

The Multiple Meanings of Nature Conservation

Insights from Dibang Valley, Arunachal Pradesh

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With increasing concerns about the degradation of forests threatening the existence of wildlife, conservation projects are seen as the need of the hour. However, conservation as a concept is often understood differently by the local community, the scientific community, and the state. A critical examination of the ongoing efforts for tiger conservation in Dibang Valley, Arunachal Pradesh, exposes the fault lines in the narrative of nature conservation as the state imposes its agenda through the establishment of sanctuaries and reserves, without considering the needs of the local Mishmi tribe and excluding their traditional conservation practices.

Nature conservation is a challenge and steps taken towards it can often give rise to other issues. This is true especially in countries like India where a large part of the population is still dependent on natural resources for its immediate needs. Conservation efforts have given rise to conflicts and misunderstandings between different sets of actors engaged in promoting conservation practices (Brosius et al 2005). Varying notions of nature and nature conservation, which often result in conflicts and tensions, arise from the contradictory ideas of “nature” as understood by the local people and conservation organisations (Cronon 1996a). Some actors have the power to create and disseminate their ideas of nature that differ from how others imagine nature (West et al 2006). Examples from across the globe show that local communities are often seen as a hindrance to conservation practices; therefore, excluding them is considered legitimate (Brockington 2002; Igoe 2004; Kabra 2009).

There is a large body of literature from the social science perspective that questions the exclusion of people in conservation, both in historical and contemporary situations (Gadgil and Guha 1995; Kabra 2009; Rangarajan 1996; Saberwal et al 2001). The aim of this article, first, is to highlight the different ways of perceiving and understanding nature and its conservation. Second, I will examine a case from Arunachal Pradesh to analyse how the local Mishmi tribe responds when the state demands more land for wildlife protection (specifically the protection of tigers). Conservation sites close to international borders such as Dibang Valley, where this research was conducted, raise questions pertaining to the issues of wildlife protection, national security and development, making nature conservation projects a very complex enterprise.

Dibang Valley and Tiger Conservation

In 2013, two tiger cubs were rescued from a village close to Dibang Wildlife Sanctuary near the Sino–India border. What was claimed as the first reporting of tigers by biologists in Dibang Valley was common knowledge for local communities. To one of the biologists who visited Dibang Valley in the late 1990s to survey wildlife, the field assistant (a local villager) randomly mentioned that tigers were a problem there as they attacked their cattle. This information was refuted by the biologist saying that it was impossible for tigers to survive at such a high altitude and the landscape might not even have a viable prey population. The biologist asked for

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“evidence” of footprints or a photograph as a proof of the villager’s statement. The presence of tigers was finally confirmed several years later, when two tiger cubs were trapped in a dry water tank in the last village close to the Sino–India border. A rescue operation was conducted by a Delhi-based non-governmental organisation (NGO) with the help of the state forest department.

Since then, there have been numerous visits by forest officials, NGOs and wildlife researchers for documenting tiger population and their prey. This sudden interest in the valley’s conservation perplexed and surprised the villagers, as tigers had always been present in Dibang. Subsequently, the scientific surveys resulted in a proposal to upgrade the existing Dibang Wildlife Sanctuary to Dibang Tiger Reserve. When a circular from the forest department was sent to the village councils¹ regarding the setting up of an eco-sensitive zone (ESZ),² their apprehensions regarding the government’s increasing interest in the region were confirmed. This triggered discussions and debates among the Mishmis and many raised questions about the ESZ, as also about the visits by researchers and NGOs.

The Mishmis live in Arunachal Pradesh, a frontier state of North East India, also known as the “land of the rising sun.” It shares an international border with Tibet which is 1,126 kilometres long. The state has been largely cut-off from mainstream economic and infrastructural development until recently (Government of Arunachal Pradesh 2006). The Government of India in its national policy has imagined the region to be “backward” due to the lack of infrastructure and connectivity (Baruah 2003). Certain portions of Arunachal Pradesh’s territory were disputed, and claimed by China as well, which led to a war between India and China in 1962.

As of today, there are several indigenous communities on either side of the border. One among them is the Mishmi, with three subgroups (Idu, Digaru and Miju) who reside on the Indian side, that is, in Lohit, Anjaw, Lower Dibang Valley and Dibang Valley districts, which are called the Mishmi Hills. Another subgroup, the Deng Mishmis live on the Chinese side, in Zayul county in the Tibet Autonomous Council. There has been little or no connection with the Deng Mishmis in Tibet after the war between India and China in 1962. The movement of the Mishmi people across the border is restricted, thus affecting social ties and trade-related activities. This research was conducted in the Lower Dibang and Dibang Valley districts with the Idu Mishmis.

Dibang Valley is a particularly important site to study tensions over nature conservation. The area has attracted attention from various national and international actors, not only because the site is located within a biodiversity hotspot (Myers et al 2000), but also because its geopolitical location is crucial for national security. This has resulted in the setting up of infrastructure in these border regions by the Indian Army, Border Roads Organisation, and by the state administration (Pandit 2014). Various state players are also investing in Dibang Valley for infrastructure development, conservation and nation-building.

Nature Conservation and the Idea of Wilderness

The origin of the ideas about nature conservation can be traced back to two important historical moments. According to Jim Igoe (2004), these are (i) the enclosure movement in England during the 18th–19th century which transformed common property into private property, and (ii) the expansion of the 19th-century United States (US) model of “national parks,” which captured the imagination of political elites globally. Thus, began the social construct of wilderness, “nature,” and national parks. The assumption that only through having private property could natural resources be protected was strong. This was also articulated as the “tragedy of the commons,” where resources understood as “open access” were seen as vulnerable to depletion, unless strict rules of sustainable use were implemented (Hardin 1968).

