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Sacred Forests of Asia

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14 The Role of Spirits in Indigenous Ontologies and Their Implications for Forest Conservation in Karen State, Myanmar

Man Han Chit Htoo, Bram Steenhuisen, and Bas Verschuuren

Introduction

The vast majority of Myanmar's remaining 16 million ha of intact forests are located in its hilly border areas, which encompass one of Asia's most biodiverse regions (Reddy et al. 2019). These forests are home to many of the country's 135+ ethnic minority groups, of which Karen people, who are at the heart of this research, constitute the third largest in Myanmar.[1] Proposed nature conservation programs in these biodiversity-rich forests have led to friction with indigenous peoples and local communities (IPLCs).[2] In the case of the United Nations Development Program's multimillion-USD Ridge to Reef project, this led to suspension of activities after a formal complaint by a coalition of six indigenous Karen NGOs (CAT 2018, complaint letter). These NGOs claim that the program fails to respect the rights of communities to their ancestral territories and doesn't recognize the land tenure systems of IPLCs. Subsequently they urge that "rather than supporting top down conservation initiatives, GEF [Global Environmental Facility] and responsible parties must take an alternative approach—one that centers around the rights of indigenous people [sic] to manage and protect their forests and resources" (CAT 2018, complaint letter).

While this conservation conflict seems to evolve around the recognition of IPLC rights and tenure, the root of the conflict is often found in deeper underlying cultural values and beliefs (Vaske and Donnelly 1999; Redpath 2013; Madden and McQuinn 2014). The different understandings that Indigenous peoples and conservationists have about forests result in an added layer of complexity about what these forests represent and how they can be best looked after. This underlines the importance of understanding indigenous ontologies and the role of spirits therein. An ontology has been defined as "the conceptualization of the nature and relation of being" (Caillon et al. 2017: 2). It concerns understandings of the nature of reality in order to determine what exists and how all phenomena that exist are interrelated to each other. It can be understood as a way to study "worlding," a "process of piecing together what is perceived in our environment" (Descola 2014). An ontology creates the structures on

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which different worlds and realities are built. As a consequence, one's ontology "affect[s] one's assumptions, belief systems, decision making, and modes of problem solving" (Honore France in Hart 2010: 1).

Our research directly investigates the spiritual dimensions of the forest as part of indigenous ontologies and the potential implications this may have for the field of conservation. We base our findings on research undertaken with Karen people in Karen State, Myanmar. Based on the identification of the role that spirits have in Karen perceptions and ontologies, we determine how proper recognition of these spirits by nature conservation actors might affect conservation. This chapter is thus aimed at demonstrating that in order to respect indigenous rights and better understand and include indigenous knowledge and practices in nature conservation, the focus should be on grasping the local ontologies that underpin them, including spirits. Uncovering the importance of spirits in indigenous perceptions and ontologies can ultimately contribute to preventing conservation conflict between mainstream nature conservation actors and Indigenous peoples and helps create more equitable and sustainable area-based conservation measures.

We base our findings on 35 semi-structured interviews involving a total of 47 Karen individuals identified by means of non-probability sampling. In order to encourage people to talk freely about a potentially sensitive subject, interviewees were promised anonymity. The interviews were conducted during January and February 2020 in seven villages within the townships of Thandaung Gyi and Kawkareik in Karen State.

The indigenous knowledge shared through these interviews is complemented by observations of interactions with the forest gathered when we accompanied local people on their visits to the forests for purposes including fishing, collecting non-timber forest products, paying homage to a sacred natural site, and tending to their plots. While more research is needed to be able to draw a complete picture, the knowledge shared by the 47 people we interviewed provides valuable insight into the presence of spirits in Karen perceptions of the forest (Figure 14.1).[3]

The study population consisted of people who, in all but one case, a resident Catholic father from a neighboring ethnic group, self-identified as belonging to the Karen ethnic group and lived in or next to the forest. People were selected based on the type of engagements, activities and professions that related them to the forest in an attempt to obtain a diverse set of opinions. The result is a group of local experts consisting of traditional healers, firewood collectors, hunters, honey hunters, herb gatherers, religious leaders, carpenters, subsistence farmers, and small-scale loggers. Often the same individual engaged with a number of these professions at different times.

