

Environmental Concerns in Pobitora Wildlife Sanctuary, Assam

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Abstract: Pobitora Wildlife Sanctuary is one of the most important environment for flora as well as fauna. It is well known for its one horned Rhinoceros which can be located here in abundance. The area of Mayong is located near Pobitora Wildlife Sanctuary and this is called the land of black magic in India. In this study, an attempt has been made to study the changes in Pobitora for the last 10 years. As Antarctica in the Southern Hemisphere is the best place to study about the environmental degradation. Wildlife Sanctuaries can also be very useful in studying the transition of environment and the impact on its wildlife's because of continuous human interference in this sanctuary. This Sanctuary has come a long way in making it as a reserve forest on November 18, 1971. In this article, a discussion has also been made about actions of the official and non-official bodies. At last, the concerns of the sanctuary have been highlighted following with some measures that can be taken in order to preserve such natural heritage and to protect the amazing birds and animals that reside in the sanctuary.

Keywords: Environment, wildlife sanctuary, degradation, one horned rhinoceros.

1. Introduction

Pobitora Wildlife Sanctuary is tucked away in Assam's grasslands, which are home to the Greater Indian One-Horned Rhinoceroses, which have the biggest population in the entire world. It is surrounded on all sides by Assamese villages that maintain the traditional Assamese way of life. A traveller or a lover of nature will find Pobitora Wildlife Sanctuary's landscape to be breathtaking overall.

Pobitora Wildlife Sanctuary is a tiny wildlife reserve situated near Pobitora in Assam's Morigaon district, 40 kilometres from Guwahati. It is one of the most well-known wildlife sanctuaries in Assam and one of the top tourist destinations in Guwahati, located in the floodplains of the powerful Brahmaputra River.

A total of 38.81 square kilometres of Assam alluvial grassland and hilly forests make up the habitat. This area is crucial for birds. Pobitora Wildlife Sanctuary is a little piece of heaven for wildlife enthusiasts since it has the greatest density of rhinoceros in the entire world. It is one of Assam's two prime locations to see the renowned and critically endangered one-horned rhinos, the other being Kaziranga. Pobitora was formerly a cattle-grazing reserve in the former Nagaon district, and it gained notoriety in 1961–1962, when a One Horned

Rhino was spotted there. It was established as a reserve forest in 1971 and subsequently received the designation of a wildlife sanctuary in 1987. Its area is 38.83 square kilometres.

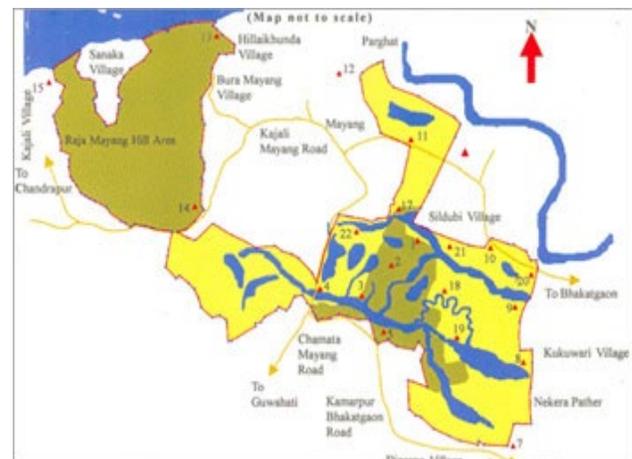


Fig. 1.

Three main sections of the sanctuary are designated as forest, grassland, and water features, or beels. Only 13% of the overall area is covered by trees, and 72% of it is made up of wet grasslands. Water features or beels cover the remaining space. Pobitora has 81 rhinos, which means it has more people than it can support. Other animals seen here, besides rhinos, are leopards, wild boars, barking deer, wild buffalo, etc. Along with several reptiles and more than 2000 migratory birds, Assam's Pobitora Wildlife Sanctuary is home to migratory birds.

The main events planned by the management at Pobitora are elephant rides and car safaris. They arrange for three people to ride on each elephant, and then take them for an hour-long ride deep inside the forest that provides an unforgettable experience.

The Pobitora Wildlife Sanctuary Forest Range Office, Raja Mayang, serves as the entry to the sanctuary. To access the sanctuary area from there, one must cross the hanging bridge. There aren't many places to stay in Pobitora. The Forest Department Guest House is your best bet for lodging. Although Pobitora is open to guests all year round, the ideal months to go are from November to March.

