Ontologies of Indigenous Karen people:

A Case Study in Kawthayghu, Salween Peace Park, Kawthoolei

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Introduction

This report begins to describe the ontology of the Karen people in Kawthayghu, a community within the Salween Peace Park, where Indigenous ways of knowing and living are deeply intertwined with the natural world. Their relationship with the land is shaped by generations of ecological knowledge, spiritual beliefs, and cultural traditions that guide conservation practices. Unlike conventional conservation models that separate humans from nature, Karen stewardship is rooted in reciprocity and maintaining relations with more-than-human beings.

For centuries, the Karen people have maintained sacred sites, protected species, and enforced taboos (called *Tadu*) that regulate land use and hunting. In Kawthayghu, entire ecosystems are safeguarded through belief systems, with certain fish, amphibians, and forest species receiving protection based on their cultural and spiritual significance rather than formal scientific classification. Oral traditions, myths, and *Tadu* function as laws, ensuring the continuity of biodiversity without reliance on external conservation policies.

The establishment of the Salween Peace Park in 2018 reflects the formal recognition of these Indigenous conservation principles. Rather than imposing a new protected area, the park serves as a political and ecological safeguard for a way of life that has persisted for thousands of years. In many ways, the park has always existed—modern conservation frameworks are simply catching up with what the Karen have practiced for generations.

This paper is a modest attempt to interpret and document myths, beliefs and practices as evidence of harmonious coexistence with nature. This report offers only a starting point in exploring Karen ontology in greater depth. By examining the conservation ethos in Kawthayghu, the species and landscapes protected through Indigenous knowledge, and the cultural narratives that sustain them, it aims to contribute to a broader understanding of the Karen worldview and its role in maintaining territories of life.

A Karen man with his traditional clothes and spear

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Historical Background

Ancient History

According to oral history, the Karen people of Kawthayghu, Luthaw Township, Mutraw District - now the site of the Salween Peace Park - go back 35 lifetimes (for the locals, they measure a lifetime as approximately 100 years). The Karen people originally resided in caves within Lermu Mountain. Over time, they moved out to build settlements, establishing villages surrounded by defensive structures. They dug protective canals and erected sharpened log fences, known as *Tahtu* meaning "village wall along the canal" to guard against dangerous wildlife such as elephants, rhinos, and tigers.

According to oral history in Kawthayghu, 3,200 years ago Karen craftsmanship flourished, with skills in basket weaving, textile weaving, blacksmithing, carving, and traditional architecture. Lacking access to iron, they crafted tools and weapons from bronze, copper, and gold, including their iconic bronze drums. This period also saw the development of the *Chicken Scratch Script*, an early form of Karen writing, which was restricted to three designated scholars per *Kawko*.

Karen settlements, or *Kaw* (customary lands), were ruled by *Kawko*, the head of the land, who held governance structures similar to kingship. Visitors were required to adhere to specific cultural protocols, including prohibitions and sacred *Tadu*. The Karen governance system provided stability and facilitated peaceful coexistence among different communities within the Indochina region.

The Karen people primarily sustained themselves through agriculture, fishing, and hunting, passing down environmental knowledge through generations. The majority practiced animism, a belief system that recognizes spirits inhabiting natural entities such as plants, animals, and landscapes. This worldview reinforced ecological interdependence and guided sustainable resource management practices. Sacred rituals and prayers were performed to seek forgiveness when they believed they had disturbed nature, ensuring a respectful balance between human activities and the environment.

According to oral history, centuries later, the Karen had their first recorded encounters with outsiders, believed to have originated from regions now known as Bangladesh and India. These traders introduced materials like clay pots and bowls, which they exchanged for locally made goods. Subsequent trade expanded with merchants from India, Arakan, Mon, Siam, Shan, Wa, Khmer, Laos, and China. These interactions facilitated the exchange of languages, technologies, and cultural knowledge, leading to the formation of alliances under the Karen system called *Tho,* meaning "alliance." These were very close friendship bonds for life. Trade agreements and diplomatic relations were further solidified through a network of blood oaths - ceremonial pacts where representatives mixed their blood and drank it as a lifelong pledge of loyalty. Some people also had tattoos in different languages to show their network of alliances. Often, they would travel these long distances on elephant back, and build tree houses to sleep in to protect themselves from tigers. The blood oaths stopped being a practice before the colonial era, after the Burmese conquered Ayutthaya, as this changed the way that people were able to travel – they no longer needed the system of *Tho*.

External Conquests and Colonial Disruptions

The era of alliances ended in the 9th century with the expansion of the Mon Kingdom, which led to the occupation and destruction of Karen villages. Many Karen communities were forced to flee, forming new settlements throughout Kawthayghu territory. Subsequent centuries saw recurring village raids by rival groups, particularly from the Shan, Burman, and Siam kingdoms. Despite these conflicts, the Karen maintained their *Kaw* governance system, which is believed to have originated over 3,000 years ago according to Kawthayghu local history.

In the 15th century, Burmese emissaries from the Ava Kingdom traversed through the Kawthayghu area in Ler Mu Plaw. They were intercepted by Karen forces (pah kay pah plor) who demanded their surrender, threatening to burn the bushes around the enemy

and kill them all if they resisted. The prince decided to surrender, offering a sword to the Karen, who reciprocated with a spear. They instructed the Burmese that in the future, when traveling towards Ava, they should raise the sword to signify friendship. Conversely, when the Burmese king passed through Karen territory en route to Thailand, he was to raise the spear as a symbol of recognition and respect.

Colonialism brought further disruption. Under British rule, traditional Karen governance was eroded as colonial administration imposed new legal and economic systems. After Burma gained independence in 1949, civil war erupted between the Karen National Union (KNU) and the Burman-dominated government. This conflict, which persists to this day, has led to widespread displacement and insecurity, testing Karen land stewardship and survival strategies.