In this chapter, we start by applying Philippe Descola's modes of identification to the forest perceptions we found in Karen State and conceptualize the major ontologies of people living in the forest. We then focus on Karen perceptions of the forest and the role of spirits as an integral part of their ontology. We use separate sections to describe several important aspects of the role of spirits

Figure 14.1 Forests near Thandaung Gyi town, Thandaung Gyi township, Kayin State, Myanmar.

in the forest of Karen State; these are discipline of forest practices, communications between humans and non-humans, and influence of the lunar calendar. Building on these different aspects, we draw up several implications for forest conservation. The chapter closes with conclusions and some recommendations for recognizing the role of spirits in the ontologies of Indigenous people.

Conceptualizing Karen Ontologies—Modes of Identification

In Karen State, a key aspect of Karen ontologies is shaped by the belief in spirits, or *nats*, who dwell in the forests.[4] Nats determine the relation between humans and nonhumans and provide a key entry point to understanding Karen ontologies in relation to nature. We deploy the four modes of identification by post-dualist anthropologist Philippe Descola (Figure 14.2) to understand the mental process that occurs when humans encounter nonhuman beings—be they animals, trees, rocks, spirits, or otherwise (Descola 2005). This approach allows us to determine some of the differences between the ontologies of various groups in Karen State—Indigenous Peoples, religious actors, and conservationists.

Descola (2013) postulates that our body and mind jointly engage in a process of "identification" when we encounter another being. Noticing another being's

Figure 14.2 Karen man making an offering to the nats at the annual *Mee pone pweq* (fire festival) near Kawkareik.

appearance and behavior, we recognize differences and similarities between that being and ourselves. On the basis of these, we either "attribute or deny" a sameness of physicality ("body, external form, substance, the physiological, perceptive and sensorimotor processes") and interiority ("mind, the soul, or consciousness: intentionality, subjectivity, reflexivity, feelings, and the ability to express oneself and to dream") (Descola 2013).

Each identification attributes sameness or difference in interiority and physicality differently, reflecting different understandings of human–nonhuman relationships and thereby informing different ontologies. Notably, sameness in mind (interiority) paves the way for humans and nonhumans to share "humanity" at an ethical level. Both can be capable of reason, rational thinking, and acting with intention while being logically understood to share communication, feelings, and relationships. This, for instance, is the case when forest-dwelling nats communicate with the Karen, and these attributes of animism were observed by early anthropologists such as Levi-Strauss (1966). In fact, it is in the animism and totemism modes of identification that Descola recognizes sameness of interiority between humans and non-humans, while in naturalism and analogism, this is denied. All modes of identification except totemism were found to inform Karen perceptions of the forest to differing degrees, but we focus on animism and to a lesser extend naturalism because they featured most prominently in our research (Table 14.1).

Table 14.1 Simplified version of Descola's four modes of identification model that distributes beings according to sameness or difference in interiority and exteriority.

Philippe Descola's four modes of identification	*Animism*	*Totemism*	*Naturalism*	*Analogism*
Similarity in physicality (body)	**No**	**No**	**Yes**	**No**
Similarity in interiority (mind)	**Yes**	**Yes**	**No**	**No**

Source*:* (Descola 2013)

Animism sees nonhumans and humans as possessing an identical kind of mind but having bodies that are very different. This mode of identification features heavily in Karen ontology, as is evident by their perception of relationships with animals, spirits, and other nonhumans in the forest. It should be noted that the animism theorized by Descola "is quite different from its earlier social evolutionist and sometimes even racist incarnations, and it has provided an important foil for critiquing Western mechanistic representations of nature" (Kohn 2013: 93).

