

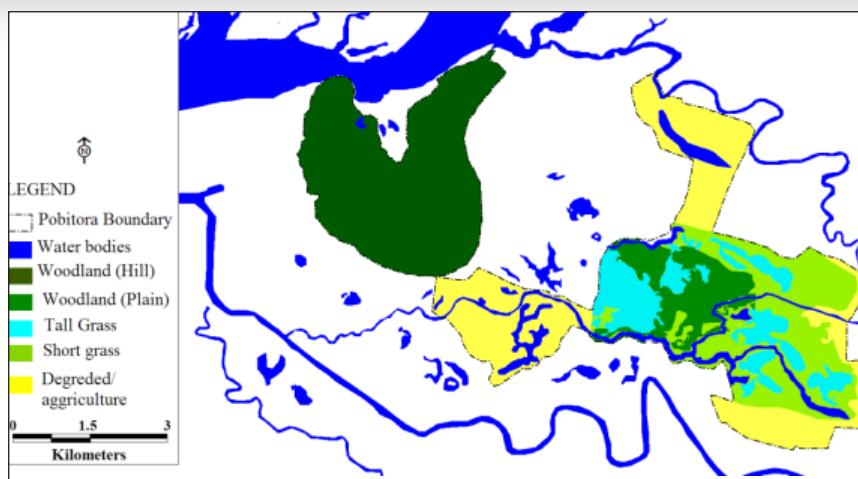
## Land of Rhinos - a chronicle

Pobitora in Assam is a small sanctuary which houses the peak density of wild Greater One-horned Rhinoceros *Rhinoceros unicornis* in the world. As the sanctuary is encircled by villages on all sides, it has very little scope for expansion (Bhatta 2011). Though declared a sanctuary in 1987, it has a decidedly leaky boundary, with cattle, wood cutters, and herdsman freely moving in and out of the area (Bhatta & Kumar 2011).

During specific festivals, throngs of villagers encroach into the sanctuary and fish indiscriminately in the wetlands, driving away the resident animals. Wild Rhinos often move outside the sanctuary and enter human habitats in search of food leading to serious man-animal conflict (Bhatta 2011).

The muggy grasslands, interspersed with woodlands and wetlands, make Pobitora the perfect habitat for the Greater One-horned Rhino (Saikia 2019). The park's





Map of Pobitora Wildlife Sanctuary (from Ramesh & Kumar 2011).

growing Rhino population was observed while conducting survey on foot, where Rhinos with their infants were sighted quite frequently even though the resources available for their survival appeared to be extremely limited. After interactions with forest officials regarding the growing overpopulation of Greater One-horned Rhinos, the fierce competition among the animals for food, space, shelter, and mates emerged as some of the leading causes of concern in the sanctuary. It could lead to inbreeding depression of this endangered species (Sinha et al 2011).

While conducting intensive survey on grass birds inside the sanctuary, frequent sightings of Rhinos along with the bird species

nestled inside the grass tussocks, was a rewarding and fulfilling experience. Forest range officers of the sanctuary arranged for two experienced armed forest guards to accompany us, who were extremely passionate about their work and regaled us with stories of their experiences, which provided us with immensely valuable insights about Rhinos and their habitats. One of the major concerns was the extensive cattle grazing inside the sanctuary from the encircling villages which invades the Rhino territories, leaving the pachyderms to scrounge for food, making them predisposed to diseases (Bhatta 2011).

While a major portion of the grass collected by the local villagers is used as fodder

for cattle. They also end up destroying a huge amount of grass by burning it improperly during collection of thatch which essentially creates the shortage of food inside the sanctuary. We also observed the invasion of weeds, which can be a dominant threat to the grassland which debases its quality as available fodder for Indian Rhinos (Saikia 2019). Straying of Rhinos out of the sanctuary in search of food, to private agricultural areas, scrub areas, and floodplains of the river Brahmaputra has become the prevalent norm (Bhatta 2011). Another important observation was that the Rhinos at Pobitora showed inadequate reaction when approached by tourists, protection staff or researchers as compared to other protected areas of Assam, which can be the result of the regular ongoing anthropogenic interferences in the sanctuary.