Resistance, Displacement, and Knowledge Transmission

Despite colonial suppression, the Karen actively resisted external control. In the late 1880s, villagers in Pawka Der, Salween District, successfully prevented a British Burma logging company from exploiting their sacred forests. They demonstrated their deep spiritual and cultural connection to the land through the concept of *umbilical spirit trees* - mature trees designated at birth as a person's spiritual guardian, which were strictly protected. Their resistance led to the British Burma government recognizing their village territory and granting them customary land titles. This precedent enabled the formal recognition of other *Kaw* lands, including Kawthayghu, by British officers in Pa-pun.

Following Burma's independence, the Karen faced increasing threats from both war and state policies. Beyond military conflicts, large-scale development projects such as mining, monoculture plantations, and hydropower dams - particularly the proposed Hatgyi Dam (Mongabay, 2016) - have continued to expel Karen communities from their ancestral lands. Forced displacement has resulted in shifts away from traditional rotational farming toward occupations like gold mining and rubber cultivation. The separation from sacred sites, biocultural species, and ancestral spirits has also contributed to religious transformations and the erosion of ecological knowledge.

The loss of Indigenous experts - primarily elders who perish during wartime displacement - has accelerated the decline of traditional conservation wisdom. Without these knowledge holders, the intergenerational transmission of resource management techniques and nature-based spiritual practices has weakened, posing a long-term threat to Karen cultural survival.

Despite these challenges, the Karen remain one of the few Indigenous nations in the region that continue to live in harmony with nature. Their ecological knowledge is deeply rooted in oral traditions, transmitted through poems, myths, and storytelling. Therefore, much of this ancestral knowledge is not documented. In traditional Karen society, poems functioned as policy, while *Tadu* served as law. Conservation principles were instilled in children through memorization of ecological verses, taught in *Blaw* - a meeting hall used for ceremonies and communal education.

These oral traditions reinforce sustainable land management by classifying land types, identifying species, and defining protected zones. Each community member is required to learn the names of significant plants, rivers, mountains, and sacred sites in order to conduct spiritual offerings. This intimate knowledge ensures not only environmental conservation but also practical survival, as recognizing plant and animal species aids in food security, medicine, and hazard avoidance.

A Karen proverb states: *"If you get lost, return to your own way as quickly as possible, because if you don't turn back, you will be lost forever."* Karen poetry serves as a guide, reminding their people to stay connected to their ecological heritage despite modern pressures.

Revitalizing Indigenous Knowledge

The Karen's approach to conservation is not merely an alternative model; it is a solution to contemporary environmental crises. Unlike state-imposed conservation policies, which often fail to integrate Indigenous wisdom, the Karen system of governance is based on reciprocal relationships between humans and nature. Their traditional ecological knowledge embodies principles of sustainability that industrialized societies have struggled to replicate.

The undervaluation of oral traditions in academic and governance structures has led to their exclusion from formal conservation policies. The dominance of written knowledge systems has marginalized Indigenous ecological wisdom, even though it has successfully maintained biodiversity for centuries. This report aims to document and revitalize these traditions for younger generations, ensuring that vital knowledge continues to be passed down.

Furthermore, this report calls upon the Kawthoolei Forestry Department (KFD) to critically assess existing wildlife and forest laws, many of which are rooted in British colonial frameworks. Recognizing and incorporating Karen conservation practices - such as *Tadu* relating to sacred species—can enhance environmental governance and ensure culturally appropriate conservation efforts.

Ultimately, protecting Karen ecological knowledge is not just about preserving cultural identity - it is about securing a future in which Indigenous wisdom leads the way in safeguarding the planet. The Karen's relationship with their ancestral lands proves that conservation does not require external imposition but rather the recognition and support of Indigenous self-determination. The world must acknowledge the Karen's contributions to environmental stewardship and stand in solidarity with their fight to protect their lands, water, and biocultural heritage.

Mythical review

This section of the paper outlines the bedrock of Karen ontology through examining oral traditions, or poems called '*Hta*' in Karen. This is based on the author's extensive knowledge as an Indigenous Karen knowledge holder, and his interviews with local elders and community members.

The Story of Creation

The following text explains the general concept of creation according to traditional oral Karen poems. It explores the causes and origins of how the natural world came about.

မူခိၣ်လၢပျၫ်တအိၣ်ဒံး
ဟီၣ်ခိၣ်လၢပျၫ်တအိၣ်ဒံး
ထူဟဲလီၤဟဲတဘျၣ်ဒံး
ယွၤဟဲလီၤဟဲတဘျၣ်ဒံး
တၢ်ဟဲလီၤဆိမ့်ကလံၤ
ဆၣ်တရံးမူခိၣ်ခီၣ်ထံး

မူခိၣ်လၢပျၫ်တအိၣ်ဒံး
အိၣ်ထဲကလီဒီးကလံၤ

In the beginning, there was no heaven or earth but a hollow space in the sky where no Gods would dare to enter. The first thing that came into this space was the wind, and it traveled around and filled this empty space. They called this empty space filled with air an air ball. This air ball was an air mass, *Kalee,* that traveled around in this hollow space which was covered with a thin membrane called *Kalaw*, to trap air. It was the combination of *Kalee* and *Kalaw* that made the air ball.

The wind swirled around this hollow space, sometimes heated by the sun until it became hotter than fire. Conversely, when the sun illuminated one side of the sphere, the opposite side remained frozen in darkness. At the boundary where the hottest and coldest air converged, intense thunderstorms erupted, giving rise to vast bodies of water in space. This natural process of heating and cooling shaped these water formations without the intervention of any creator

ကိ်ာန့်မ့ဉ်ဒီးခုဉ်နှ့်ထံ
လဲးတ်ာ်ဒီးဃဲဒီးကလံး

After the body of water formed in the hollow space, a disintegrating meteor scattered rock particles, which descended into the water. Over time, as debris continued to fall, these particles gradually settled and transformed into sand and stones beneath the water's surface.

လၢဟူးမ့်ာ်ထံတလဲးလဲး
အိဉ်ထဲလ့ာ်မဲးဒီးဝဉ်မဲး

This Karen-origin myth tells of how the first humans and spirits entered the world. Naw Mugkha Kler, the god of creation, and her family lived on another celestial body within the Ursa Major constellation, commonly known as the Big Dipper. This constellation holds significance across many cultures, often bearing different mythological names, and includes two prominent stars that serve as navigational pointers toward the current northern pole star.