In what is the complete opposite of animism, a naturalist mode of identification understands humans and nonhumans to have the same kind of bodies but different minds. While a human and an animal have almost identical DNA, share similar physical features, and are subject to similar biological processes, nonhumans are seen as lacking the qualities associated with a human mind. From this perspective, nonhuman beings lack culture; they are little more than things that move with intention. The naturalist mode of identification is dominant in the West. In our research, a naturalist form of identification was also discernible, seemingly linked to peoples' perceptions of the forest, as they were influenced by their formal religious affiliations, in some cases Buddhism, and still more in the case of Christianity.[5]

These differences between ontologies raise the question of whether the role of spirits can be recognized in nature conservation efforts underway in Karen State. This will be addressed throughout the following sections as we describe several important aspects of the role of spirits in the forest of Karen State.

Karen Perceptions of the Forest and Its Spirits: Nats

In Karen ontology, humans identify with nonhumans largely based on animist modes of identification and, to a lesser extent, naturalist and analogist modes as well. Karen experts describe the forest as an important part of an intricate indigenous belief system centered around local spirits ("nats"). These beliefs appear rooted mostly in animist ontologies. Nats are nearly unanimously perceived by those interviewed as the "guardians of the forest" and surface as the main factor determining peoples' behavior and activities in, and in relation to, the forest.

While not unique to the forest, the nats' relationship with other beings appears strongest inside the forest. Nats influence peoples' actions in the forest, and thus for any significant activity in the forest—climbing a tree in order to collect fruits or honey, burning a piece of land for agricultural cultivation, and especially logging and hunting—permission needs to be asked from the specific nat who inhabits that particular area. The forest is frequently described as "belonging" to the nats, who live alongside and preside over humans, animals, trees, plants, and inanimate entities inside it, though they are not necessarily seen by definition as more powerful or important than humans.

Nats, as nonhumans, are often described in human terms, a common feature of an animist mode of identification, as it is those features that humans are most familiar with. A Buddhist monk notes that "[nats] are alive because they have eyes, a nose, ears and a mouth, and a body." A traditional healer says that "nats are just like humans, they have their own ways. They have kids and they travel a bit." A hunter explains the differences between individual nats by saying that "they have a different name, and like humans, they have different abilities and characters. For example, you (interviewer) can read and write, and me, I can climb and hunt—we can do different things." While humans are understood to only see physical things, the nats see everything.

In the few cases of metamorphosis described by local Karen, nats are believed to temporarily take on different physical forms, with the tiger most commonly perceived as in fact being a nat who manifests as a tiger. Metamorphosis is also an element in the origination stories involving people. An elderly traditional healer, stressing to us that what she was about to say has really happened and was not a myth, proceeded to explain the origins of the egret and the crow, which feature 13 human-animal-plant metamorphoses.

Discipline of Forest Practices

The presence of nats in the forest functions as a form of discipline for peoples' actions in the forest in a number of ways. First, while nats are believed to be living everywhere, they make their presence known by causing accidents or unexplained phenomena. The forest is perceived as hosting the most important, powerful, feared, and respected nats. As one female farmer notes, "in the forest, every tree and every mountain has their own nat. The bigger the tree, the more powerful the nat." Hunters in particular note the apparent retreat of the powerful nats into more remote and undisturbed areas of the forest, with one saying that "in remote places there are still powerful nats where I have to ask the nat for permission to hunt in that area." A wood collector lists three places in the forest that are home to such bad nats, believed to intentionally cause harm and trouble to people, that "you are not allowed to farm around there, just let it be wild, stay away from there and let the trees grow there." Others note that in the forest, nats can also be found in "the ground, in streams, on mountain slopes, and at paddy-plots," with muddy places being frequently noted as a particularly favorite place where nats like to live (Figure 14.2).

Second, the nats are effectively regulating behavior in the forest. The local experts interviewed note that keeping the nats appeased is the duty of anyone entering the forest. A traditional healer who specializes in mending people's broken bones, often the result of accidents in the forest such as falling from a tree, explains that

> there are lots of dos and don'ts in the forest. You can't just do what you like, if you do so, the nats will take your soul. . . . You should refrain from doing anything. If you cut the tree, it has a nat. If you do *taungya* [a system of agroforestry practiced locally], that area has a nat.

