Volume 3 | Issue 4 | Aug 2012

Paradise Lost and Regained: Lessons from the National Parks of India

By Sonali Ghosh, Chandra Kumar

Subharnab Majumdar (via Flickr)

Efforts to protect India's Kaziranga National Park, by engaging local communities, providing employment, and collaborating with local government, have modeled the value of effective conservation for the past 25 years. Nearby Manas National Park has struggled to replicate this success.

In 1985 the United Nations Educational, Scientific and Cultural Organization (UNESCO) designated two world heritage sites in the tiny, mountainous province of Assam in northeastern India. UNESCO had sweeping ambitions to conserve the region's rich ecosystem of tigers, one-horned rhinos, elephants, wild buffalo, and swamp deer. The Kaziranga National Park lay on Assam's alluvial floodplains along the Brahmaputra River, while Manas National Park hugged the foothills of the Bhutanese Himalayas. Yet these two parks, just 100 miles apart, and once joined by dense forest, were to experience very different fates over the following 25 years. Where Kaziranga has thrived, and its population of flagship rhinos quintupled, poachers have wiped out Manas' own rhino population and its habitat has been pillaged. This tale of two parks offers an important lesson on how to maintain healthy ecosystems: the welfare of local people, their engagement, and the alignment of political will across geographical scales are often critical to a park's long-term success.

Trouble began early on in the Manas world heritage site. In 1989 armed gunmen from the Bodo ethnic group, who had been fighting for a separate province for decades, attacked Manas' recently constructed office and residential quarters for the local park rangers.[1] Further park facilities were attacked in the coming months and years, with regular cases of murder, kidnapping, and extortion of rangers, who were understandably hesitant about patrolling the park.1 As the law and order situation deteriorated, local poachers wiped out the 80-odd population of rhinos by 1995.[2] Tiger and elephant poaching were also reported.[3] Herbivores fell prey as well, especially swamp deer, whose population dropped from 450 in 1992[3] to less than 20 animals at present.[4] The normal habitat management activities such as controlled burning of grasslands, desilting of water bodies, and prevention of livestock grazing could not be carried out, and the overall habitat quality deteriorated.[5,6]

The downfall of Manas therefore traced a predictable pattern of succession: the alienation of local communities, followed by breakdown of government machinery, local extinction of sensitive species, and finally an irreversible change in the landscape and permanent loss of the knowledge needed to guide future treatment and corrective measures. Was Manas simply the victim of this concurrent struggle for independence? The answer lies in a comparison with Kaziranga National Park, which also suffered from proximity to insurgent groups like the Bodo. In the early 1990s, Kaziranga's mega fauna were also heavily poached but, by the turn of the millennium, signature populations had not only stabilized, they were well on their way to doubling.

Kaziranga had several natural advantages over Manas. The park started with larger animal populations, and thus could better absorb heavy poaching. Terrain also played a part: animals like rhinos and pygmy hogs are specialist grazers and, in the Manas hills, grasslands were small and compact compared to Kaziranga, making the work of poachers easier. This was true as well for the Manas' Bengal florican, an endangered bustard (related to the crane) that uses select grassland pockets for breeding. The lack of habitat management in Manas also reduced viable grazing land due to rapid forest encroachment. Heavy monsoon rains in the Beki River routinely cut the park from access and ecotourism slumped as a result.

On the sociocultural side, the Assam-centered politics effectively ignored the troubles in Manas, whereas the proximity of Kaziranga to the capital and its importance as the "pride of Assam" compelled the government to provide special funds and manpower. But could Manas' fate have been avoided?

At each stage these distinct challenges could likely have been overcome, but Manas did not effectively factor local politics and communities into its plan. Space for politics in natural resource conservation is fundamental to its long-term success.

Subharnab Majumdar (via Flickr)
Populations of the red-listed one-horned rhino, among other threatened species, have made strong recoveries in Kaziranga National Park. Manas, on the other hand, has struggled to deal with poaching threats, and rhino populations have collapsed since the late 1980s. A program started in 2005 has so far reintroduced 22 rhinos into Manas from Kaziranga.

By contrast, Kaziranga Park continued to allow communal grazing in buffer areas. It also had the advantage of relative ethnic homogeneity in surrounding villages, which by and large did not support the insurgent groups.[3] Its recovery has been impressive: With the end of the insurgency in 1997, poaching numbers of animals like the rhino have been reduced to single digits, with the exception of 2007, when management was particularly (and briefly) poor.[7] Once the animal populations stabilized and the patrolling and monitoring mechanisms were in place, the park authorities could concentrate on habitat management activities. The park area was also doubled to include some of the adjoining forests and riverine areas. Though this increase required relocating a few fringe villages and acquiring lands from private plantations, the process generally occurred quite amicably. Camera-trap studies by research organizations indicated that Kaziranga habitat supports one of the highest tiger densities in the world. Recognizing this, the park's status was upgraded to a tiger reserve, which meant more funds and special focus on tigers and their prey within the management plan. At present, the park holds the world's largest population of wild tigers and, with its substantial force of field staff and ground infrastructure, has become an international model for park management.