According to the myth, Naw Mugkha Kler and her siblings - two brothers, Maw Ywa and Cheeghue, and two sisters, Naw Paw Moo and Naw Paw Bwa - once resided among the Maylagha and Shak'Hsor stars (known as the Elephant Star in Karen tradition). As the eldest sibling, Naw Mugkha Kler decided to journey to the vast hollow space filled with water, bringing her two brothers along while instructing her sisters to settle on the Moon.

Before departing, she carefully prepared for the journey, bringing a fish, a bird, and a fig tree, believing the world below was entirely covered in water. The fish would live in the water, the bird would serve as a means to travel above the surface, and the fig tree would provide both a place to rest and a source of food. To ensure warmth, she also crafted an earthen hearth, securing it to the fig tree so it wouldn't sink upon landing.

Calling upon the wind, she descended with her brothers into the water-filled space. As she arrived, her fig tree remained afloat, and she held the bird safely in her arms. However, her brothers and the fish plunged directly into the water and vanished. Alone in this vast expanse, she desperately searched for Maw Ywa, hoping to find him floating on the surface. With no land in sight, the bird she carried had nowhere to rest—until it eventually perched on the fin of the fish swimming near the water's surface.

တၢ်နီနၢ်းနီနၢ်းမ့ၢ်ထံ
ထိဉ်ချၣ်စီၢ်လၢညဉ်မၢ်ခံ

After a long time of searching, she found a big patch of water foam in the middle of the water's surface. She then went there and searched for her brother. She finally found her brother Maw Ywa, whose name means 'hoping to flow with the water,' lying inside the foam, but not breathing. She then blew air inside her brother seven times, after which he breathed on his own again, and she renamed him Ywa, which means flowing with the water. Later, she asked Ywa to help the bird to take soil from her earthen stove to create the Earth. The bird went to Mugkha Kler's kitchen every day, rubbed her tail against the earthen hearth and brought back some soil on her tail from which to create a small planet the size of a bean from the pod of the woody "matchbox" vine. The bird made it bigger by adding soil every day, while Ywa helped her with polishing and spreading it flat. Mugkha Kler blessed the soil to make sure it didn't run out.

ဟီဉ်ခိဉ်လၢဟ့ၢ်နီမီကဲ
ထိဉ်ချၣ်တ့ၤယ့ၤဟိာ်မဲးမဲး

Mugkha Kler knew that living on that little fig tree without people was very lonely. So, she took her own menstrual blood, stirred it vigorously, extracting and coalescing cells into bone, flesh, and other tissues. She wrapped the mixture in fig leaves like larvae, forming a type of cocoon - reflecting the process of cleavage in multicellular organisms, where a single-celled zygote undergoes rapid division to form the blastula and eventually a fetus. In Karen, this process is called *Lo*, comparable to the English concept of molting. All humans started from a blood mixture, becoming flesh known as *Lolerthwee Pielernya*, which translates roughly to 'seedling blood.' This concept is still prevalent in Karen belief about how life is created within the womb.

She needed to wait and care for it for a long time until it became human. This process created many more beings than could survive, ensuring the survival of the strongest. She placed the dead ones on the forks of fig branches as a form of burial, as there was not yet any soil. She also inserted them into hollows in the fig tree or laid them on its branches,

where they became spirits of the tree. Others she cast onto the ground, where they became spirits of the land, or into the water, where they became spirits of the rivers and seas.

From her blood, she also created other beings called *Shapo Kawpo*, meaning "stars on earth." When humans look into the eyes of animals, they see these earthly stars. At that time, all animals could speak, communicating not only with each other but also with Mugkha Kler. They lived peacefully, eating only fruit. But after they disobeyed the Creator, they lost their voices and began to prey on one another.

မှၢ်ဃါဝ့ၤအသွံၵ်လၢပျူၤ
ကဲထိၵ်နီၢ်ချုဒီးစီစၢၤ

Over time, as the material on the land decomposed, she called the earth *Horkho*, which means 'rusted site' in Karen, as the Earth resulted from rusting material and decomposed organic properties. Above the land there was freshwater, ice and salt water. Beneath the land surface there was oil or petrol-like rivers called *Thoklo* which was being taken care of by Cheeghue, one of the brothers who fell beneath the surface of the Earth.

ဟီၵ်ခိၵ်အဖိလာ်သိကျိ
လၢ်မ့ၵ်ထးဆါစံၵ်လ့ၢ်လိၤ

Mugkha Kler, called the Sky 'Moo Kho' meaning unstable place, or the place that always moves. Mugkha Kler's younger brother Cheeghue had fallen deep into the Earth's core where he remained beneath the sea floor while looking after the petrol rivers deep inside the earth. On the land, Mugkha Kler asked Ywa to look after the creatures of the land and in the firmament. Since then, Mugkha Kler, Ywa and Cheeghue rule the world, while her sisters, Naw Paw Moo and Naw Paw Byay, rule the Moon.

Mugkha Kler transformed into several spiritual entities later and spread around the world to take care of each of its ecological systems. Cheeghue lived deep within the Earth's inner core, where he could not see the ocean, the land, or the moon. It is said that the dung beetle constantly lied to him, taunting him by claiming that all creatures - Cheeghue's family on Earth - had been completely wiped out.

As Cheeghue supported the land above him, he could shake his thumb to cause an earthquake. But when he heard the cries and commotion from above, he knew the dung beetle was deceiving him.

To stop an earthquake, people must repeat three times that their children on Earth are still alive. If a Karen person speaks these words, the earthquake will cease immediately, for Cheeghue will realize that he has been tricked once again.

The Story of Apocalypse

The owners of all creatures exist everywhere at all times. Because of this, people must honor and respect them at every moment. The world itself will not end, but one day, the age of humans and other living beings will come to a close. When that time arrives, the Karen people will have a role to play in confronting the disaster foretold in prophecy.