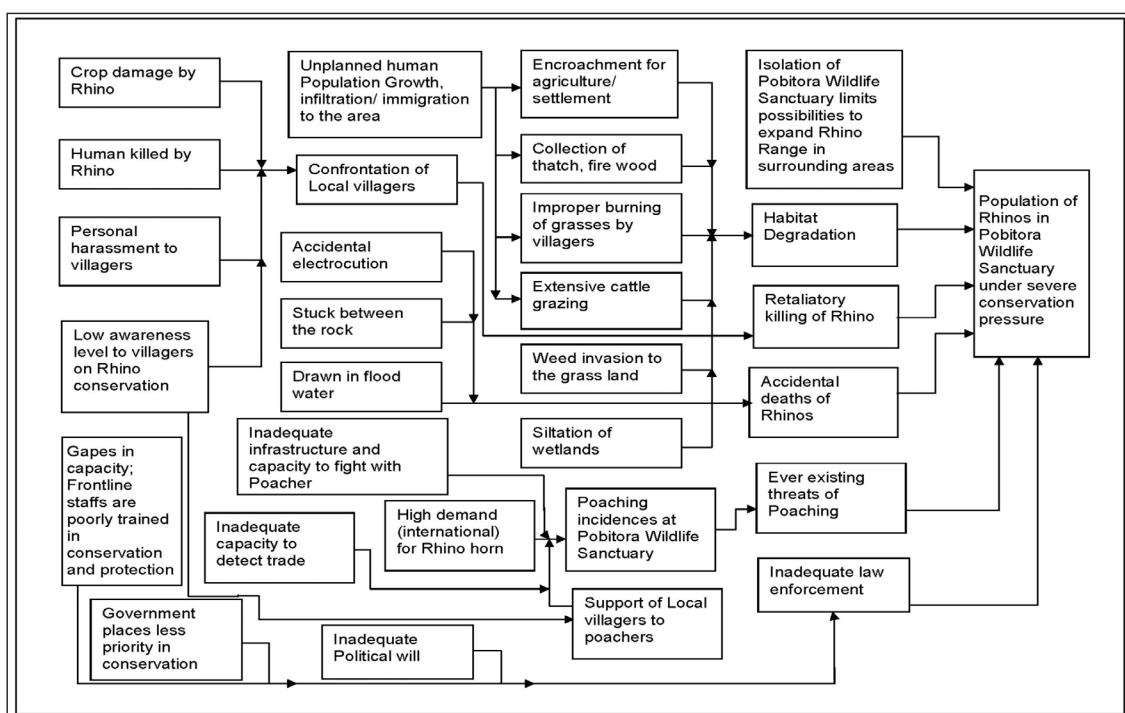
From interaction with forest officials, we came to know that around 10 km<sup>2</sup> area was found to be used by local villagers for agriculture. Intensive agricultural practices just adjacent to the border had also affected the habitat

and the behaviour of wild animals including Rhinos (Sinha et al. 2011). After construction of PWD roads, the process of siltation of wetlands was found to be accelerated without sufficient water channels (Sinha et al. 2011). Expansion of woodland towards grassland habitat was also found to be common in the sanctuary which had endangered the grassland habitat. Poaching of Rhinos for horn was common in the sanctuary (Sinha et al. 2011). The main modes of poaching were recorded as electrocution, bullet injury, and poisoning (Sinha et al. 2011). Forest guards are given permission to shoot at sight and during