National parks are one such example of the fencing of forests by the state to protect these lands, rather than leaving them open to people who have been dependent on forest resources for millennia and managing the resources according to customary laws.³ Therefore, ideas of privatisation of land are pitted against collective rights. This process resonates with the concept of “primitive accumulation” proposed by Karl Marx as a process which divorces the worker from the ownership of the conditions of his own labour (Marx 1979: 875).

According to Michael Perelman (2007), primitive accumulation can occur in three key ways: (i) as the direct expropriation of people’s means of livelihood, (ii) by forcing people to enter wage labour, and (iii) by the manipulation of the division of labour. These characteristics can be seen in different aspects of contemporary conservation policies and practices, but the catalyst is the “expropriation.” The kind of direct expropriation of forestlands and forcing people to adopt wage labour is seen as necessary to create protected areas as undisturbed “wild” spaces for fauna, flora and tourists, which Dan Brockington (2002) calls “fortress conservation.” People who work for subsistence as farmers, hunters or fisherfolk (primary producers) are forcefully removed from the means of production (land, forests, rivers), for the creation of parks in order to manufacture “pristine nature,” which Roderick Neumann (1998) appropriately calls “imposing wilderness” for the preservation of nature.

The concept of “nature conservation” is not just criticised for its practice, but also its ideology. Some scholars question the very foundation of conservation ideology which is seen as an imperialist agenda (MacKenzie 1988), as a “civilising mission,” and as having the mandate to “uplift the inferior races of the world” (Igoe 2004: 93). Others highlight that conservation is not as “noble” as it is thought to be (Duffy 2010). A large number of NGOs is involved in “teaching” people how to save and care for the environment. Converting them to “green and responsible” citizens is similar to the civilising mission of colonialism. Local people were also seen as “too ignorant to appreciate the beauty of nature” (Argyrou 2005; Parnwell and Bryant 1996). Through the civilising mission, Europeans “developed” both nature and people (Neumann 1998). A dual mandate of colonial rule, “the white man’s burden,” required control over nature and natives, both to be managed, improved

and developed for the benefit of the colony (Lugard 1972; Moore et al 2003). This is a mandate that conservationists tend to continue to implement: the control of “nature” and the control of the “native” (Argyrou 2005).

Nature in Conservation Narratives

A recurrent concern in conservation is the extent to which the understanding of conservation is misaligned with the understanding of “nature.” To understand why conservation is such a “prickly affair” (Erb 2012) the term nature has to be “unromanticised.” For quite some time, I have been uncomfortable with the idea that nature is “caring” and “nurturing.” Is not nature also a destroyer when it takes the form of disease and “natural” disasters such as tsunamis? Should we embrace everything about nature? Also, “when we say nature, do we mean to include ourselves?” asks Raymond Williams (1976: 67).

According to the Oxford dictionary, the word “nature” as a noun is “the phenomena of the physical world collectively, including plants, animals, the landscape, and other features and products of the earth, as opposed to humans or human creations.” This definition encodes for the English speaker the idea that nature does not include human beings or their works. Thus, the dictionary has a role in shaping our understanding of what nature is in the English-speaking world, which is, in fact, not true universally. However, it is stated as a matter of fact, such that English speakers come to accept this view as the one “truth.”⁴

The uses and meanings of the word nature generate different ideas and feelings, as the conditions of the human world change (Williams 1980: 85). To know nature is a complex, multiple and highly political process (Goldman et al 2011). “Nature” is a human idea, says William Cronon (1996b: 20), because of the long cultural history that led to various conceptions of the natural world in different ways. According to Cronon (1996b), the things, landscapes and living beings that we call “natural” are a manifestation of words, images and ideas. Our notion of nature is selective in the sense that we decide what we want to label as “natural.” This has left a deep and lasting impact on how policies and laws related to nature protection are formulated, especially the idea of wilderness for protecting nature.

The dominant narrative of conservationists is that nature is “untouched,” “virgin” and “wild.” The term “wilderness” is typically associated with the idea of Eden, an uncultivated and uninhabited land. American writers like John Muir and Henry David Thoreau played an important role in shaping how nature came to be imagined in the Western world (Cronon 1996a). Nineteenth-century writings professed biocentric or ecocentric views of nature, often excluding humans, especially humans who were “outside of the dominant class, race, or gender” (Naess 1989). Their writings had an influence on the wilderness movements and the setting up of the Yellowstone National Park, which became the model for establishing protected areas globally. Thus, protecting this “wild” form of nature required cultivating a moral right to dictate to others, especially to the indigenous peoples, not to hunt or fish in this “pristine nature.”

The “idea of wilderness” has been successfully infused in the disciplines of ecological and conservation sciences from their inception. Trained conservationists and field biologists use these ideas to advocate, plan and implement conservation projects across the world to preserve “wild” spaces. The problem with this approach is that any use of natural resources is seen as harming nature, even when it is for the survival of poor people. Hence, people who use natural resources for their livelihood and subsistence become “encroachers and poachers.” Vassos Argyrou (2009: 6) says that ecocentrism “is an extreme form of environmentalism” because it provides a justification for changing the world and changing people’s beliefs, at times overriding opposing views and even ignoring the rights of the local people. The conservationists’ mantra has been to evoke the idea of “pristine” to advocate for nature preservation (Neumann 1998). Such an imagination hides elements of humans and their creations. Conservationists see these spaces of wilderness as vulnerable because of the need for land, water, timber and forest produce.

The conservationist notion of vulnerability of nature is well articulated by Timothy Luke (1997: 71–74), who suggests that nature is seen as dead or dying by conservationists and global NGOs raise memorial sites in the world’s “last great places” in the form of national parks and wildlife sanctuaries. He even calls these sanctuaries as “nature cemeteries.” The notion of the death of nature or the “end of nature,” to use Bill McKibben’s (1989) phrase, emerges from the idea of an environmental crisis; that a decline in forest cover, extinction of wildlife, rise in global temperatures and sea levels project a “doomsday” like situation. Environmentalists and biologists speak the language of ecological emergency and crisis. For example, conservation biologists see dying nature in the form of “empty forests”⁵ (Redford 1992).