A hunter notes that one has to behave appropriately when in the forest. "You can't just enter areas with powerful nats and behave badly and pee there. If you do that you and your family get punished." A honey hunter stresses that "one cannot swear and say bad words while harvesting the honey."

Before carrying out a significant act in the forest, permission has to be sought from the nats. A hunter says that he asks permission from the nat "with a candle and betel leaves and betel nuts, or a cup of alcohol, and asking 'Please provide me with an animal'." The nat's negative response usually appears to be received during or after the incursion into the forest by means of a misfortune in the form of a physical injury, illness, mechanical accident, broken motorcycle, or missing animal trap. A smooth completion of the action means the nat has given a positive reply. One traditional healer, however, states her direct communication, while someone else notes that she was able to know beforehand if a nat permits the logging of a tree by sticking a knife head down into the soil at the base of a tree. "If by the next morning the knife has fallen down the nat does not given permission, if the knife is still standing then the nat gives permission and the tree can be cut down."

The clearest case of nats prompting disciplinary behavior by humans concerns hunting practices, with some hunters stating they don't shoot pregnant, breeding, or nurturing animals. They consider it futile to shoot a wild chicken with eggs, as the nat would intervene, preventing the gunpowder from igniting so that the bullet would not come out. If they shoot such an animal by mistake, they will have to apologize to the nat. There also appears to exist a nat-imposed quota of one or two animals per hunting trip, enough to feed one's family; in some cases animals are to be killed only for the purpose of food, not for commercial ends. According to one hunter, breaking such rules would cause the nat to "punish your family; one of your family members will die."

Communications Between Humans and Non-Humans

Besides nats, animals and plants are the other nonhumans that feature prominently in people's perception of the forest, in some cases interacting with both nats and humans. One healer notes that before clearing a piece of forest for agriculture, he visits that place for seven days straight in order to ask permission from the nat by saying, "this is the order of the king, please go away." Another farmer warns the animals in the piece of forest in advance that he is about to

burn down for cultivation, telling them, "please take yourself and your children and move away, we will be back here in two days and burn it." A local hermit is said to be able to talk to animals and inform them of the safest areas in the forest.

The local Karen experts we interviewed interpret certain animals to be communicating omens, signs, or warnings. Animals do so by means of unusual appearances, particular behavior, or certain sounds. Deer, birds, and monkeys are the animals most frequently mentioned. Deer coming to a village forebodes illness or disease; hornbills are a sign of peace and prosperity to come; and, according to three hunters, the presence of the "monkey that never touches the ground and swirls its tail around a branch from which it hangs upside down to drink" means that "the harvest is good and the region will be peaceful."

Similar to nats, relationships between animals are often described in human-like terms. Certain animals are described as living in a hierarchical social relationship with other animals. Particular plants are also believed to positively influence the behavior of certain animals as well as other plants. The laurel clockvine (*Thunbergia laurifolia*) is seen as the "sweetheart" of the honeybee, for the smoke of its dried leaves deactivates the bee's intention to sting, the way "when two people love each other, one takes out the aggressiveness of the other person," according to one woman interviewed. The plumed cockscomb (*Celosia argentea*) is seen as the parent to the rice paddy, because planting it nearby helps the rice to "behave better," so grains loosen more easily from the husk.

Another characteristic of the animist mode of identification concerns the perception that there can be a transfer of an interior *power* of an animal body into a human body, a case of a continuity of interiorities across two different bodies (physicalities) (Descola 2013). What appears to be a Karen adaptation of this characteristic concerns the belief by hunters that the supposed power of an animal is intertwined with the power of the nat. The cause of the animal's death determines whether its remaining body parts hold any power. If one manages to shoot and kill an animal, that is because that animal has already been "abandoned" by the forest nat, who has stripped the animal of all its protective powers. However, when the animal dies of natural causes, accidents, or when a body part has fallen off by itself, then these animal parts still contain all their protective powers.