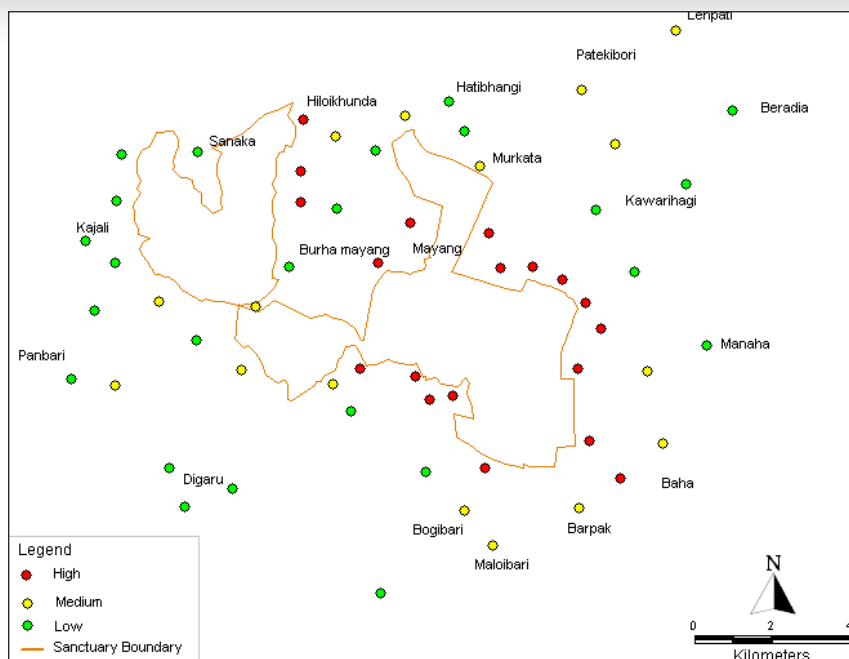
the survey in the sanctuary, they showed us some areas where they had encountered poachers and were forced to take extreme measures like shots fired in their direction to control the situation at hand. They also informed us that in order to further contest the poaching incidents in the sanctuary and keep a check on the conflict, use of unmanned aerial vehicles (UAVs) can be an immensely useful technique for the forest department officials. With the help of UAV's, they managed to cover great distances in the conflict area in order to remotely identify the site of the 'problem animal'. This helps them to

strategize procedures for tranquilizing and rescuing affected Rhinos, without risking any casualties.

As the forest guards were so amicable, I contacted them after the protracted flood of Assam in 2020, which had washed away the huge grasslands and swamped 70 % of the forest, leading to a food scarcity for the animals. Rhinos turned nomadic and entered human habitats in search of sustenance leading the forest department to face a complicated situation. They arranged for boats loaded with fresh grass to transport to the highlands inside the park in order to deliver



Threats and pressures on survival of Indian Rhino in Pobitora Wildlife Sanctuary (Bhatta 2011).



**Distribution of Rhino-affected villages around Pobitora Wildlife Sanctuary (Bhatta 2011).**

fodder to the marooned Rhinos of the sanctuary. It was also very surprising to learn that for the very first time, a Rhino mother and her calf came up to 10 feet distance from their doorstep due to the ceaseless rains, while grazing on overgrown grasses near the base camp.

Pobitora Wildlife Sanctuary is home to around 102 Endangered Greater One-horned Rhinos according to the last census carried out at the end of 2018. After completion of our survey in the sanctuary, I had a detailed discussion with the range officer where we came to the conclusion that in order to manage the

population of Rhinos and protect the small isolated area, there is an urgent need for applied research through collaborations between social scientists and ecologists, who can help people understand the diverse rudiments of human-wildlife interactions. This can be helpful to conserve the Rhinos and assure the wellbeing of the neighbouring people at the same time. Additionally, rules need to be enforced strictly and alternative means of grazing should be provided to villagers before it causes irreparable damage. This could amplify enthusiasm to conserve the Rhinos and their habitats

rather than destroying them through burning, over-grazing, and agriculture. The present is the perfect time to practice some new-fangled ways to assimilate economic development hand in hand with conservation.

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**Citation:** Dutta, S. (2021). Land of Rhinos - a chronicle. *Mammal Tales #31, In: Zoo's Print 36(6): 11–14.*