In preparation, they must preserve their sacred ceremonial women's clothing - *Nee Ghoe, Chay Ber* - a garment painstakingly crafted by Animist Karen women. Its deep, rich dye is made from the root of a sacred shrub and the leaves of another (Tanya), mixed with pork fat (Hto Bwar Thoe). The fabric is woven with great care, collected and prepared by a virgin couple, one male and one female. The *Nee Ghoe* is the skirt, and the *Chay Ber* is the shirt and it has seeds woven into it. These ceremonial garments are rarely worn; instead, they are carefully kept, ideally in each household, safeguarded by a mother in anticipation of the prophesied final fire.

Nee Ghoe, Chay Ber

This prophecy, *Horkho Ko Oo K'lu Ken*, translates as: "Soil will become embers, and nations will burn." It speaks of a time when fire will consume the Earth - scorching the land, reducing civilizations to ash, and wiping out most of humankind. No one - neither the educated, nor religious leaders, nor scientists - will be able to extinguish it. The only hope will be in the sacred garments. Thrown into the flames, these will quench the fire, saving the survivors.

Yet, even after this great catastrophe, all will not be lost. More of Mugkha Kler's family from the Elephant Star - the Big Dipper - will

descend to Earth to meet the survivors. With their arrival, peace will finally reign, as the surviving Karen people and Mugkha Kler's kin will live there together.

It is said that Mugkha Kler's family has faces shaped like the lids of clay pots - round, with a central, circular nose. In contrast, the Karen people of Earth have faces shaped like the hoof of a buffalo, their broad noses dividing their faces into two halves. When they first see each other, they will laugh so hard they nearly die of joy. Though no human can journey to Mugkha Kler's distant homeland, the day will come when Earth's inhabitants will finally be able to travel there.

Before this time, Karen stories teach that nature was created to support and nourish the human spirit. When people find themselves alone, without friends to speak to, the trees, the animals, and the flowers remain—always present, always listening. The untouched forests and abundant wildlife are not merely resources; they are companions, weaving joy and prosperity into life itself. In these creation myths, nature is not separate from the sacred—it is sacred. The elements of the natural world hold supernatural power, their essence reflecting the divine forces that shape existence.

Methodology and Study Areas

This study was conducted in He Gho Lo Der and Bler Kaw villages within Kawthayghu and surrounding *Kaws* in the Salween Peace Park. Data collection methods included semi-structured interviews and open discussions. Most interview participants were Animist elders, with additional insights from Christian leaders and full moon worshipper religious leaders.

The author's direct observation over three decades, combined with personal practice of Indigenous Karen traditional knowledge, informed the development of the questionnaire used for data collection. Some data was gathered from personal recollections of experiences from over 30 years ago, as original cultural source materials have been lost over time.

A significant portion of the data was collected through storytelling and group discussions held during traditional feasts and other cultural events. Additional insights were gathered through field trips, hunting, farming, harvesting Non-Timber Forest Products, and other daily activities. Gender representation was prioritized by ensuring an equal selection of 10 men and 10 women for interviews and group discussions.

To enhance the reliability of this information, multiple workshops and training sessions were conducted to evaluate the validity of the collected data. However, certain knowledge is now inaccessible due to the passing of knowledgeable elders, the migration of community members, or conversions to other religions that led individuals to repudiate traditional beliefs.

Furthermore, data from prayers and *Hta* (poems which are often sung) was obtained through personal involvement and memorization of key phrases. While some elders can recite lengthy prayers, only the short opening and closing words of a specific prayer have been included, as traditional *Tadu* which prohibit the full transcription of these sacred texts. Recording them in their entirety would be considered sacrilegious.

By integrating personal experience, interviews, workshops, and training, we have compiled this knowledge into a storytelling report that illustrates our ways of thinking and traditional conservation practices. This documentation aims to foster a deeper understanding of Karen Indigenous perspectives and practices, highlighting how the Salween Peace Park is both a product of traditional conservation methods and a beneficiary of modern conservation designations. It also seeks to communicate the necessary conditions for Karen Indigenous people to continue living in peaceful harmony with their environment.

We chose to conduct research on Indigenous Karen animist communities because they have maintained their traditional way of life despite the pressures of globalization. While other religious practitioners have retained some traditional knowledge, our study focused on communities where animist practices remain strong, maximizing the depth of knowledge we could gather within our time and resource limitations.

The strength of our research lies in the writer's personal practice of animism, which allowed the creation of culturally appropriate questionnaires and facilitated sensitive interactions with community leaders. This background ensured that data collection avoided cultural or religious misunderstandings. Additionally, as native speakers and members of the local community, we were able to engage with participants in meaningful ways that fostered trust and openness.

Our background and cultural familiarity played a crucial role in data collection, allowing us to navigate sensitive cultural and religious topics with care. Understanding animist traditions helped us determine the best times and places for discussions, as knowledge is often shared only in specific contexts. Being part of the community enabled us to build trust, ensuring that participants felt comfortable sharing their insights. Additionally, as native speakers and local community members, we were able to conduct research in a way that was both respectful and deeply informed by lived experience.

However, our research also faced challenges. Much traditional knowledge has been lost with the passing of elders, as it was never written down or recorded. Despite being part of the animist community, we were still limited by cultural and religious restrictions that prohibit outsiders - including researchers - from participating in certain ceremonies and events. Furthermore, as this area of study has not been widely researched, there is a lack of academic references to support our findings. Our backgrounds are not in anthropology, which may make it more challenging to frame our findings in academic discourse. Additionally, many Karen words and concepts do not have direct English translations, posing the risk of misinterpretation. Despite these constraints, we successfully obtained essential knowledge for this report within a few months.

Background of the study areas

Description of the Study Area

The information for this paper was gathered from customary lands, specifically in Kawthayghu, a *Kaw* in northern Salween Peace Park (SPP). The communities of Kawthayghu have rejuvenated their governance systems, a response to decades of conflict and displacement. They have established a 14, 606-acre community forest called Kheshorter, revitalized *Kaw*, created fish conservation zones, developed holistic and integrated watershed management, preserved herbal medicine forests, documented their biodiversity with community-led and women-led research that combines indigenous wisdom with scientific methods, and strengthened their livelihoods and food sovereignty through rice banks designed to guarantee food security within their communities during times of crisis.