Forests where wild animals have been hunted indicate an “apocalyptic” situation. “Endangered,” “critically endangered,” or “threatened” species are metaphors of dying nature. Some even term the over-exploitation and depletion of natural resources as “bankrupting nature” (Wijkman and Rockstrom 2012). Therefore, places such as national parks become living museums and a natural laboratory to conserve the dying species, for future generations to enjoy (Carson 2014; Luke 1997). The conservationist’s view of nature is thus of preservation and one in which nature must be separated from human activities and creations.

Nature and Local Communities

In contrast to the conservationist’s understanding of nature, which sets humans apart from the natural environment, many indigenous people do not make that distinction. The boundary between the human world and the natural world is often blurred. Some cultures depict human relatedness to nature as a type of kinship, such as in terms of a parent–child relationship, sexual relatedness, procreation, or just simply “name-sake” relatedness (Bird-David 1990; Ingold 1996; Roy and Katsuyoshi 1996; Tanner 1979). Forests in some farming societies of India are seen as ancestors who unconditionally provide

food, which Nurit Bird-David (1990) calls the “giving environment,” where forests are viewed as parents and people as children of the forests.

This “giving environment” contrasts with the “reciprocating environment,” where the provision of food is conditional upon proper conduct, found among hunter-gatherers, such as the Nayakas (Bird-David 1990). Brian Morris (1982) shows that among the Malaipantaram (South Indian foragers), forests are an abode of their ancestral spirits and forest deities, which can be called upon for protection. Through the use of kinship relations with nature, indigenous people show their “belonging and genealogical ties” as sources of identity (Bird-David 1990; Tanner 1979).

Two important concepts are central to most indigenous groups: the presence of “spirits” in all non-human beings and objects (animals, trees, rivers, farms, houses) and the existence of an “owner of the forest” (Howell 1984; Ingold 1980). There are spirits that guard the farms and wild animals and provide safety, health and wealth. If people fail to satisfy these spirits, the harvests may fail and hunts may be unsuccessful. The rituals and taboos followed in connection with resource use (harvesting and hunting) are in the context of showing respect to the forest’s spirits and the spirits of the dead (Howell 1982; Morris 2000; Singh 1987). Forests and animals have owners and, therefore, people do not claim the ownership of these animals, but instead seek permission before hunting or farming. Another key belief among some indigenous peoples is that there is an exchange of vital force between humans and spirits through domesticated animal sacrifices, and from spirits to humans during hunting.

Tim Ingold (1980) calls ideas like these as supporting a “world renewing process” and thus contributing to the regeneration of life. Therefore, human–nature relations among indigenous people involve constant engagement of humans with various elements of nature and the spirits. This differs from the conservationists’ perspectives, and the basic difference is that conservationists consider humans and nature as separate, while indigenous people like the Mishmis do not see this separation.

Nature and Neo-liberalism

Recent participants in the domain of conservation are the neo-liberal lobby, who claim to be able to fix environmental problems through the market economy. This lobby sees nature as a commodity to be traded and constructed as a “world currency” (McAfee 1999). Natural resources are appropriated from local people and a price tag is put on nature for capital creation. Market-based solutions are often aligned with profit-driven corporations, disregarding local cultural values and uses. The belief continues to be that they need to “sell nature to save it” (McAfee 1999: 97). Rob Fletcher (2010: 172) rightly points out that, over the last few decades, conservation has become “infused with a neoliberal economic philosophy,” resulting in the creation of capitalist markets for natural resource use and consumption.

Ecotourism has been criticised for targeting new frontiers in nature and for packaging nature for global consumption (Laudati 2010). The spread of protected areas, the faith in ecotourism,

the infusing of conservation into developmental agendas, and the creation of community conservation programmes are clear indications that conservation is intertwined and often compatible with capitalism. This raises questions of ecological equity and justice, especially when different actors with different capacities seek to cooperate and collaborate with each other.

When multiple partners are involved in the practice of conservation, collaborations are formed through negotiations. Collaboration with different groups seems to be a socially equitable process of knowledge and skill sharing, but it is not a “simple sharing of information” (Tsing 2005: 13). This kind of association creates new interests where not everyone benefits, as these collaborations have their own limitations. Sometimes, the idea of “collaboration” also takes place in helping “an occupying enemy” (Erb and Acciaioli 2006: 144).

These collaborations can be said to be taking place in “contact zones.” Mary L Pratt (1991) defines these as “social spaces” where cultures meet, clash, and grapple with each other, often in the context of asymmetrical relations of power. They often culminate in a series of negotiations, promises, and compromises where communities are gently, or sometimes violently, forced to agree to the ideas offered by more powerful actors (Peluso 1993). Marginal communities that are already weak and vulnerable are pushed further to the periphery.

Community-based Conservation

Although community-based conservation (CBC) projects intend to provide an equitable platform for people’s participation, in hierarchical societies like those in India, there are groups (poor, landless, Dalits and indigenous tribes) whose voices are suppressed and there is often no or minimal participation from such communities. The inherent inequalities embedded in caste-based societies are part of a larger socio-economic and political process which conservation projects often ignore. Naya S Paudel (2005) argues that the lack of representation from these groups is a common feature in all rural development programmes. These inequalities have been aggravated by conservation projects, leading to the “double marginalisation” of vulnerable groups (Kothari 2003). For example, in India, the dominant Hindu nationalistic ideas have become crucial rallying points for environmental movements (Sharma 2012). Ideas of conservation are deeply Brahminical and work to marginalise Dalits, who are coerced to become vegetarians as their meat-eating practices are condemned as dirty, inferior and not being environment-friendly (Sharma 2012).