As for the Manas National Park—once again, only 100 miles away—its path has been rocky, but there are signs of lessons learned. One significant development was the 2005 creation of the Bodoland Territorial Areas District, an autonomous district council vested with legislative and financial powers under the Indian Constitution and elected to power. This brought with it the signing of a peace accord, and the newly elected political representatives have prioritized the protection of Manas. Primary infrastructure such as all-weather approach roads and bridges to the park were constructed, and anti-poaching camps were reconstructed. Patrolling and wildlife monitoring has been taken up on a priority basis and scientific studies to ascertain the status of key species have been undertaken with the help of research organizations.[8,9]

Preliminary investigations revealed that tigers, elephants, gaurs, and the Asiatic wild buffalo were present in low numbers, whereas populations of rhino and swamp deer were nearly wiped out. A comprehensive rhino reintroduction plan was devised in 2005 that suggested reintroducing rhinos to Manas from Kaziranga and other national parks. Currently, there are 22 rhinos that have been reintroduced under this program.

Subharnab Majumdar (via Flickr)
Ecotourism in both Kaziranga and Manas has been a key support of conservation measures, and the jobs

The highlight of the recovery, though, has been the unique way in which the participation of local youth has been actively sought for the management of Manas and its buffer regions. The past sociopolitical situation in the region had forced many of the uneducated youth toward poaching and petty timber felling—the easy, perhaps only, means available to earn money. After the formation of a stable local government, these youth were employed as conservation volunteers on a monthly stipend and ration. They assisted the forest department in surveillance and patrolling activities. With the help of national and international nongovernmental

that it provides have helped bring local communities and governments on-board with the work.

organizations (NGOs), some of the youth were also trained to act as nature guides for small ecotourism enterprises. At present, there are more than 1,400 such conservation volunteers supported by the Bodoland Territorial Areas District government in at least 10 different locations spanning a total area of more than 2,840 square kilometers. Through this initiative, the local people now have a stake in protecting the park and a sense of pride in having such a biodiversity-rich area nearby. Indirectly, the recovery of Manas has also generated broad environmental awareness and kept the local, semi-educated population employed. Previously, there was seldom any work besides farming, which is seasonally specific and provides low wages.[10] This local engagement combined with a more stable and amenable government has helped stave off and reverse the decline of Manas National Park.

Although one-size-fits-all solutions to park management may be counterproductive, a careful examination and nuanced understanding of failures at one location provides important lessons for other parks facing similar problems. In our opinion, parks in India carry two prime objectives: first, protection from exploitation of the target species, and, second, long-term preservation in a natural state. Often such frameworks remain inflexible and exclusive to the local stakeholders. Continuous neglect of these dynamics produces an environment of mistrust and exploitation until the park itself becomes a potent and destructive symbol of disempowerment. Manas National Park is just beginning to glimpse what an alternative future might hold.

Note: The views expressed in this article are those of the authors alone.

References

1. Assam Forest Department. Draft management plan: Manas Tiger Reserve (2011).
2. Menon, V. Under seige: Poaching and protection of greater one-horned rhinoceros in India. *TRAFFIC India* (1996).
3. Talukdar, BK. Challenges faced in tiger conservation in Manas National Park of Assam, India. *Tiger Paper* 37, 4 (2003).
4. Das JP, Sinha, A & Talukdar. *Swamp Deer in Manas: Present Status and Feasibility of Restocking: Report Submitted to Manas Project Tiger Directorate, Assam Forest Department* (2009).
5. Seidensticker, J et al. Tiger range collapse and recovery at the base of the Himalayas. In *Biology and Conservation of Wild Felids* (Macdonald, DW & Loveridge, AJ, eds) 12, 305-324 (Oxford University Press, Oxford, 2010).
6. Sarma, PK, et al. Land-use and land-cover change and future implication analysis in Manas National Park, India, using multi-temporal satellite data. *Current Science* 95, 223–227 (2008).
7. Martin E, Talukdar, BK & Vigne, L. Stir in rhino poaching turn conservationists into action. *Oryx* 43, 323–328 (2009).
8. Barman R, Sinha, SK, Singh, RK, Srivastava, DS & Mishra, RP. *Appraisal of Manas Tiger Reserve, Assam: Report Submitted to the National Tiger Conservation Authority* (2009).
9. Mathur V, Vasu, NK, Singh, P, Pal, P, & David, A. *Rapid Assessment of Wildlife Values in Manas World Heritage Site, Assam: Report Submitted by Wildlife Institute of India to Ministry of Environment and Forests* (Government of India, New Delhi, 2007).
10. Horwich, RH et al. Community protection of the Manas Biosphere Reserve in Assam, India and the endangered golden langur (*Trachypithecus geei*). *Oryx* 44, 252–260 (2010).