

Hunting tales

I met Mr. T on the road to Moying. He was in an overloaded Mahindra Pickup that belonged to the JP Group, a company building a hydro-electric plant up north towards Tuting, the last 'town' before the China border in Upper Siang district of Arunachal Pradesh. Mr. T worked for the JP Group. He was from Andhra Pradesh. It is easier and less embarrassing to just call him Mister 'T'.

I was walking towards Moying from my study village Bomdo in Upper Siang. My village doesn't have mobile connectivity, so occasional trips to a 'network point' were necessary to assure people at home that I was alive and well. Unfortunately, there was no local transport and the 22 km to the 'network point' would have to be covered on foot. The sound of the vehicle was a welcome noise and I signaled for a lift. Five minutes later I was inside answering a volley of questions from Mr. T. Predictably, he ranted on about the constant rain, lack of mobile connectivity, remoteness and excess of jungle! So, what was I doing here? I told him I was studying wildlife in community managed forests among other things.

Mr. T was shocked. "Really? What is there to study? People here kill and eat everything. I haven't seen a single bird here!"

That was my cue. I told him it was surprising he hadn't seen a single bird while I recorded over 200 species in a year within the vicinity of the village. There was evidence of 20 species of mammals and although I hadn't been very fastidious in searching for butterflies, I still recorded over 50 species. The people who 'kill and eat everything' must be doing something right if such an impressive assortment of wildlife still existed after all their exertions.



Trophies on display in an Adi home in Bomdo.

I also told him that having spent a long time here, I now realized that we city dwellers eat a lot more meat than them.

Mr. T's comments are not uncommon—they reflect the views of a majority. However, the supreme irony is that when it comes to biodiversity loss, nothing could beat his own company and others building mega dams across Arunachal.

As I contemplated how to break the bad news to him, Mr. T asked: "Can you get me two *totas* (parakeets)? I need some pets."

Oh well. This was going to be even more difficult than I thought.

The focus of my research is to understand patterns of village hunting in this remote Adi village and how it is affected by cultural, socioeconomic and institutional factors. The hope is that my study, and similar interdisciplinary studies, will begin to change preconceived notions about hunting and introduce greater room for debate on current policies that govern hunting.

Assessing tourism impacts in Singhalila and Neora Valley

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The fragile, biologically rich and aesthetically beautiful landscape of Singhalila has been receiving tourists officially for 20 years now, shortly after the area was declared a National Park in 1992. It also resulted in the eviction of livestock herders, leading to a major shift in livelihood strategies from animal husbandry to tourism.

Tourism saw an exponential growth after this with corresponding livelihood dependence on tourism. A survey of nine villages in December 2011, showed that about 69 per cent of households have tourism as their primary source of income. Upper Neora Valley which harbours pristine red panda habitat, and an array of other wildlife habitats, received an average of 84 visitors per month as compared to 349 per month in Singalila in 2006, indicating a low tourist visitation to Upper Neora. The fringe villages of Upper Neora primarily consist of farming communities. However, the likelihood of growth in tourism to Upper Neora Valley is possible with the nearest town of Lava (14km away) developing as a tourism hub in the area. In 2006, Lava had 300 households with 34 hotels, and 19 restaurants catering to tourists.

Studies have shown that tourism has contributed little to poverty reduction in mountain areas, attributing this to policy failures, poor regulations, lack of human resource development, lack of supply facilities, management and revenue leakages. In such cases, where tourism loses its purpose in sensitive habitats, it could potentially have negative socioecological impacts.

With these issues in mind, this study on tourism along the Singalila trek route and Upper Neora Valley seeks to answer a few broad questions:

- What is the current state of tourism in the study locations?
- What is tourism's contribution to the local economy?
- In what ways do communities perceive links between red panda conservation and improvement in local economy (do they see tourism as a strategy?)
- What are the challenges in developing a sustainable tourism strategy in the study areas?
- How has tourism expanded or developed over time and how has it encroached or will encroach and impact red panda habitat?

Our preliminary surveys, focused around the last question related to growth trends of accommodation facilities along the Singhalila trek route, have shown that 26 percent of the facilities came up between 1994 and 2003 (within 10 years of the area being declared a National Park), 46 percent came up between 2004-2012, with as much as 50 percent established in the last 2-3 years (2010-2012). Further, tourism has expanded to new locations. As much as 28 percent of the accommodation facilities were available before the area was declared a National Park (<1993). It will be interesting to find out the driving forces and impacts of these trends.

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Dhotray, an old village with new tourism facilities on the Singalila trek route.

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Ecosystem services and adaptive management

Stakeholder consultation workshops have been held in Sikkim and Darjeeling as a part of the project on 'Integrated approaches to adaptive resilience-based management of forests for supporting agro-systems in the Sikkim-Darjeeling Himalayas'. The first was held in Gangtok on 23 March and the second in Darjeeling on 26 March 2013.

These workshops involved key stakeholders from government agencies and civil society. The aim was to present the project background, overall and specific objectives, the potential study sites and to seek feedback on these aspects and any other area that they felt might have been left out in the project outline and required an assessment. The project focuses on assessment and quantification of ecosystem services according to how highly each service is valued by the communities, the mapping of these services and disservices (like human wildlife conflict) and indicators.

The consultations proved to be helpful in terms of inputs regarding assessments and site selection. Some other areas were also included as potential sites for case studies in Sikkim and Darjeeling in order to study the valuation of ecosystem services by communities. A framework for the assessment and for preparing an inventory of ecosystem services specific to the region was also suggested.



View of Dzongu valley from Puntung village, Upper Dzongu, North Sikkim.