The SPP spans over 6,000 square kilometers of biodiverse landscape in Mutraw district, Karen State, managed sustainably by Indigenous Karen communities through an inclusive democratic governance structure that provides spaces for local people and leaders to converse on equal-footing.

The Salween Peace Park isn't just important to the lives and socio-ecological system of the Karen indigenous people. It also plays a key role in achieving more global targets. The Peace Park protects some of the world's most endangered animal and plant species, and is home to around 100,000 people many of whom have lived with and protected the forest and its resources for generations.

This region is characterized by diverse forest types, including montane evergreen forests, Pinus forests, and mixed deciduous forests.

Montane evergreen forests are found at elevations between 1,500 and 2,615 meters above sea level. These forests are home to a wide variety of species, including Lauraceae, *Acer calcaratum*, *Rhododendron spp.*, *Rhododendron arboreum*, *Myricaceae*, and *Fagaceae*, along with wild roses, rattans, and small bamboo. These forests have remained largely untouched, covering ridges and mountain tops where moss-covered trees create a cool and sacred atmosphere year-round.

Pinus forests, which range from 700 to 2,000 meters above sea level, consist of two tropical pine species: *Pinus merkusii*, which thrives at lower elevations, and *Pinus kesiya*, found only above 800 meters. *Salix tetrasperma* is a common wetland tree in these areas. The study surveyed orchids in both primary forests and secondary forests, the latter of which has been used for rotational farming.

Mixed deciduous forests, found between 100 and 800 meters above sea level, are rich in species from the Lamiaceae, Lythraceae, and Fabaceae families. The dominant canopy species include Teak (*Tectona grandis*), *Lagerstroemia calyculata*, *Lagerstroemia balansae*, *Xylia xylocarpa*, *Pterocarpus macrocarpus*, and *Bombax ceiba*. Emergent tree species include *Shorea obtusa*, *Tetrameles nudiflora*, *Dipterocarpus costatus*, and *Hopea odorata*. Some areas of secondary forest have regenerated after selective logging and rotational farming practices carried out over the past 30 years.

Livelihoods

The people of the northern SPP rely on a subsistence-based economy, with farming and non-timber forest product harvesting being their primary sources of livelihood. Rice farming, both hill and paddy, is the most important crop, supplemented by sweet corn, potatoes, yams, chili, eggplant, taro, millet, and various medicinal herbs. Alongside rice fields, villagers grow spices and other crops with medicinal value.

Only a few villagers have the means to raise livestock such as cattle, buffalo, goats, chickens, ducks, and pigs. When necessary, these animals are sold to traders from Thailand for cash. Unlike in other regions, timber is not extracted for sale, as villagers are acutely aware of the environmental consequences. Most houses and structures are built using bamboo and broad leaves rather than timber.

While local people are not full-time hunters, poachers from other regions have hunted species such as sambar, wild boars, muntjac, serow, and pheasants, which has had a significant impact on biodiversity. Local villagers only hunt occasionally, after the planting and harvest seasons. They also collect a variety of non-timber forest products, including nuts, mushrooms, honey, fruits, and medicinal plants. Unfortunately, rare ceremonial and decorative orchids, despite being protected and culturally significant, are sometimes illegally harvested and sold.

For those unable to sustain themselves through farming or harvesting, labor opportunities are scarce. Many displaced people in the area, affected by ongoing conflict, rely on subsistence farming to survive. The few available jobs include teaching, health work, and missionary roles, but there are very few opportunities for wage labor beyond exploitative manual work.

Human-Wildlife Conflict

Wild pigs occasionally raid crops, and tigers have been known to prey on cattle and buffaloes about once or twice a year. Leopards and dholes sometimes take domestic pigs and goats. In the past, wild elephants migrated to the area during the rainy and cool seasons, but due to habitat destruction and population decline, this no longer happens.

Development and Environmental Threats

Since the escalation of civil war in 2021, no major development projects have taken place. While external actors, particularly from China and Thailand, are eager to access the area's natural resources, most villagers remain dependent on their annual crops for survival. Travel restrictions imposed by the government have made it nearly impossible for them to sell their produce in urban markets or buy essential goods, as many do not have the necessary documents to move freely within the country.

Forest fires are a major environmental threat. Most originate along roads where the Burma Army clears grasses and bushes during the dry season, often setting fires that spread uncontrollably. Burning garbage also frequently leads to accidental forest fires. The presence of landmines, planted over decades by the State Peace and Development Council (now the State Administration Council), makes it too dangerous for villagers to extinguish fires, as they risk severe injury or death.

There have also been rare cases where fires were caused by poachers, travelers discarding cigarette butts, or embers from torches used at night. Villagers are extremely cautious with fire, as strict penalties are enforced by local leaders. In cases where fires from swidden farming spread to forested areas, it is the full responsibility of the concerned farmer and nearby villagers to put out the flames before they engulf the forest.

Despite these challenges, the region's people continue to maintain and protect their forests through traditional conservation practices, ensuring that these landscapes, which sustain their livelihoods and culture, remain intact for future generations.

Findings

From these interviews and the transmission of ancestral knowledge, it becomes clear that Karen ontology views the structure and function of the world as a continuous process of the divine, manifesting both physically and spiritually. The land is understood as being governed by spiritual entities, including the spirit owners of the land, water, and sky. Each of these divine forces operates within a structured hierarchy, with distinct roles and responsibilities. Some bestow blessings upon those who honor and respect nature, while others enforce consequences for those who violate sacred laws. The following information explores the functions of these spiritual beings within the Karen worldview.

Systems of Spirit Owners and Guardians

In the Karen worldview, humans are not the ultimate owners of the land and water. Instead, the land, water, sun, moon, mountains, and rivers each have spirit owners, called *K'Sah*. Many Karen terms cannot be easily translated and all existing terms in English may naturally evoke certain connotations from readers. For example, 'spirits' can be seen as something made up, which is not the intended meaning of using the word 'spirits' in this paper. Here, 'spirits' refers to the invisible more-than-human entities which exist in the world and imbue flora, fauna, ecosystems, and landscapes. There is a hierarchy of spirits, a complex system which governs and maintains balance of the natural systems. Each spirit, or spirit community, has its own purpose within the system ordained by Naw Mugkha Kler. Under Mugkha Kler there are *K'sah* which can be translated as spirit owners, or masters of the land, water, mountains, and other ecological systems. Under the authority of the *K'sah* there are also other levels of communities of unseen beings.