Beautiful large antlers obtained by shooting an animal are thus appreciated for beauty only, while a small piece of an antler found on the ground in the forest is believed by one Karen man to protect his house from fire. Similarly, the ivory of a shot elephant is believed to have no power and can be sold. By contrast, the tusks of a logging elephant we observed working in the forest for a day, which had broken off in a fit of rage, are seen as holding incredible power, and the mahouts keep those for themselves. Similarly, teeth ("tusks") from wild boar are believed to have power only if the animal has died by natural means, not if it has been shot or trapped by humans. Certain woods also are perceived as more powerful if naturally fallen off a tree instead of being cut off by humans and are used to filter bad spirits from one's surroundings and keep one safe during travels.

The influence of formal religion in Karen's perceptions of the forest is also noticeable. It is in that respect that a naturalist mode of identifying with nonhumans is

seen to inform Karen ontology. Buddhist local experts hold in high regard a variety of trees, with their importance ascribed not as inherent to the tree but rather by being linked to their role in Buddhism. As a senior Karen monk explains,

> When people pray in front of trees, they pay homage to the Buddha and the nat, but not to the tree by itself. From a Buddhist view, the tree does not have life. But from a scientific point of view the tree has life. Some people say the tree has life, but it only means the tree has physical breakdown, it has no mental consciousness.

The significance of 19 different tree species in Buddhism stems from them being seen as the "equipment" or "utensils" that belong to the Buddha, meaning that under those tree species, one or more of the 28 historical Buddhas obtained enlightenment or, in the case of the Matreiya Buddha, will do so in the future. Out of these 19 trees, the Banyan trees (*Ficus benghalensis*), under which the most recent (Gautama) Buddha attained enlightenment, and the *gankaw* tree (*Mesua ferrea*), the tree under which the future Buddha is believed to obtain enlightenment, carry particular importance. It is noted that branches from the Banyan tree (*Ficus benghalensis*) cannot be broken without permission from the monks or other representatives of the sangha, let alone cutting down the tree. People are also said to put Buddha statues next to the gankaw tree (*Mesua ferrea*), whose wood can only be used for particular ends by people who keep their precepts, for example, the building of a monastery (Figure 14.3).

Figure 14.3 Buddha shrine belonging to a fisherman in a village in Kawkareik Township.

People's faith also influences their behavioral code of conduct in the forest, with hunters noting that the Christian faith tells them they can't hunt in the mating season and the period of lent, nor kill pregnant animals, nor kill without a reason to do so. Buddhists, as well as some Christians, note that it is "bad karma" to shoot a pregnant animal, as one would kill two lives instead of one. One hunter feels "embarrassed" to go hunting "because it is not good to hunt and kill animals according to Buddhist teachings."

Especially in the Catholic villages, holy water, blessed by the local Father, is noted as being able to scare away spirits and is, according to one traditional healer, the most important ingredient in traditional medicine. Some Christians are said to enter the formerly off-limits deep forest, no longer believing that nats live there.

Following the Lunar Calendar

The already intricate perception of the forest as a continuous balance of relations between humans and nonhumans becomes more complex still when adding the feedback Christians and Buddhists alike provide regarding the influence of the moon on the rhythm of life in the forest. Karen State follows a lunar calendar, but the influence of the moon goes much further, influencing the day-to-day actions of humans and nonhumans in the forest.

A majority of hunters in all locations note that certain positions of the moon prohibit them from going into the forest to hunt, and the specific lunar phases partially overlap across townships. Full moon and no moon are considered off limits for hunting, as one hunter put it, because during those days, animals in the forest are meditating, it being considered "a big sin" to shoot them during this period. Animals, including fish, are also believed to "look at the moon to know what time it is" and gather in certain places at certain moments in the cycle of the moon to eat together, making them easy prey for the hunters. A honey hunter notes, however, that he only harvests honey during new moon nights, as "on those nights there is a lot of honey in the hive."