For a long time, conservationists struggled to keep people out of protected areas, but in the last two decades, there has been a serious attempt to bring people and nature back together (Adams 2004). This turning point came during the 1992 Convention on Biological Conservation, at the United Nations Conference on Environment and Development (the Rio “Earth Summit”). It was also the year of the World’s Indigenous Peoples, when the “experts” formally recognised the rights of indigenous people and their knowledge. The inclusive model provided platforms for collaboration between communities and NGOs. Many organisations, local and regional, adopted the

“community” in their project plans and the expression “community participation” became the new buzzword. CBC is seen as a “politically correct” way of doing conservation, but the reality on the ground suggests that it is overrated and has raised doubts on the socio-economic dimensions and differing intentions (Agrawal and Gibson 1999; Tsing et al 2005).

From the local communities’ point of view, conservation brings benefits to the community such as healthcare, additional sources of income, employment opportunities (tour guides, research assistants, porters), and access to new technology. Many NGOs believe that it is important to gain the goodwill of the poor communities that are in need of basic civic amenities like schools and hospitals. NGOs with the help of donors help build schools and health centres. Communities may get civic facilities like roads, schools, and hospitals, and also may in turn show substantial participation in conservation projects. Tracey Heatherington (2012), however, suggests that these initiatives are in fact a form of structural adjustment, which lead to the overall development of the area and do not particularly result in the conservation of resources or equal participation.

While the outcomes of CBC projects are said to empower people, some see this as a coercive way of diffusing ideas of global partners such as funding bodies and international NGOs, and as a way of controlling local resources (Peluso 1993). The expectations of local people from NGOs and vice versa often do not match and it seems as if they are speaking different languages (Brown 1998; West 2006). NGOs sometimes have opposing agendas, which lead to disappointments for both the parties (West 2006). The vision of conservationists to protect nature is seen only as a management issue unrelated to the rights of the local people (Alcorn 2005), whereas local communities aim to gain some employment and income through conservation projects (West 2006). CBCs are part of a larger process in which multiple actors, institutions and discourses define, contest, reinterpret and enforce claims over resources, making it a complex political process (Paudel et al 2007).

Nature Conservation in Dibang Valley

The local people did not know about the proposal for a tiger reserve until they received a letter from the forest department for the setting up of an ESZ. This created some suspicion about the forest department and deepened the mistrust between the people and the department. When a team of researchers arrived in 2014, the local residents realised that the news regarding the tiger reserve could indeed be true and their concerns mounted. Their anxieties manifested in disagreements during meetings between the residents and the visiting research teams, NGOs, and the forest department. One of the local residents in Dibang Valley retorted, “Why a tiger reserve here? We don’t hunt tigers, they are our elder brothers! Tigers and humans were born to the same mother. We are protecting them anyway” (personal interview, 2014).

The Mishmis in general take pride in claiming their kinship with tigers and in the fact that their culture protects tigers. Anyone visiting the Mishmi Hills and interested in wildlife and conservation cannot miss the mythological story of the

Mishmis and tigers as children of the same mother. These narratives of tigers as siblings are also popular in other parts of Arunachal and North East India (Aisher 2005; Aiyadurai 2007). For the Mishmis, one of the anxieties is that when the sanctuary becomes a tiger reserve, more of their land will be taken away for conservation purposes, sometimes resulting in confrontation with the authorities and not permitting research plans to be implemented. In January 2014, a tiger survey team from the Government of India was not permitted to enter the forests for research. In another incident, a Geographic Information System team from a Delhi-based NGO to map the sanctuary was permitted to visit the forests, but only after a serious discussion by the village council members. Incidents like these are rare, but the sudden increase in the interest in tigers by the state, without official consultations with the people, is leading to such situations. People fear that the government will take more of their land if a tiger reserve is set up.

We are not opposing them (forest department). We have already given 4,914 square kilometres (sq km) to wildlife.⁶ Where will we sit? Where will we have developmental activities, if we give all to wildlife? If there is no human existence, what is the meaning of wildlife? We have to focus on people. (personal interview, 2014)

The trust deficit between the forest department and the local villagers is not new, but there seems to be an increase in the mistrust of researchers and NGOs. A PhD student from the United Kingdom studying Dibang forests and wildlife shared his experience during his research in the Dibang Valley district, and the following is an excerpt from his report:

There appears to be widespread dislike for the forest department and any entity they represent (for instance, wildlife conservation), ... the senior most forest official in Dibang Valley, has been unresponsive to people’s complaints about mithun depredation by wild animals. However, recently he sent around a notice to the villages within a certain radius of the protected area boundary declaring that their land was going to be included in an eco-sensitive zone with restrictions on hunting and farming. This has created further mistrust between the people and the department. (Nijhawan 2014)

Among the NGOs and the community of biologists, the excitement of declaring this protected area as a tiger reserve was high. According to a member of the State Wildlife Board, “Dibang Valley is a very good tiger habitat and rich in wildlife. However, no studies have been done on this landscape; on the tiger or any other species. This area has the potential to even be declared a tiger reserve” (Dutta 2012). He is also a highly influential member of the Mishmi community and is a key contact for all the NGOs and biologists visiting the region. He played a major role in the tiger cub rescue and one of the tiger cubs was even named after him. His role as a mediator is very crucial in the success of the tiger conservation programme.

Mediating Voices

The Mishmis living in the town or district headquarters are important mediating voices between the conservation groups and the local community. The Mishmi elite make frequent trips outside Arunachal and have developed networks with influential government officials, businesspersons and NGOs. They are also seen as spokespersons for the entire community,

as if the Mishmis are a homogeneous group. Sometimes, these mediators are blamed for not voicing the diversity of opinions within the community. While the State Wildlife Board member (mentioned previously) is well known among the scientific and NGO community, some local villagers who face the problem of cattle attacks by carnivores show a great amount of dislike towards him.