Land and Forest

Kaw K'sah - Owners of the Land

Kaw K'sah refers to the owners of the land - spirits are not visible to human eyes - but it exists in all lands. They reside as unseen souls, guiding people to do the right thing by showing signs or omens through the behavior of certain species. This knowledge has been passed down through generations in the form of *Tadus*.

For example, if a community plans to begin shifting agriculture in a certain area and a Slow Loris (*Nycticebus* spp.) is found hanging in the fork of a tree's branches - believed to be due to the loss of a mate or family - the plan to farm there should be abandoned. This is understood as a warning that farming in that area could lead to the loss of family members.

Other species also indicate signs. If gibbons call at night, the following day is considered inauspicious for breaking soil on a new farm. The same applies if the red trogon bird laughs, the barking deer calls, or a snake crosses the path on the way to the farm. These signs serve as reminders to pay attention to the natural world.

People believe that the *Kaw K'sah* has supernatural power and can bless those whose surroundings have a thriving forest with abundant wildlife. A strong relationship with the *Kaw K'sah* comes from maintaining a healthy forest beside one's village. The *Kaw K'sah* becomes more powerful when the forest is rich in megafauna and megaflora. The more biodiversity, the more spirits there are within the system which support the *Kaw K'Sah*. Karen people believe that deep forests are powerful places that need to be highly respected. Those who protect and restore their forests receive blessings from the *Kaw K'sah* in return.

Mugha – Forest Guardian Spirits

The *Mugha* is a community of benevolent forest spirits, guardians which inhabit virgin forests and pay rewards to those who are good-hearted and kind towards nature. There, forests are sacred places and include sacred sites and sacred mountains. If anyone visits these areas, they must not commit deeds or actions considered sinful by the forest or local community which include in, in some places, prohibition of eating meat, drinking alcohol, cursing, lying, calling people's names out loud, or committing adultery. The *Mugha*

works to protect the *Kaw K'sah* and seeks permission from *Kaw K'sah* to bless people if it is permitted by *Kaw K'Sah*. The *Mugha* is permitted to bestow blessings onto people but never to curse or harm them.

Tamugha – Land Spirits

As well as the *Mugha*, there are also capricious spirits, called *Tamugha*, who punish those who commit crimes against nature. They will punish you through their animals such as pigs and dogs. Traditional *Tadu* guide people's behaviour and interactions with nature but the taboos themselves cannot punish people, so the unseen soul intervenes to punish people who break *Tadu*, with illness, disasters, and sometimes death. Therefore, Karen people believe they are required to respect nature in order to be protected from bad fortune.

The mythology surrounding *Tamugha* is that they were once humans. There is a story where one of the *Tamugha* never quarrelled or sought revenge with anyone, and didn't hold grudges with anyone who harmed him or his family. However, his neighbours were always trying to provoke and blame him for their own crimes. Finally, *Tamugha* could not bear it anymore so he called upon Mugkha Kler to help him to curse himself so that he would be unable to see his human neighbours. *Tamugha's* neighbour however told Mugkha Kler that he wanted a curse to make him invisible which was the opposite of *Tamugha's* intention. The neighbour did not want to see *Tamugha* and his family any more and be reminded of their power. Mugkha Kler agreed to curse them according to what the humans wanted and made all *Tamugha* invisible. Since then, people have never seen *Tamugha* again, but *Tamugha,* who live in the forests and other places, can see humans. Since then, the *Tamugha* have the power to seek revenge or harm, or even kill people if people have committed crimes against them or the forest. *Tamugha,* is accompanied by other unseen spirits in the forest, which include, black demons, white demons, horse demons, elephant demons, dog demons, pig demons, headless demons, sound demons, wild people demons and humanoid creatures, similar to North American sasquatch or "bigfoot" creatures. If these spirit communities are harmed, then these spirits usually harm humans or human spirits, causing sickness or death.

Kaw K'sah Punishment

As mentioned above, most of the punishments are dealt by *Tamugha* and the land spirits, and it indirectly comes through disease and illnesses. However, there is a direct punishment from the *Kaw K'sah* of nature if a crime is committed against the earth or soil. The punishment will come with an obvious form called *Ho Kho Yu* meaning "soil

swallowing people alive". This event has been described as similar to quicksand, in areas with soft soil around, it happens quickly while swallowing people alive. It is very rare, but it is said to have occurred before. This kind of punishment mostly results from the abuse of nature, but it sometimes occurs when people abuse their parents and grandparents.

K'sah of Mountains

Just like land and forests, there are also owners of mountains, including specific mountains in the area. The tallest and most prominent mountains are often considered sacred and hold deep historical significance. Since time immemorial, local people have named these great mountains for blessing and offering purposes. These sacred names play an essential role, especially during religious and cultural ceremonies.

Whenever people make offerings or conduct rituals, they call upon the spirits of these mountains by name, inviting them to join the gathering, share a meal, and bestow blessings in return. Memorizing these names is crucial, as calling the wrong name means the mountain spirit will not attend the feast. Every time a ceremony is performed, the sacred mountains must be addressed by their proper names.

Other Spirits on Land

The spirits of megaflora, particularly giant emergent trees, large fig trees, and other ancient tree species, are believed to host both benevolent and malevolent spirits. These spirits are referred to as "seven-fathom-wide trees and seven-hand-span-wide bamboos." When a tree reaches several hundred or even thousands of years in age, it is believed to harbor a spirit that may harm those who attempt to cut or burn it.

Most often, the malevolent spirits residing in these trees originate from individuals who were once sick. In traditional practices, an evil spirit is extracted from the afflicted person, placed in a basket, and transferred to a large tree or its surroundings. This process makes the tree particularly dangerous to approach or cut down. Signs of these spirits' presence include black, white, and red threads, dead animals, sacrificed chickens, and old ritual baskets - intentionally placed.