The lives of nats, too, are influenced by the moon. In one village, no offerings are made during new moon, quarter moon, half moon, and full moon, for "these are the days when the [big] nats have a meeting" and therefore are not present in their usual location. Certain plants, too, are said to be influenced by the moon, with many people noting the influence of the moon on bamboo, which should only be harvested from the forest during a waning moon, because if you use bamboo that has been cut during a waxing moon, it will be eaten by bugs if you build your house from it. One medicine man only uses leaves that were harvested during *thazaung daing*, the full moon of the eighth month in the lunar calendar.

What this short summary of research findings portrays is a complex spirit belief system together with Buddhism and Christianity that heavily influences Karen perceptions of the forest. Humans perceive nonhumans mostly through an animist mode of identification, with notable naturalist exceptions that appear to be rooted in Buddhism and especially Christianity.

Implications for Forest Conservation

A growing number of agencies and initiatives focus on the importance of Indigenous peoples as conservation actors, including Indigenous Protected Areas in Australia, Tribal Parks in North America, and most prominently the overarching Indigenous and Community Conserved Areas (ICCAs) consortium (Tran et al. 2020). These approaches are formalizations of long-standing ways of life or conservation efforts by Indigenous peoples. Studies show that 36% of intact forested landscapes fall within Indigenous peoples' lands, where forest loss rates have been considerably lower than on other lands (Fa et al. 2020). Because these forests are still vulnerable to clearing and other threats, it is pertinent that indigenous ontologies and the role of spirits be taken seriously. In addition, recognizing the role that Indigenous ways of life play in forest conservation could justify a form of conservation support that is inclusive of spirits and other ways of knowing.

The impact that recognizing the role of spirits can have on formal forest conservation and forest management also begs an epistemological question: what counts as knowledge in different ontologies, and, by extension, what knowledge counts in forest conservation? Implicit in recognizing indigenous knowledge and practices from within the ontologies in which they are rooted constitutes a re-evaluation of what counts as knowledge in forest conservation. We must ask which parts of the indigenous wealth of perceptions of forests are seen as "knowledge" by natural scientific conservationists. Questions of concern here include "[w]hat level of evidence or proof is needed before we really 'know' something? Are some forms of knowledge more valid than others? What is the relationship between knowledge and belief?" (Newing 2011: 8). While based on our research we cannot fully answer these questions, it is clear that differences in knowledge go beyond mere cultural differences; they concern the fundamentals that inform knowledge: difference in ontologies.

Karen local experts demonstrate that indigenous knowledge is full of wisdom, awareness, insight, and information, an epistemology with a strong empirical foundation. The challenge lies in understanding indigenous knowledge from within its own underlying ontologies. While this is complicated, not doing so risks (mis)understanding them in a different way than their original meaning. Misinterpretation caused by an ontological discrepancy can lead to miscommunication, irritation, friction, or conflict. This becomes evident when considering that in Karen forests, what is a tiger to a biologist to a Karen can also be a spirit temporarily manifesting as a tiger.

Given Karen perceptions of nats as guardians of the forest, any nature conservation program that does not include nats would be the equivalent to addressing political issues of national importance without the head of government present at the table. This begs the question of which stakeholders we see and hear at the table and which stakeholders (human or nonhuman) we don't see or hear at the table. Conservationists should explore a conservation issue separately from two

different ontological realities: science and Indigenous. A foundation for ontological equity may be established by means of constructing potential scenarios emerging from each ontology (c.f. Verschuuren 2017). This should happen right from the conceptual stage of understanding a conservation area or issue and its related challenges; this must include research, reconnaissance missions, focus groups, and brainstorm sessions. During such a process, one becomes aware of perceptions, priorities, and redlines held by scientists and Indigenous peoples. While a scientist may categorize areas of the forest in Karen State by counting IUCN red-listed animal and plant species, our research results suggest that from a Karen perspective, we should also consider the level of happiness of the spirits, the number of animal species that cause peace, and the abundance of trees with cultural and religious significance.