With a population of one horned rhinos in Assam in 1971, Pobitora, particularly a protected region, has grown into a

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significant sanctuary for its rhino conservation.

2. Objectives of the Study

- 1) To study the environmental conditions of PWS.
- 2) To find out the changes in the environmental condition of PWS.
- 3) To find out the effects of environmental changes on animals living in that area.
- 4) To analyze the problems and give measures to solve the issues related to the environment.

3. Need of the Study

- India's wildlife is impacted by climate change and extreme weather both inside and outside of protected areas. India's policies reflect the attention being paid to the effects of climate change on biodiversity on a global scale, but their integration with research and actions like putting up alarm systems need attention.
- To lessen the effects of extreme weather on wildlife, it is essential to examine and uphold traditions of human-animal cohabitation outside of protected areas. Outside of protected areas, urban settings can provide as refuges for 'holy' and commensal species.
- Conservation efforts can be influenced by knowing how wildlife reacts to extreme weather conditions, for as by seeking shelter in landscapes dominated by people. Using a landscape-level conservation strategy also enables species to move around under severe weather conditions. Improved monitoring is required for the effects of harsh weather on invasive species.

4. Method of the Study

Research project's broad plan and justification are referred to as its methodology. It entails researching the theories and ideas that underpin the procedures employed, in order to create a strategy that is in line with our goals. A descriptive survey strategy was utilized in this study to gather data. Methods used in descriptive research outline the features of the variables being examined. With this methodology, the emphasis is on providing answers to "what" questions rather than "why" queries about the study topic. Descriptive research focuses less on the "why" and more on merely describing the characteristics of the demographics under examination.

5. Findings of the Study

Following inquiries to residents and local government representatives, it was discovered that:

Mammals: During the estimation in April 2006, a total of 81 rhinos were seen. Other mammals that have been discovered include Chinese pangolins, feral buffalo, wild pigs, fishing cats, leopards, and leopard cats.

Birds: 375 species of migratory and resident birds, representing 46 families, have been identified thus far; 14 of these are recognized in the Indian Red Data Book.

Fishes: A variety of fish use this area as a vital breeding place.

Amphibians: There are nine different species of amphibians known.

Reptiles: The Sanctuary is home to 27 different species of reptiles.

Visitors Facilities:

Elephant rides and Jeep safaris are available as visitor amenities. A good location for bird watching with a high likelihood of seeing rhinos. a picnic area close to Garanga Beel.

How to get there:

From Guwahati, it is 52 km by NH 37-Sonapur and 35 km via Chandrapur.

Places to stay:

With 4 rooms, the Mayang Tourist Lodge is a branch of the tourism department. Bungalow in Mayang used for Forest Department inspections with two rooms.

Best time for visit: November to March



Buffaloes on highland during flood

Rhino taking shelter on road

Haduk Beel

Fig. 2.

(Source: Google)

6. Milestone of Pobitora Wildlife Sanctuary

Pobitora Wildlife Sanctuary's notable events include its declaration as a reserve forest on November 18, 1971.

On July 16, 1987, a wildlife sanctuary was established.

Area increased on March 17, 1998, to 38.8 square kilometres.

The Pobitora Wildlife Sanctuary is typically accessible to visitors from mid-October until mid-May. When the Pobitora Wildlife Sanctuary opens, guests can enter and take part in the park's vehicle and elephant safari trips to view the diverse flora, animals, and avifauna. Additionally, during this time, numerous migratory birds stop by Pobitora, giving visitors the chance to experience bird watching at Pobitora Wildlife Sanctuary.

Rainfall begins in Assam in the month of May, and the monsoon season arrives in the month of June, when the Brahmaputra River begins to overflow and inundate the Pobitora Wildlife Sanctuary area. Visitors are no longer allowed inside the Sanctuary's grounds, and the animals find it difficult to stay inside and leave in search of higher grounds nearby. The Pobitora Wildlife Sanctuary is not open to tourists during these months due to the extreme heat and humidity (the temperature can reach 36 degrees Celsius).

The optimum time to visit the Pobitora Wildlife Sanctuary is from the months of November to April. In the month of October, the temperature begins to improve and the waters in the interior of the Pobitora Wildlife Sanctuary begin to recede. By mid-October, the area is once again open to tourists. The three distinct seasons at Pobitora Wildlife Sanctuary are summer, winter, and monsoon, which can be characterised as a sub-tropical monsoon climate.