One of the reasons for this is that the board member has not taken up local issues like cattle depredation by tigers with the forest department. The villagers expect the board member to help them get the compensation for cattle deaths due to carnivores from the forest department. Therefore, the role of this member is ambiguous because, although he belongs to the Mishmi community, he is heavily criticised for his close association with the forest department and the NGOs, and is accused of not being of any help to his own “Mishmi brothers.” Mediators like this wildlife board member can participate in all three groups (local communities, forest department and the conservation groups), but may have “no or little legitimacy at the local level” (Brown 1998: 312).

Some residents pointed that the existing wildlife sanctuary is too big (4,914 sq km) and suggested that there should be a reduction in the size of the sanctuary. They have taken various steps for pursuing this issue. For instance, there is a public interest litigation,⁷ filed by one of the residents of the Dibang against the forest department, which is currently pending in the Sessions Court in Guwahati (Assam). Another Mishmi man has filed a right to information (RTI) request⁸ to know the basis for declaring 4,914 sq km as the area for the wildlife sanctuary. While there is no organised or consolidated approach by the Mishmis, there are incidences of intimidation and acts of “non-cooperation” with visiting research teams. Attacks on cattle by tigers, the rescue of the tiger cubs, the indifference of the forest department to the villagers’ complaints, and the arrival of a letter from the Government of India regarding the ESZ have led to an accumulation of the local people’s grievances and any individual or group visiting Dibang Valley for research on tigers or forests have become easy targets of their frustrations (Aiyadurai 2016).

Need for Mutual Dependence

Though conservation actors such as NGOs and biologists have academic resources and scientific/technical knowledge, they lack certain other resources (such as local knowledge of forest trails and wildlife presence) and must depend on others, including the Mishmi people, for research and conservation activities. The local forest department is dependent on Delhi- or Assam-based NGOs for technical and scientific expertise such as animal handling/capturing, wildlife rescue operations and for wildlife monitoring and surveys. NGOs often are dependent on the forest department for logistical support and for procuring research permits. NGOs, in turn, offer scientific expertise (such as mapping, estimating tiger population and habitat assessment) to the forest department. These NGOs, from mainland India, also often lack the cultural knowledge of local practices or of the landscape. Therefore, the NGOs and the forest department seek help from the local people.

There is a real concern, however, among the Mishmis, that when the state takes interest in tiger conservation, the forest department will impose stricter restrictions on people’s access to forest resources. There is a feeling among many Mishmi people that resources are better conserved if customary laws are in place. Many express concerns that increased government regulations will result in a diminished sense of ownership and care for local resources, and people will end up overexploiting such resources. One of the residents of Dibang, Angeche, said,

See, this jungle is my clan’s. We save the animals here. We can go whenever we want, without permission, but for hunting, one has to take permission from the clan member. If as a clan member, I do not permit, then he cannot hunt. If this becomes the government’s property, then anyone can hunt, it will become a matter of free will. (personal interview, 2014)

The Dibang Wildlife Sanctuary could be considered to be, what is called a “paper park.” This term is applied to protected areas that exist in an “administrative vacuum” (del Valle 2002: 150) without proper maps, boundary demarcation, and with insufficient field staff. The forest department is aware of this situation on the ground and when a senior official from the National Tiger Conservation Authority visited Dibang Wildlife Sanctuary in 2016, he expressed concerns that the ground-level staff was not adequate to manage the sanctuary and he wondered if they had the capacity to manage funds if it was declared as a tiger reserve.

Sociological Emptiness

Ulrich Beck (2010) uses the term “sociological emptiness” in his paper titled “Climate for Change, or How to Create a Green Modernity,” where he questions why the issue of environmental destruction that is threatening humankind has not yet been met with the same enthusiasm as the issues of war or poverty. One of the explanations he provides is that the discourse on environmental politics is an “expert and elitist discourse” and that common people’s views are not counted (Beck 2010: 254). Often in wildlife conservation, the views of wildlife enthusiasts and wildlife experts are heard “loud and clear,” but not the views of local people like the Mishmi, who live in areas where the wildlife projects are implemented.

Very often, the stories from the ground are subdued in the hegemonic discourse of science, activism and management. Unless there is support or approval by the common or local citizens, wildlife conservation will continue to be a story of science and the state and will continue to be what Amita Baviskar (2002) calls “bourgeoisie environmentalism,” a form of environmentalism that has a narrow but powerful voice of urban elites. The focus of biodiversity conservation in Dibang Valley has largely been on tigers. The Mishmis’ concerns for compensation for the cattle killed were not addressed during my fieldwork, either by the forest department or by the visiting research teams. This disconnect with the local concerns has been a bone of contention on the ground.

There are many reasons why the “social” is often not included in conservation projects. Researchers are often not trained

to carry out social surveys and sometimes are not aware of the social issues. They rarely consider any issues outside the purview of wildlife research, particularly when they are fixated on a particular species. This form of separation of one particular part of the ecosystem and disintegration of the species from its anthropological and social meaning is, according to Paige West (2006), a kind of ecot fetishism. This ecot fetishism blinds the viewer to the social and creates “sociological emptiness.”

Nature conservationists continue to speak the language of protectionism and endorse the model of a protected area, even after years of criticism. If the Dibang Wildlife Sanctuary becomes a tiger reserve, it will be the third tiger reserve in Arunachal, in addition to the Namdapha Tiger Reserve and the Pakke Tiger Reserve. The Dibang Tiger Reserve will probably bring employment opportunities to the local youth, but many believe this may divert attention from how the majority of the local peoples’ farming, fishing, and hunting, the mainstays of their subsistence, will be brought under surveillance. How far a tiger reserve will be effective is difficult to say at this time. What is evident is that there is a lack of a “social” understanding of wildlife conservation among the visiting ecologists and wildlife researchers. The science-based conservation practices do not acknowledge social issues, such as local needs, social inequality, and power relations.

