, COP14 was co-held in Wuhan, China, and Geneva, Switzerland.

### **III.RESULTS**

- Bakhira Wildlife Sanctuary is an open habitat for a large variety of migratory and resident birds.
- It has been declared a Bird Sanctuary in 1990 by the Forest and Wildlife Department, Government of Uttar Pradesh, India.
- Bakhira bird sanctuary also known as Bakhira Tal, located to the west of the Rapti riverbank, is a shallow-water, river-connecting wetland. [7,8,9]
- Bakhira Tal (wetland) is the largest natural wetland of Eastern U.P. It is a perennial wetland, where the source of water is natural rain and the Ami River, a tributary of the Rapti River.
- Apart from birds, the Sanctuary has a variety of trees, shrubs, hydrophytes.
- About 40,000 birds belonging to about 30 species have been recorded during winters.
- It is a vast stretch of water body expanding over an area of 29 sq. km.
- The landscape and terrain of the wetland is almost flat, representing a typical 'Terai' landscape.
- The sanctuary is named after the village Bakhira located adjacent to the lake.
- The villagers of the surrounding villages depend on the wetland for their livelihood in the form of fishing, agricultural activities and fuelwood collection.

#### **Importance of the Sanctuary**

- Though the wetland has been declared as a Wildlife Sanctuary, there are several anthropogenic pressures on it.
- Fishing and poaching of migratory birds are key issues.
- It is an important habitat for sarus as well as winter migratory birds; hence, it is important to conserve the area/wetland.
- The loss of wetland can reduce the number of stopover sites for migrating birds as well as nesting species.

#### **Ecosystem**

- Bakhira lake is one of the significant wetlands of eastern Uttar Pradesh.
- The sanctuary provides breeding and nesting ground to a large number of migratory and resident birds.



- The majority of the migratory birds come from Siberia, Tibet, China and Europe.
- Moreover, certain species of fish, amphibians, reptiles and mammals are also found dwelling in and around Bakhira Tal.
- The flora of this area is represented by semi-arid vegetation and typical aquatic vegetation of the lake in the plains of North India.
- The Bakhira Lake supports a variety of aquatic plants typical to the upper Gangetic system.
- However, it is also said that the sanctuary has a relatively lesser number of aquatic species due to the harsh climatic conditions and rocky soil.
- The water bodies are shallow and boggy.
- The average annual rainfall in the district is 1166 mm.
- During the winter, the mean minimum temperature is about 9 °C and the mean maximum – 23 °C.
- In the post-monsoon seasons, the relative humidity is high and reaches above 70%. [10,11,12]

#### **IV.CONCLUSION**

- On the occasion of World Wetlands Day on February 2, 2022, Union Environment Minister Bhupendra Yadav declared 'Bakhira Wildlife Sanctuary' in Uttar Pradesh and 'Khijadiya Wildlife Sanctuary' in Gujarat as Ramsar sites in a program organized at Sultanpur National Bird Park, Gurugram, Haryana.

#### **Key Points**

- With the inclusion of these two sanctuaries in the Ramsar site, the total number of protected wetlands in the country has increased to 49. Now the number of Ramsar sites in India has become the largest among the countries of South Asia.
- Similarly, the number of Ramsar sites in Uttar Pradesh has now increased to 10 - 1. Upper Ganga River (Brajghat to Narora stretch), 2. Nawabganj Bird Sanctuary (Unnao), 3. Sandi Bird Sanctuary (Hardoi), 4. Samaspur Bird Sanctuary (Rae Bareli), 5. Saman Bird Sanctuary (Mainpuri), 6. Parvati Arga Bird Sanctuary (Gonda), 7. Sarsai Nawar Lake (Etawa), 8. Sur Sarovar Lake/Keetham Lake (Agra), 9. Haidarpur Wetland, 10 Bakhira Wildlife Sanctuary (Sant Kabir Nagar).
- Bakhira Wildlife Sanctuary, located in the Sant Kabir Nagar district of Uttar Pradesh, provides a safe and favorable winter habitat for a large number of Central Asian bird species.[13,14,15]
- On this occasion the National Wetlands Decadal Change Atlas on Wetlands of India (in physical form) prepared by Space Application Center (SAC), Ahmedabad was also released, which throws light on the changes in wetlands over the last decade.
- It is noteworthy that the Ramsar Treaty is an international treaty for the conservation and efficient use of wetlands, which was signed on February 2, 1971 in the city of Ramsar, Iran.
- World Wetlands Day is celebrated all over the world on 2 February every year to mark the date of implementation of the Treaty on Wetlands. It is celebrated to raise global awareness about the important role of wetlands for people and our planet.
- The theme of this year's World Wetlands Day is 'The Role of Wetlands for People and Nature', which highlights the importance of work to ensure the conservation and sustainable use of wetlands for the health of humans and the planet.[16]

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