A. Changes in Pobitora

Even though Pobitora Wildlife Sanctuary has come a long way from its beginnings as a tourist destination of Assam and with a very small number of visitors coming to this place to a thousands who flock here every year to see the prized Indian One Horned Rhinoceros species, making it an attractive tourist destination in Assam that is very close to the capital of Assam (Dispur) and the largest city of North East India at Guwahati.

The Pobitora Wildlife Sanctuary's future, namely the future of its animal species, is currently plagued by a few difficulties.

First, there is the issue of the yearly Assamese floods, a natural disaster that decimates not only the animal population at Pobitora Wildlife Sanctuary but also the entire renowned Kaziranga National Park.

The Brahmaputra River is the lifeline of Assam, supporting both human and animal life in many different ways. However, every year during Assam's monsoon season, excessive rain causes the Brahmaputra's waters to rise above a safe level, flooding the interior of Kaziranga National Park and Pobitora Wildlife Sanctuary.

The Brahmaputra River has about 90% of Kaziranga National Park and Pobitora Wildlife Sanctuary submerged, which causes the animals to temporarily lose their shelter. Some are able to move to higher ground to avoid the flood waters, but some get stuck and perish in these floods. At Pobitora Wildlife Sanctuary, the situation deteriorates rapidly as numerous species, most notably the rhinoceros, lose their habitats for shelter and food sources.

Each year, Pobitora Wildlife Sanctuary is caught in the grip of Assam's yearly floods, and the entire sanctuary is engulfed in floodwaters. Although the government has built highlands inside the park, the growing population of animals inside Pobitora Wildlife Sanctuary means that these are insufficient, and many animals, including the rhinoceros here at Pobitora Wildlife Sanctuary, perish in floods.

What actions were taken in the last ten years by official and unofficial bodies?

For the Pobitora Wildlife Sanctuary in Assam, which is practically an island surrounded by human settlements on all sides, the conservation approach integrating forest employees and periphery residents is working fantastically. Pobitora has garnered a lot of local interest, which is encouraging for the likelihood of its long-term protection. That it was an effective combined effort between forest officials and locals, including NGOs

Pobitora presently ranks among the top wildlife tourist sites in the State due to the influx of tourists, many of whom are from outside the country.

Along with bird observing treks and boating for river dolphin sightings, the Forest Department of the Government of Assam organises elephant rides and vehicle safaris as its main events.

In India, Assam has had great success in protecting the wildlife. The Greater One-Horned Rhinoceros' population was reduced to the point where it could be counted on one hand in the late 1990s, but it now stands proudly in front of the world with an even overcrowding that is supported by science. Pygmy hogs, hispid hares, white-winged wood ducks, and big Indian

hornbills are just a few of the rare, endangered, and threatened animal, bird, and amphibian species that are safely maintained in Assam.

B. Around Pobitora

About 45 km from Guwahati, Assam, the Brahmaputra and Pobitora Wildlife reserve, which has the largest population of one-horned rhinos, is close to the village of Mayong, which is surrounded by wildlife. The name Mayong or Mayang may have its roots in a number of places, such as the Sanskrit term maya, which means illusion, the Dimasa word miyong, which means elephant, or the Maa word for Mother Shakti and the word ongo.

Mayong is well-known due to its historical status as India's Capital of Magic. There are legends of a man who could vanish into nothingness or mutate into an animal, like werewolves in folklore. Even if magic and sorcery are no longer used, many curious individuals continue to visit to learn whether magic is being used.

The Mayong Central Museum and Emporium is home to many archaeological items and artefacts, including literature on Ayurveda and black magic.

How wildlifes of pobitora are affected due to environmental changes?