The absence of social sciences and humanities in conservation biology or wildlife management is not new, but a continuation of this absence is a matter of concern. Scientists trained in wildlife sciences mostly implement conservation projects and aspects of biological sciences dominate their praxis. For example, conservation activities are mainly focused on quantifying forest cover, counting animal populations, and measuring the threats to the health of the ecosystem (Aiyadurai 2011). These projects are shaped by scientific knowledge, with

little or no insights from the social history of the landscape (Saberwal and Kothari 1996).

Conclusions

In this article, I highlighted how the Dibang Valley is continuously being constructed as a space of rich biodiversity and how the space is socially produced by both the global and local ideas of nature. On the one hand, the Mishmis try to retain their land and prevent further acquisition by the state, while on the other, global forces shape and reshape the space as valuable for biodiversity conservation. When different actors meet, negotiations may not take place on very friendly terms, because of the mistrust. The Mishmis take pride in the taboos they observe that help in the conservation of species. Using their ecocultural knowledge of the landscape, the Mishmis claim that they are also conservationists and that wild animals are still present in their forests because of their cultural taboos and practices, and not because of any protection by the forest department.

The Mishmis articulate themselves as wildlife guardians when they claim that their kinship relations with tigers prohibit them from killing tigers, thereby reclaiming their ancestral land as a shared territory not only for them, but also for tigers and other species. While the state and the biologists’ community have invested heavily in protecting tigers, their engagement with the local communities and their societal connections need a better approach. Nature conservation continues to be a sensitive issue on the ground, especially when multiple actors are involved. A middle path could be found by initiating discussions between groups to examine the various notions of nature and what really needs to be conserved. If the actors do not have a common meeting ground, nature conservation projects will continue to face challenges.

NOTES

- 1 Memo no ASFD/DWLS/EZ/167–196 dated 19 February 2013.
- 2 ESZ are delineated areas around existing protected areas declared as “buffers and corridors” to check the impact of industrialisation and unplanned development in and around protected areas.
- 3 For this reason, resources are not really “open access.” The notion of the “tragedy of the commons” tends to misunderstand or ignore the complex rules associated with access to land practices prevalent among locals. When the commons are taken over by non-locals, these rules and solutions are not used (Ostrom 1990).
- 4 The English word nature comes from *nātūra*, from a root of *nāsci*, which means to be born. *Natura* means conditions of birth, quality, character and natural order. In Raymond Williams’s (1976) book titled *Keywords: A Vocabulary of Culture and Society*, he provides 130 keywords that have taken on new meanings and how these new meanings reflect the political and cultural framework of the past and present society in Europe. In this work, and another publication titled *Culture and Materialism: Selected Essays* (1980), he points out three different meanings of nature. First is the essential quality and character of something. Second is nature understood as an inherent force, which directs the world including humans. The third

meaning corresponds to nature as the material world itself, which may or may not include human beings.

- 5 This term was coined by Kent Redford (1992) in reference to forests where large mammals have been removed by hunting. It is interesting to note that the term “empty” applies to forests with no wildlife, especially mammals and not people. Humans are acknowledged only as destroyers of forests.
- 6 Wildlife is a term that the Mishmi use to call the forest department and the wildlife sanctuary. Sometimes the term is also used to refer to NGOs and wildlife biologists as wildlife-wale (wildlife-people).
- 7 Public interest litigation (PIL) is the power given to the public by courts. Any person can file a petition in the court in the interest of public. A Mishmi man in Anini filed a PIL in 2013.
- 8 Another resident of Malinye (Dibang Valley) filed an RTI in November 2012, but there has been no reply from the government yet. The Right to Information Act aims to empower the citizens of the country and promote transparency and accountability in the working of the government.

REFERENCES

- Adams, William M (2004): *Against Extinction: The Story of Conservation*, London: EarthScan.
- (2007): “Thinking Like a Human: Social Science

and the Two Cultures Problem,” *Oryx*, Vol 41, No 3, pp 275–76.

Agrawal, Arun and Clark Gibson (1999): “Enchantment and Disenchantment: The Role of Community in Natural Resource Conservation,” *World Development*, Vol 27, No 4, pp 629–49.

Aisher, Alex (2005): “Through ‘Spirits’: Cosmology and Landscape Ecology among the Nyishi Tribe of Upland Arunachal Pradesh, Northeast India,” diss, University College London.

Aiyadurai, Ambika (2007): “Hunting in a Biodiversity Hotspot: A Survey on Hunting Practices by Indigenous Communities in Arunachal Pradesh, Northeast India,” The Rufford Small Grants Foundation, London, <https://www.rufford.org/files/43.07.05%20Technical%20Report.pdf>.

— (2011): “Wildlife Hunting and Conservation in Northeast India: A Need for An Interdisciplinary Understanding,” *International Journal of Galliformes Conservation*, Vol 2, pp 61–73.

— (2016): “Tigers Are Our Brothers’: Understanding Human–Nature Relations in the Mishmi Hills, Northeast India,” diss, National University of Singapore.

Alcorn, Janis (2005): “Dances Around the Fire: Conservation Organizations and Community-based Natural Resource Management,” *Communities and Conservation: Histories and Politics of Community-based Natural Resource Management*, J Peter Brosius, Anna Tsing and Charles Zenner (eds), Walnut Creek: AltaMira Press, pp 37–68.