Among these sacred trees are *Giant Ficus* trees, *Dipterocarpus alatus*, *Tetrameles nudiflora*, *Anisoptera costata*, giant Bombax trees, *Hopea odorata*, and giant bamboo species. The Giant Ficus tree is especially significant, as it is believed to shelter numerous spirits. It is said that the spirits of deceased infants inhabit these trees, finding refuge under the

protection of Naw Mugkha Kler, a tree thought to have been brought to Earth by Naw Mugkha Kler to care for them.

Some giant trees are also used to contain malevolent spirits, making these sites shared realms of both good and evil forces. It is believed that a fig tree inhabited by many infant spirits produces the sound of children crying at night, especially during the full moon.

Water

T'puko and Free Flowing Rivers

The spirit owners of the water are called *Htee K'sah*. Living under the water is the *T'puko*, which lives under the water and is usually benevolent towards human beings and blesses people with plentiful water for household use, cleaning, agriculture, healing, and spiritual purposes. These underwater spirit communities that live with him and work to take care of water species and manage the underwater ecosystems. *T'puko*, travels from the sea to the rivers and up to the stream watershed every year in August, *Lahkue* in Karen, which marks the peak water flow, to punish people who commit offenses against water and rivers.

When *T'puko* travels along rivers, the sound of flowing water resembles a group of people moving together with music and dance. During *Lahkue*, when the water level reaches its peak, the *T'puko* people for their transgressions with floods that can wash away homes, destroy paddy fields, trigger landslides, and erode riverbanks.

A free-flowing river allows the water king to travel freely, blessing supporters and punishing offenders. This annual event takes place as long as the river remains unobstructed. During this time, *T'puko* also visits *Kaw K'sah's* friends and their emissaries in the surrounding mountains and ridges of the watershed.

The enemy of *T'puko* is tree shrews because when they travel upstream towards the mountains, the tree shrew uses fig tree leaves as spears which fall down on the *T'puko* procession.

There is a Karen story that tells of a time when *T'puko* was travelling up the river, and was a woman doing laundry wearing a *Kyo Gue* (large woven palm leaf hat) in the river. *T'puko* captured her to travel up the river with them and hid under the *Kyo Gue*. Since then, Karen people believe that ever since then, *T'puko* can take humans during this time of year to protect them.

If a dam blocks the way, *T'puko* cannot travel upstream to reunite with their children in the headwaters or meet with the *Kaw K'sah*. This is also part of why Karen people are so active in stopping planned dams along the Salween River[1] – the life blood of the Karen people, non-human kin, and spirits of the land.

Na Htee – Water Spirits

People believe that water spirits serve as the guards and enforcers of the will of the *Htee K'sah*, who exist everywhere in the water. These spirits protect places considered dangerous due to their unique physical features, such as mountains, fens, marshes, natural springs, cave waters, water from hollow trees, sacred waterfalls, sacred ponds, sacred lakes, and river islands. These locations are believed to be the habitats of *Na Htee*. To avoid harm or sickness, people must stay away from these sites. It is said that these water spirits do not harm or kill unless provoked. However, because they are invisible, people may unintentionally offend them, and in such cases, the spirits will retaliate. For example, if a person unknowingly harms the *Na Htee's* children or destroys its habitat, the spirit will seek revenge. If one of their children is killed, they may take the life of the offender's child in return. Acts of revenge may also come in the form of illness, pain in the feet or hands, blindness, deafness, or even death. If someone realizes that their sickness is due to wrongdoing against a wetland, marsh, or pond, they must seek forgiveness through a water offering, called *Lue Ta*.

The Karen ancestors have long passed down knowledge of which aquatic species must not be touched or eaten in certain areas. Every community member learns about these locally protected sites and prohibited species through oral tradition and shared knowledge. Fish species that are completely banned from capture or consumption in the wild include eel, *Channa* fish, red *Garra* spp., axe-like *Garra* spp., crabs, *Macrobrachium* spp., and others, depending on the community. Some communities enforce stricter protections than others due to traditional *Tadu*.

All amphibian species, including Kuhl's Wart Frog, the Karen Hills Frog, and Blyth's Frog, are also strictly protected and must not be captured in the forest. Additionally, sacred water bodies such as waterfalls (*Pupwalay*), ponds (*Teperpah*), and lakes (*Noh Na Htee*) are protected from fishing, visiting, and cutting down surrounding trees. Marshes and wetlands are considered the "eyes" of the water-dwelling spirits, and damaging them - by felling trees or dumping waste - blinds the spirits. In return, those responsible may suffer blindness as a form of punishment. To prevent such misfortunes, these places must be kept undisturbed and free from human interference.

1 *https://karennews.org/tag/dam/*

Htee K'sah Punishment

The *Htee K'sah* uses the system including flood, landslide, drought, heavy rain and mass fish death as indirect punishment. There are direct punishments, including drowning in water, and mud slides that kill people and floods that wipe away life.

Sky

Mugkho K'sah – Owners of the Sky

Mugkho K'sah, the owners of the sky, manage the quality of the air, determining whether the air is good or bad. If people are preparing slaughtered animals for consumption, they will burn off skin, fur, hair or feathers because the smoke from this is an auspicious offering, and the *Mugkho K'sah* will be pleased and bestow good weather year-round. However, if farmers do not choose the right animals, as identified by a shaman, to offer to the *Mugkho K'sah*, the weather will be terrible for the whole year.

Mugkho K'sah has kin called the heavenly community, or *Tamookopo*. These beings are believed to live and travel high among the clouds but are not visible as their clothes are all white like the clouds. They bless or reward people who do good or take care of the earth. If someone on Earth does good deeds that satisfy *Tamookopo*, a heavenly being will descend and suddenly reveal themselves to the person and bless them. Sometimes, they bless people through healing chronic disease, or showing them where precious materials can be located and extracted, or blessing them with good health and prosperity.

Mugkho K'sah Punishment

Mugkho K'sah rules over seven thin layers of the sky, governing wind, thunder, storms, and rain and blesses people with abundant water for agriculture, favorable winds for pollination, and fresh air to breathe. Those who use the land with respect and care are under the protection of *Mugkho K'sah*, while those who commit offenses against nature may face direct punishment through lightning strikes.

