

## **TRANSLOCATION OF GREATER ONE-HORNED RHINOCEROS**

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At present the family rhinocerotidae contain five herbivorous species. They include white (*Ceratotherium simum*) and black (*Diceros bicornis*), Javan (*Rhinoceros sondaicus*) rhinoceros, Sumatran (*Dicerorhinus sumatrensis*) and greater one-horned (*Rhinoceros unicornis*) rhinoceros. Of the five species, white and black rhinoceros are restricted to the African continent, Javan and Sumatran rhinos are confined in South-East Asia and the greater one-horned rhinoceros is found only in South Asia mainly in Nepal and India.

The greater one-horned rhinoceros (henceforth called as rhinoceros) once inhabited throughout the Indus, Brahmaputra and Gangetic floodplains and nearby foothills of south Asia. Due to rampant poaching and loss of suitable habitat, rhinoceros are now restricted to a few isolated pockets of protected areas. Few greater one-horned rhinoceros roaming in forested areas of Sindha, Pakistan, are believed to have disappeared by early 1990s. Similarly, few animals residing along Indo-Bhutan border are also inclined to poaching.

At present, only two populations contain above 600 individuals. Royal Chitwan National Park in mid lowland, Nepal and Kaziranga National Park, Assam India. Kaziranga holds the largest population with an estimated present population of about 1500 animals at present.

In Nepal, Chitwan Valley harbored about 1000 animals until 1950. Indiscriminate poaching and destruction of their prime habitats between 1950s and 1960s drastically reduced this population to about 100 animals. However, with the creation of the National Park in 1973, and adequate protection, the population in Chitwan has now revived to above 600 individuals.

To establish a new viable breeding population and to protect this species from natural calamities and disease, several individuals were translocated from Chitwan to Dudwa National Park, India, and Royal Bardia National Parks, western lowland Nepal. Among 38 rhinoceros translocated to Royal Bardia National Park, 13 were released in Kamali floodplain in 1986 and 25 were released in Babai Valley in 1991.

The newly established sub-population in Bardia seems to be doing well as new births have been recorded in different occasions. Although an exact number of animals in both areas remains unknown, as no such scientific census has been carried out to estimate population size of rhinoceros to date. A crude estimate ( $n = ca. 40$  animals in both areas) of rhino number in Bardia shows that the population has not yet reached the viable number as a minimum number for a viable rhino population is said to be 50 individuals.

Considering this, a few more animals of both sexes need to be translocated in the area, preferably in Babai Valley. The possible conflict between human and rhinoceros is expected to be minimal if Babai Valley is considered for further rhino translocation. However, the following criteria should be met before any further attempts of rhino translocation in Bardia is being made:

1. **Habitat study:** A detail study of suitable habitats available for rhinoceros in the area should be carried out before any further translocation is made. This will help to determine the carrying capacity of the potential rhino areas.
2. **Rhino guard-post:** As poaching incidents have occasionally been recorded in Bardia, construction of rhino guard-posts in different poaching prone areas is inevitable to ensure protection of the animals against probable poaching incidents. The following sites have been proposed for rhino guard-posts: Babai Valley: Lalmati, Shivpur, Thulosiri and Kalinara Geruwa area: Sarkhol, Pattharboji, both outside the park boundary

3. **Monitoring system:** A lack of a systematic monitoring system has caused tremendous difficulties in proper management of released rhinoceros in both Karnali floodplain and Babai Valley. Therefore, a systematic scientific monitoring system should be developed and implemented as soon as possible to ensure long-term survival of this endangered species.
4. **Strengthening of existing anti-poaching unit:** The existing anti-poaching unit in Bardia has been able to minimize poaching incidents satisfactorily. However, the crew seems to have inadequate field gear required during the operation. This includes a good 4-wheel drive vehicle, motorbikes (2), good flashlights, night vision, etc.