The Earth has warmed by around 1.1°C (2°F) since the 1800s. By the end of the century, global temperatures are predicted to increase by 2.7°C (4.8°F). It is impossible to foresee precisely how our planet's delicate, intricately intertwined ecosystems will be impacted by long-term changes in temperatures and weather patterns. Animals will be affected when changes in one area have an impact on changes in other regions. Among the greatest risks to animals posed by the climate are:

- 1) *Habitat loss:* Increasing temperatures have an impact on a variety of factors, including vegetation, food sources, water availability, and more. Ecosystems may lose their ability to support some species, pushing wildlife to go outside of their typical migratory patterns in search of food and livable circumstances while triggering the extinction of other species.
- 2) *Natural catastrophes:* Natural disasters like hurricanes, wildfires, and droughts that are caused by climate change and weather are already five times more common than they were fifty years ago. People, pets, and wildlife suffer devastating losses in life and habitat as a result of these catastrophes.
- 3) *Conflict between humans and animals:* Due to habitat loss and extreme weather events brought on by climate change, people and wildlife are forced to coexist in more crowded areas. People and wildlife move farther in search of food, water, and resources as ecosystems change. Animals involved in conflicts between humans and wildlife can suffer terrible consequences.
- 4) *Extinction:* The combination of issues could lead to the extinction of numerous animals. The biggest dangers will likely be to the most defenseless animals in the planet, including those who are already on the

verge of extinction.

There is already indisputable proof that the distribution and behaviour of animals, birds, and plants are being impacted by climate change and global warming. If greenhouse gas emissions are not drastically decreased, a quarter of all land animals, bird species, and plant species might go extinct due to climate change.

Birds lay eggs earlier in the year than usual, plants bloom earlier, and mammals emerge from hibernation earlier all result from climate fluctuation and change. The distribution of animals is also impacted; as a result of the increase in global temperatures, many species are migrating towards the poles. The nesting sites that birds are migrating to are not as far away as they used to be, and in some nations the birds don't even go anymore because the climate is ideal all year round. As a result, birds are arriving at their nesting grounds earlier.

C. Measures to Solve These Problems

Similar to trees, wildlife is a national resource that not only contributes to the preservation of the ecological balance but is also advantageous from an economic, recreational, and aesthetic standpoint.

There was a time when there was little human involvement, a large number of wild creatures, and no issues with their protection or conservation.

But as agriculture, settlement, industry, and other forms of civilization increased—largely due to man's greed—the number of wild animals decreased throughout time.

As a result, some animal species have been declared extinct and others are on the verge of doing so. One of the biggest causes of wildlife extinction is deforestation. All around the world, wild animals are being killed in large numbers for their flesh, bones, fur, teeth, hair, skin, etc. As a result, the preservation of wildlife is now essential.

There are various pressures on the natural habitat of wildlife, including population growth, the expansion of agricultural and livestock production, the construction of cities and roads, and pollution. Along with unlawful hunting, habitat loss and degradation have put the biodiversity of the areas where these animals are abundant in danger.

A correct, prudent control over the proliferation of plants and animals that interact to offer a suitable habitat for man, whose very survival is in danger today, is what it means to preserve wildlife rather than providing blanket protection to all faunal and floral species.

The majority of the wildlife has been irreparably lost because to past irrational usage of the earth's biotic and natural resources. It is urgently necessary for us to preserve ecosystems' inherent beauty and to develop a system of coexistence with all other living things on the planet.

Even though the world's nations are greatly concerned with wildlife conservation, the number of wild animals is steadily declining. The multinational organization World Wildlife Fund is doing wonderful work to promote the preservation of

wildlife. There are national organizations dedicated to wildlife conservation.



Fig. 3. Pobitora wildlife sanctuary



Fig. 4. One-horned Rhinoceros



Fig. 5. Mayong museum

7. Conclusion

This paper presented a study on the environmental concerns in Pobitora wildlife sanctuary, Assam.

References

- [1] Pobitora National Park, Assam India. (n.d.). Kaziranga National Park. Retrieved August 18, 2023, from <https://www.kaziranga-national-park.com/pobitora-national-park.shtml>
- [2] About Pobitora Wildlife Sanctuary. (n.d.). Pobitora Wildlife Sanctuary. Retrieved August 18, 2023, from <https://pobitorawildlifesanctuary.wordpress.com/about/>
- [3] Bora, P. J., & Kumar, Y. (2003). Floristic Diversity of Assam: Study of Pabitora Wildlife Sanctuary. Daya Publishing House.
- [4] Baruah, D. R. K., Nath, B., & Ahmed, R. (2023). Assam Year Book. Ashok Publication.
- [5] Indian rhinoceros in Pobitora Wildlife Sanctuary. (n.d.). Wikipedia. Retrieved August 18, 2023, from https://en.wikipedia.org/wiki/Pobitora_Wildlife_Sanctuary