Indigenous ontologies, and the importance they attribute to nonhumans, are gradually being formally recognized in the social sciences. One such example concerns the granting of juristic personhood to nonhumans such as animals, enspirited rivers, and mountains in positivist legal systems (thereby no longer treating them as things or property). This has gained traction in places as diverse as Bangladesh, Brazil, Colombia, Ecuador, India, Mexico, New Zealand, the Philippines, Sweden, Uganda, and a number of Nations in the United States (Studley and Horsley 2019). Increased recognition of sacred natural sites and spiritscapes can be seen as a comparable development in the field of nature conservation (Verschuuren and Furuta 2016; Verschuuren 2021). In Karen territories, the Salween Peace Park, winner of the 2020 UNDP Equator Prize and 2020 Goldman Environmental Prize, as well as the Rays of Kamoethway Indigenous People and Nature-organized community-driven conservation initiative in the Kamoethway river valley are inspiring examples of Karen indigenous nature conservation that deserve more political and legal recognition (KESAN 2017; ICCA Consortium 2018).

Conclusions and Recommendations

Our field research on Karen ontologies found that Karen perceptions of the forest are informed by an ontology that depicts the forest as an interrelated web consisting of humans and nonhumans, especially animals and spirits. This reality is continuously brought into being by communications, relationships and experiences that have occurred, and continue to occur, in the forest.

It becomes clear that when Karen experts and western scientists talk about the forest, they have a different understanding of what it is that they are talking about. The severity of this gap becomes clear when unearthing the different ontologies that inform these respective perceptions. This in particular concerns the kinds of nonhumans, including spirits, that live in the forest and the kind of relationships they can have with each other and with humans. Strikingly, while nats are regarded as important "guardians of the forest" in Karen knowledge systems, they are completely absent in scientific knowledge.

As we have shown, the importance of recognizing the indigenous ontologies that underpin the role of spirits in forest practices remains an underestimated, underresearched, and misunderstood factor in accounting for the challenges of nature conservation in indigenous areas. Acknowledging the plurality of ontologies and their importance in shaping our thoughts and practices prompts us to reconsider how we think of nature and how we practice nature conservation. Recognizing the role of spirits in forest conservation means that natural scientists are no longer the only experts on nature conservation, nor are they the dominant ones. Indigenous peoples with understanding not just of ecology but also of human-nonhuman relations (often not seen as separate) are experts. Consequently, knowledge of forests can no longer be found only in universities and academic publications but also inside the forests themselves and in indigenous accounts and reports of spirits in the forests. By extension, not just natural science but the humanities matter in nature conservation.

Conservation actors need to understand and respect in their own right the indigenous ontologies that inform indigenous perceptions of nature in which a key role is played by spirits. The practical implications of doing so mean re-evaluating what is considered knowledge and addressing the (in)equality between scientific and indigenous knowledge. Implicit in this practice is recognition of the importance of including culture in conservation.

A good place to start may be to become aware of one's own ontological filters. Walking a mile in another person's shoes might help with understanding indigenous ontologies, avoiding ontological discrepancies, and unlocking potential for greater mutual respect. This in turn creates a foundation from which to increase trust, which strengthens conservation dialogue that can decrease misunderstanding, lower the risk of conservation conflict, and improve conservation outcomes.

Notes

1 We use "Karen" and "Karen State" to refer to the people and the geographical area and "Myanmar" to the country with no political connotation.

2 Article 1a of ILO Convention No. 169 refers to "tribal peoples in independent countries whose social, cultural and economic conditions distinguish them from other sections of the national community and whose status is regulated wholly or partially by their own customs or traditions or by special laws or regulations."

3 The typology of nats within Karen ontology is in need of further research. Nats appear to be spirits who have always been spirits. In two cases, spirits were distinctly referred to by name, not as nat, which appeared to refer to spirits who were believed to have lived as heroic humans in the distant past.

4 The majority of interviews were conducted in the Burmese language, where the word "nat" refers to spirits. Bweq Karen/Geba Karen speakers also used the word [Toko-mo-key], while Geba Karen also referred to nats as [Deq-shi-deh-neh]. Po Karen speakers referred to Nats as [Nar].

5 There are small Hindu and Muslim communities in Thandaung Gyi and Kawkareik townships, but the people we encountered living near or in the forest self-identified as Buddhist or Christian.

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