

## Challenges of rhino conservation in India

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The report on the future of one-horned Indian rhinoceros (*Rhinoceros unicornis* Linnaeus, 1758) is alarming. A recently conducted Population Viability Analysis (PVA) suggests the great risk of extinction of the Indian rhinoceros, if the current rate of poaching and habitat loss and fragmentation continue unabated. However, although the PVA software is good for predicting future projections on population dynamics of vulnerable species; however, it is more of academic interest than of practical use. The PVA has several limitations and is criticized for weighing some parameters higher over others and hence the outcome it provides is often of academic importance rather than practical value. Furthermore, several parameters included in the PVA model are more relevant for developed countries and hence not always accurate for developing and under developed nations. Hence, one has to accept the evaluations provided by PVA with skepticism as this a simulation modulator only. None the less, the situation in Kazairanga and Manas sanctuaries in Assam in north-east India and adjoining sanctuaries in North Bengal in eastern India are showing signs of decay with respect to rhino habitat and security. No software or ground survey is needed to predict the fact that the future of the Indian rhino is appearing grim unless appropriate actions are immediately taken. The conservation of umbrella species like rhinos, tigers and elephants should be included in the national budget as they

need way more support now than earlier and should be made a national priority. The extension of the protected area is a valid point. But since the current system is not even able to provide security to the existing area; whether it will be able to provide security and protection to extended area is an important question to ask. Last but not the least the report takes into account of all possible parameters; except effective measures in dealing with the severe existing anthropogenic pressures on the sanctuary. The last point is the most important as this is the root of all conservation nightmares. Without improvement in the quality of human life around the sanctuary specifically the fringe residents and forest dwellers, the issue of poaching could never be dealt with successfully; and hence the conservation of the rhino and other vulnerable wildlife species in the region are in a limbo. The unfortunate death of a ranger in the hands of poachers in Kaziranga is silently demonstrating how serious the situation is turning with respect to poaching in the state. Similar incidents are also anticipated in the unguarded forests of North Bengal in the not so distant future. This is a warning call for both the State and Central Governments to act with efficiency at the highest level and to cooperate and coordinate with one another to the best of their ability. Hope the concerned authorities take the corrective steps before the situation goes out of hand. This is no time to play politics or engage

in mindless blame game. Assam's loss is not only a great loss for India but the entire world. We all need to stand together to resolve this huge crisis which has the potential to wipe put the majestic rhino population in next 20-25 years if we fail to act now.

Without the involvement of the common mass, educate and uneducated, fringe dwellers, forest residents and remote rural tribal communities and village members; any success in conservation of the vulnerable wildlife is only but a distant dream. Only through education, awareness and involvements of all stakeholders in the process of conservation evils such as encroachments into forested areas, poaching. Illegal trade on wildlife and their body parts could be controlled. The administration as well the society needs to make connection with the marginal people living around national parks and sanctuaries to give meaningful and successful dynamics to the conservation efforts, Unless the economic needs of the poorest of the poor living in remote areas adjacent to wildlife is improved, no successful conservation efforts could be generated only through armed protection and government policies. It has been quite a relief to note that the Central Government of India has pledged to protect the Indian rhino from extensive poaching pressures in Assam. However, if the effort and coordination is restricted to the north-east with Assam centric focus, the wild rhino population in north Bengal will be the next big target of organized poaching groups. In the context of present lawlessness and failure of the local administration in providing security, if the poaching units from North East shift their operational

base to north Bengal; not only the rhinos, the entire vulnerable wildlife populations of the state will be decimated. If the Central Government is really serious, a comprehensive plan needs to be chalked out integrating Bengal and Assam; as well as Nepal and Bhutan together in a transboundary rhino and wildlife coordination and cooperation deal in successfully dealing with highly organized poaching groups operating in these areas. Furthermore if socio-economic conditions of the indigenous human populations in and around the rhino habitats are not improved with alternate employment opportunities and stable economic developments in the region following the new paradigms of Eco-sociology; rhino conservation is nothing but a distant dream.



Fig 1. One-horned Indian rhinoceros at the Indian national Museum at Kolkata WB India.



Fig 2. Rhinoceros inscribed on Indian coin.



Fig 3. Rhinoceros on Indian postage stamp released in 1962.

## References

1. Adhikari, B. P., Haider, W., Gurung, O., Poudyal, M., Beardmore, B., Knowler, D., & Van Beukering, P. (2005). Economic Incentives and Poaching of the One-Horned Indian Rhinoceros in Nepal Stakeholder Perspectives in Biodiversity Conservation: Analysis of Local, National and Global Stakes in Rhino Conservation in Royal Chitwan National Park, Nepal. PREM Working Paper No. 05-12.
2. Amin, R., Thomas, K., Emslie, R. H., Foose, T. J., & Strien, N. (2006). An overview of the conservation status of and threats to rhinoceros species in the wild. *International Zoo Yearbook*, 40(1), 96-117.
3. Berger, J. (1993). Rhino conservation tactics. *Nature*, 361, 121.
4. Berger, J., & Cunningham, C. (1994). Phenotypic alterations, evolutionarily significant structures, and rhino conservation. *Conservation Biology*, 8(3), 833-840.
5. Foose, T. J. (1993). Global management of rhinos. In *Proceedings of an international conference: rhinoceros biology and conservation* (O.A. Ryder, ed.). Zoological Society of San Diego, San Diego, California (pp. 32-47).
6. Khan, M. K. B. M. (1997). *Asian rhinos: status survey and conservation action plan*. T. J. Foose, & N. J. van Strien (Eds.). IUCN.
7. Martin, E. (1999). West Bengal: committed to rhino conservation yet a major entrepot for endangered wildlife products. *Pachyderm*, (27), 105-112.
8. Milliken, T., Emslie, R. H., & Talukdar, B. (2009, November). African and Asian rhinoceroses—status, conservation and trade. In *A report from the IUCN Species Survival Commission (IUCN/SSC) African and Asian Rhino Specialist Groups and TRAFFIC to the CITES Secretariat pursuant to Resolution Conf(Vol. 9)*.
9. Penny, M. (1987). *Rhinos: endangered species*. Christopher Helm Publishers, Incorporated.
10. Sinha, S. P. (2003). Assessment of corridor viability and habitat restoration between Dudhwa National Park and Katerniaghata Wildlife Sanctuary and its management in Western Terai Rhino Conservation Unit. *Kheri District, Uttar Pradesh, India*.
11. Talukdar, B. K. (2000). The current state of rhino in Assam and threats in the 21st century. *Pachyderm*, 29, 39-47.
12. Walpole, M. (2000). GIS as a tool for rhino conservation. *Pachyderm*, 28, 65-72.