- Argyrou, Vassos (2005): *The Logic of Environmentalism: Anthropology, Ecology and Postcoloniality*, Oxford: Berghahn Books.
- (2009): "Virtualism and the Logic of Environmentalism," *Virtualism, Governance and Practice: Vision and Execution in Environmental Conservation*, J G Carrier and Paige West (eds), New York: Berghahn, pp 24–44.
- Baruah, Sanjib (2003): "Nationalizing Space: Cosmetic Federalism and the Politics of Development in the Northeast India," *Development and Change*, Vol 34, No 5, pp 915–39.
- Baviskar, Amita (2002): "Politics of the City," *Seminar*, Vol 516, pp 40–42.
- Beck, Ulrich (2010): "Climate for Change, or How to Create a Green Modernity," *Theory, Culture and Society*, Vol 27, Nos 2–3, pp 254–66.
- Bird-David, Nurit (1990): "The Giving Environment: Another Perspective on the Economic System of Gatherer-Hunters," *Current Anthropology*, Vol 31, No 2, pp 189–96.
- Brockington, Dan (2002): *Fortress Conservation: The Preservation of the Mkomazi Game Reserve, Tanzania*, Bloomington: Indiana University Press.
- Brosius, J Peter, Anna Tsing and Charles Zerner (2005): *Communities and Conservation: Histories and Politics of Community-based Natural Resource Management*, Walnut Creek: AltaMira Press.
- Brown, Katrina (1998): "The Political Ecology of Biodiversity, Conservation and Development in Nepal's Terai: Confused Meanings, Means and Ends," *Ecological Economics*, Vol 24, No 1, pp 73–87.
- Carson, Mary K (2014): *Park Scientists: Gila Monsters, Geysers and Grizzly Bears in America's Own Backyard*, New York: Houghton Mifflin Harcourt Publishing Company.
- Cronon, William (1996a): "The Trouble with Wilderness: Or, Getting Back to Wrong Nature," *Environmental History*, Vol 1, No 1, pp 7–28.
- (1996b): *Uncommon Ground: Rethinking the Human Place in Nature*, New York: WW Norton & Company.
- del Valle, Fernando B (2002): "The National Sanctuary Pampas del Heath: Case Study of a Typical 'Paper Park' under Management of an NGO," *Making Parks Work: Strategies for Preserving Tropical Nature*, John Terborgh, Carel van Schaik, Lisa Davenport and Madhu Rao (eds), Washington: Island Press, pp 149–55.
- Duffy, Rosaleen (2010): *Nature Crime: How We're Getting Conservation Wrong*, New Haven: Yale University Press.
- Dutta, Pollock (2012): "Two Tiger Cubs Rescued in Arunachal," *Telegraph*, 16 December, http://telegraphindia.com/1121216/jsp/northeast/story_16321963.jsp.
- Ellen, Roy and Fukui Katsuyoshi (1996): *Redefining Nature: Ecology, Culture and Domestication*, London: Bloomsbury Academic.
- Erb, Maribeth (2012): "The Dissonance of Conservation: Environmentalities and the Environmentalisms of the Poor in Eastern Indonesia," *Raffles Bulletin of Zoology*, Vol 25, pp 11–23.
- Erb, Maribeth and G Acciaoli (2006): "Conservation with and against People(s)," *Biodiversity and Human Livelihoods in Protected Areas: Case Studies from the Malay Archipelago*, N S Sodhi, G Acciaoli, M Erb and A K Tan (eds), New York: Cambridge University Press, pp 143–52.
- Fletcher, Rob (2010): "Neoliberal Environmentalism: Towards a Poststructuralist Political Ecology of the Conservation Debate," *Conservation and Society*, Vol 8, No 3, pp 71–81.
- Gadgil, Madhav and Ramchandra Guha (1995): *Ecology and Equity: Use and Abuse of Nature in Contemporary India*, London: Routledge.
- Goldman, Mara, Paul Nadasdy and D Matthew Turner (2011): *Knowing Nature: Conversations at the Intersections of Political Ecology and Science Studies*, Chicago: The University of Chicago.
- Government of Arunachal Pradesh (2006): "Arunachal Pradesh Human Development Report," Department of Planning, Government of Arunachal Pradesh, Itanagar.
- Hardin, Garrett (1968): "The Tragedy of the Commons," *Science*, Vol 162, No 3,859, pp 1,243–48.
- Heatherington, Tracey (2012): "Remodeling the Fortress of Conservation? Livingscapes and the New Technologies of Environmental Governance," *Anthropological Forum*, Vol 22, No 2, pp 65–185.
- Howell, Signe (1982): "Chewing Myths and Legends," *Malaysian Branch of the Royal Asiatic Society*, Vol 11, p 136.
- (1984): *Society and Cosmos: Chewong of Peninsular Malaysia*, Singapore: Oxford University Press.
- Igoe, Jim (2004): *Conservation and Globalization: A Study of National Parks and Indigenous Communities from East Africa to South Dakota*, Belmont: Wadsworth.
- Ingold, Tim (1980): *Hunters, Pastoralists and Ranchers: Reindeer Economies and Their Transformations*, London: Cambridge University Press.
- (1996): "Hunting and Gathering as Ways of Receiving the Environment," *Redefining Nature: Ecology, Culture and Domestication*, Ellen Roy and Katsuyoshi Fukui (eds), Oxford: Berg, pp 117–56.
- Kabra, Asmita (2009): "Conservation-induced Displacement: A Comparative Study of Two Indian Protected Areas," *Conservation and Society*, Vol 7, No 4, pp 249–67.
- Kothari, Ashish (2003): "Protected Areas and Social Justice: The View from South Asia," *George Wright Forum*, Vol 20, No 1, pp 4–17.
- Laudati, Ann (2010): "Ecotourism: The Modern Predator? Implications of Gorilla Tourism on Local Livelihoods in Bwindi Impenetrable National Park, Uganda," *Environment and Planning D: Society and Space*, Vol 28, No 4, pp 726–43.