An informal chat with members of Dim Pandi (self help group) of Puntung village, Upper Dzongu.

The months of January and February were spent visiting potential sites all over Sikkim and Darjeeling. In terms of management regimes it was initially decided to include areas of Lachen Valley in North Sikkim and monastery forests in West Sikkim to study traditional management models and examine how they depend on and manage certain ecosystem services. The other regime is private forests and for that we have decided to look at cardamom plantations in Dzongu, North Sikkim and tea plantations with forests in Makaibari tea estate, Kurseong. Finally, in order to study government managed forests, sites were chosen on the basis of proximity gradient from forests, in the Senchel Wildlife Sanctuary and Singhalila National Park, where villages fringing reserved forests and protected areas were selected.

The main objective of this project is to understand how social-ecological systems can be managed and governed to generate a sustained supply of ecosystem services and support associated livelihoods without impairing key ecosystem properties and functions—biodiversity, hydrological services, etc—that are necessary for maintaining resilience in the face of climate variability and change.

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Saving the white-bellied heron from extinction



Koilamoila – one of the sites on the India-Bhutan border.

A new project to conserve the critically endangered white-bellied heron *Ardea insignis* is being implemented by ATREE in key sites of the Manas Tiger Reserve in Assam. The 18-month project is supported by the IUCN-SOS (Save Our Species) Fund.

During the first quarter, a project team from ATREE Guwahati and the Eastern Himalayas Regional Office undertook field visits to two sites in the Bodoland Territorial Council area of Assam—Koilamoila, in Manas Reserve Forest; and, Pagladiya, in Subankhata Reserve Forest. These sites were selected based on the results of an survey undertaken by local NGO Nature's Foster in 2010 with an CEPF small grant. This species-focused project complements the larger biodiversity conservation project that ATREE has been undertaking in Manas National Park, which forms the core zone of the larger Tiger Reserve.

Indications of habitat degradation and disturbance were evident in the sites where the white bellied heron has been reported. Extraction of fuelwood, removal of sand and gravel from river courses, unsustainable fishing and hunting appear to be the major threats to the species. The bird is generally believed to prefer undisturbed hill streams.

The ATREE team met with key stakeholders from the forest department and civil society to explain the aims and objectives of the project. The stakeholders showed enthusiasm and assured their support. The forest department and several local NGOs and CBOs are working to address some of the threats to the species. However, the scale of the task, the difficult terrain, and the political and security situation in the region remain key challenges.

The project will focus on securing key sites for species recovery by engaging with local communities, training a cadre of 'heron guardians' and creating disturbance-free zones through community support and sanction.

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Monitoring wildlife in Kaziranga



The Assam Forest Department invited ATREE to participate in a study to estimate tiger and other wildlife populations in Kaziranga National Park. The objective is to estimate tiger population and density by photographic capture-recapture using remote camera traps. This is a collaborative effort with WWF and Aaranyak, and carried out under the supervision of Kaziranga National Park Authority/ Assam Forest Department.

The research protocol follows the guidelines prescribed by the National Tiger Conservation Authority and Wildlife Institute of India. The results will contribute to the long-term tiger and other wildlife population monitoring initiatives in Kaziranga National Park. ATREE researchers have deployed camera traps in two blocks across different ranges of the Park. The exercise commenced in February 2013 and is expected to finish by April 2013. Preliminary results from the cameratraps have produced high number of captures of tiger and other key wildlife species.

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Line transect surveys in Manas



Frontline staff during a practical session in Manas.

As a part of our wildlife monitoring efforts in Manas National Park, line transect surveys for estimating herbivore density were undertaken during February and March 2013. The team walked 7 transects with 5 replicates each, totaling 35 transects ranging from 1.5 to 2.2 km. The team encountered elephant, rhino, buffalo, gaur, sambar, barking deer, hog deer and a host of other smaller fauna.

As a prelude to this exercise, a training programme was conducted for frontline forest staff of Manas National Park in February 2013. It was jointly organized by ATREE, WWF, Aaranyak and Manas National Park Authority/Assam Forest Department and supported by the ATREE-USFWS project titled: 'Recovery of the Tiger and its Prey in Manas National Park, India'. Forty staff from three ranges were trained in the principles and methodology of Line Transect Survey used for estimating density of herbivores, and handling of GPS receivers, Laser Range Finders and Surveyor Compass. It was followed by a practical session that involved identifying, selecting and walking random line transects and taking readings of animals sighted during the survey using the field equipment.

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Workshops attended

Anand Gazmer and Sarala Khaling. Indo-US workshop on Biodiversity Informatics organized by ATREE in Bangalore, 19-20 January 2013.

Samuel Thomas. Himalayan

Connections: Disciplines, Geographies,

Trajectories: an interdisciplinary workshop at Yale

University, 9-10 March 2013.

Papers, presentations and lectures

Sunita Pradhan. Lectured at the Sikkim State Council of Science & Technology's 'Lecture Series for DNA Clubs of Sikkim' 16-22 March 2013, Sikkim Science Centre, Marchak, Gangtok.

Samuel Thomas. Presented a paper on 'The sacred and the material: everyday choices in resource landscapes in the Indian Eastern Himalayas' at the Conference on Everyday Religion and Sustainable Environments in the Himalayas, organised by The India-China Institute, The New School, New York 7-8 March 2013.

Grants received

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ATREE's mission is to promote socially just environmental conservation and sustainable development by generating rigorous interdisciplinary knowledge that engages actively with academia, policy makers, practitioners, activists, students and wider public audiences. ATREE's Northeast/Eastern Himalayas Programme has a direct presence in the Darjeeling and Sikkim Himalayas and Assam, and works with a range of local partners in the other states of north east India.

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