- Lugard, Frederick J D (1972): *The Dual Mandate in British Tropical Africa*, London: William Blackwood and Sons.
- Luke, Timothy (1997): *Ecocritique: Contesting the Politics of Nature, Economy, and Culture*, Minneapolis: University of Minnesota Press.
- MacKenzie, J M (1988): *The Empire of Nature: Hunting, Conservation and British Imperialism*, Manchester: Manchester University Press.
- Marx, Karl (1979): *Capital: A Critique of Political Economy*, 1867, Vol 1, London: Penguin Books.
- McAfee, Kathleen (1999): "Selling Nature to Save It? Biodiversity and Green Developmentalism," *Environment and Planning D: Society and Space*, Vol 17, No 2, pp 133–54.
- McKibben, Bill (1989): *The End of Nature*, New York: Random House.
- Moore, Donald, Kosek Jake and Anand Pandian (2003): *Race, Nature, and the Politics of Difference*, Durham: Duke University Press.
- Morris, Brian (1982): *Forest Traders: A Socio-economic Study of the Hill Pandaram*, London: Berg.
- (2000): *Animals and Ancestors: An Ethnography*, Oxford: Berg.
- Myers, N, R A Mittermeier, C G Mittermeier, G A B da Fonseca and J Kent (2000): "Biodiversity Hotspots for Conservation Priorities," *Nature*, Vol 403, No 6,772, pp 853–58.
- Naess, Arne (1989): *Ecology, Community and Lifestyle: Outline of an Ecosophy*, New York: Cambridge University Press.
- Neumann, Roderick (1998): *Imposing Wilderness: Struggles Over Livelihood and Nature Preservation in Africa*, Los Angeles: University of California Press.
- Nijhawan, Sahil (2014): "The Role of Cultural Norms in Wildlife Conservation in Arunachal Pradesh: First Phase December 2013–June 2014," University College London and Zoological Society of London, http://21tiger.zslsites.org/assets/21tiger/Project_PDFs/India/Tigers-DamsandTribalCulturesArunachalPradeshInterimReport2014.pdf.
- Ostrom, Elinor (1990): *Governing the Commons: The Evolution of Institutions for Collective Action*, Cambridge: Cambridge University Press.
- Oxford Dictionary (2018): "Nature," Oxford University Press, <http://www.oxforddictionaries.com/definition/english/nature>.
- Pandit, R (2014): "Army Kicks Off Raising New Mountain Strike Corps against China," *Times of India*, 9 January, <http://timesofindia.indiatimes.com/india/Army-kicks-off-raising-new-mountain-strike-corps-against-China/article-show/28571907.cms>.
- Parnwell, Michael and Raymond Bryant (1996): *Environmental Change in Southeast Asia: People, Politics and Sustainable Development*, New York: Routledge.
- Paudel, Naya S (2005): "Protected Areas and Reproduction of Social Inequality," *Policy Matters*, Vol 14, No 4, pp 155–68.
- Paudel, Naya, Prabhu Budhathoki and Uday R Sharma (2007): "Buffer Zones: New Frontiers for Participatory Conservation?" *Journal of Forests and Livelihood*, Vol 6, No 2, pp 44–53.
- Peluso, Nancy Lee (1993): "Coercing Conservation? The Politics of State Resource Control," *Global Environmental Change*, Vol 3, No 2, pp 199–217.
- Perelman, Michael (2007): "Primitive Accumulation from Feudalism to Neoliberalism," *Capitalism Nature Socialism*, Vol 18, No 2, pp 44–61.
- Pratt, Mary L (1991): "Arts of the Contact Zone," *Profession*, pp 33–40.
- Rangarajan, Mahesh (1996): *Fencing the Forest: Conservation and Ecological Change in India's Central Provinces, 1860–1914*, New Delhi: Oxford University Press.
- Rangarajan, Mahesh and Ghazala Shahabuddin (2007): *Making Conservation Work: Securing Biodiversity in this New Century*, New Delhi: Permanent Black.
- Redford, Kent H (1992): "The Empty Forest," *Bioscience*, Vol 42, No 6, pp 412–22.
- Saberwal, Vasant K and Ashish Kothari (1996): "The Human Dimension in Conservation Biology Curricula in Developing Countries," *Conservation Biology*, Vol 10, No 5, pp 1,328–31.
- Saberwal, Vasant K, Mahesh Rangarajan and Ashish Kothari (2001): *People, Parks and Wildlife*, New Delhi: Orient Longman.
- Sharma, Mukul (2012): *Green and Saffron: Hindu Nationalism and Indian Environmental Politics*, Ranikhet: Permanent Black.
- Singh, B P (1987): "North-East India: Demography, Culture and Identity Crisis," *Modern Asian Studies*, Vol 21, No 2, pp 257–82.
- Tanner, Adrian (1979): *Bringing Home Animals: Religious Ideology and Mode of Production of the Mistassini Cree Hunters*, New York: St Martin Press.
- Tsing, A (2005): *Friction: An Ethnography of Global Connection*, New Jersey: Princeton University Press.
- Tsing, Anna, Peter J Brosius and Charles Zerner (2005): "Introduction: Raising Questions about Communities and Conservation," *Communities and Conservation: Histories and Politics of Community-based Natural Resource Management*, Peter J Brosius, Anna Tsing and Charles Zerner (eds), Walnut Creek: AltaMira Press, pp 1–34.
- West, Paige (2006): *Conservation Is Our Government Now: The Politics of Ecology in Papua New Guinea*, Durham: Duke University Press.
- West, Paige, Jim Igoe and Dan Brockington (2006): "Parks and Peoples: The Social Impact of Protected Areas," *Annual Review of Anthropology*, Vol 35, pp 251–77.
- Wijkman, Anders and Johan Rockstrom (2012): *Bankrupting Nature: Denying Our Planetary Boundaries*, New York: Routledge.
- Williams, Raymond (1976): *Keywords: A Vocabulary of Culture and Society*, New York: Oxford University Press.
- (1980): *Culture and Materialism*, New York: Verso.