The mood of *Mugkho K'sah* is reflected in the color of the clouds, which shift between black, white, brown, yellow, red, green, and blue - each carrying a message. People interpret these colors to predict future events. For instance, if a red cloud, *Tapwor*, descends over a specific area, it signals impending disaster or misfortune within the coming month or year. This could be a natural catastrophe such as an earthquake or landslide, or a human-induced calamity.

Punishments from *Mugkho K'sah* manifest as lightning strikes, violent storms, and even asteroid impacts - targeting those who have disrespected the sky by polluting it or disrupting nature's balance. Indirect punishments can be things like pest problems, drought. Certain transgressions, such as forcing unnatural pairings between animal species or inflicting severe cruelty on animals, are believed to provoke the wrath of the atmospheric forces. Such acts increase the likelihood of being struck by lightning.

Sacred Sites Within Villages

Some *Kaw* territories encompass multiple villages, while others consist of only one. A *Kaw* includes the land, water, and natural resources within a specific ancestral domain. Recognized as a "territory of life" (ICCA Consortium, 2024; 2021), a *Kaw* may contain various types of forests and land uses, serving both ecological and spiritual purposes.

As a spiritual territory, the *Kaw* embodies the belief systems of the Karen Indigenous people and reflects their cultural identity. Within each *Kaw*, numerous sacred sites are preserved, but the most commonly maintained ones include:

Each village in the *Kaw* is required to have at least five zones for sacred sites. The sites included forest sites (*Daypaw*) for the placement of newborn umbilical cords, mother pig's head spirit site (*Htomolo*), unmarried deceased person's spiritual memorial site (*Talay*), grave forest for other deceased people (*Thwako*), corridors (*Ta-aray),* dead spirit world (*Lohti*), with addition of offering sites called a water offering site (*Luhteehta*/*Hteeboko*) and a land offering site (*Ta Jho*).

***Daypaw* - Umbilical Cord Forest**

The *Daypaw* is a sacred forest site where a newborn's umbilical cord is cut, placed in a bamboo container, and tied to a designated spirit tree. Once a child's umbilical cord is placed on a tree, that tree becomes their personal spirit tree, and they are responsible for its care throughout their life. If a child falls ill, their parents or relatives may perform a traditional soul-calling ritual, believing that the child's spirit has gone to reside in the spirit tree. By calling the spirit back, they seek to restore the child's health. Over time, as each community member has their own spirit tree, these individual trees grow into a large sacred forest - a place deeply connected to the spirits of the people.

Htomolo - Mother Pig Spirit Site

The *Htomolo* is a sacred place where the spirit of a mother pig, raised specifically for a special feast honoring deceased parents and great-grandparents, is sent after the feast. Once the pig is sacrificed for the ceremony, its spirit is believed to reside in this site.

The community is responsible for protecting this place, ensuring that its forest remains untouched—trees must not be cut down, and fires must not be allowed to destroy the area. The site serves as a refuge for wild animals to rest and for birds to roost. Additionally, it plays a vital role as a natural seed bank, as animals and birds feed there and disperse seeds into the surrounding secondary forest. To maintain its sacredness, the site must remain undisturbed and is strictly protected from hunting.

Talay – Memorial Site

The *Talay* is a memorial site for those who passed away without marrying, located in a forested area where their memorial statues are placed. It is believed to be a place where the deceased can communicate with their relatives, friends, and loved ones.

A *Talay* statue is made of wood and resembles a small spirit house, with its top carved in the shape of a duck. The statue is adorned with the deceased's traditional clothing, personal belongings, and essential items, such as a Karen bronze drum, gong, spear, crossbow, or gun. Loved ones may also continue writing letters to the departed and delivering them to the *Talay* site as a way to maintain a connection.

This sacred site must be protected, and the surrounding forest must remain untouched to keep the spirit safe and at peace.

Thwako - Graveyard

The grave site, called *Thwako*, is where the dead are buried or cremated. This place must remain undisturbed, as the dense forest provides shade for the spirits of the deceased. It is believed that souls cannot endure direct sunlight; without shade, they will flee far from their former homes in search of shelter. When the forest canopy is intact, the spirits can rest peacefully without worrying about the weather.

To protect the spirits, villagers ensure the graveyard remains untouched, preventing deforestation, forest fires, or any activities that could degrade the land. In practice, this

sacred site also serves as a refuge for wildlife. When wild animals face threats or danger, they instinctively retreat to the grave site, knowing it is a safe haven. Traditionally, humans are forbidden from hunting or entering this area unless for burial or cremation purposes.

Ta-aray - Corridors

Ta-aray are kept to join fragmented forests to each other. The corridor mainly connects forests in-between sacred sites for protected wild animals to use, especially for the gibbon, other primates, ungulates, tigers and other large areas to roam freely from place to place without any problems. This corridor also acts as seed-saving buffer zones for wild animals and birds to disperse seeds. The seeds of big trees are dispersed by birds, mammals and winds to the surrounding degraded forest areas. These places are totally protected by the local villagers from fire and any encroachments. Also, they help protect the rotational farmers from getting injured by animals, and other dangerous attacks.

Lohti - Dead Spirit World

The spirit world of the dead, known as *Lohti*, belongs to the ancestors of many different communities across the region. This sacred, forested mountain has remained untouched since time immemorial, safeguarded by the collective efforts of villages that protect it from encroachment and forest fires. The mountain, called *Pworbee Kho*, is revered by Karen communities across Karen State, as well as in other parts of Burma and Thailand.

In the past, people from as far as Chiang Mai, Chiang Rai, Tanintharyi, and the Burma Delta would send the spirits of their deceased back to this mountain. The journey to return a spirit to *Lohti* could take days, weeks, or even months, ensuring that the departed could reunite with their ancestors. It is believed that all spirits residing in *Lohti* - referred to as *Hplu* - have white hair. As a result, elders with white hair are seen as being closer to their return to the spirit world. Since *Pworbee Kho* is the resting place of generations past, it must remain untouched and protected, especially from forest fires, to honor the spirits that dwell there.

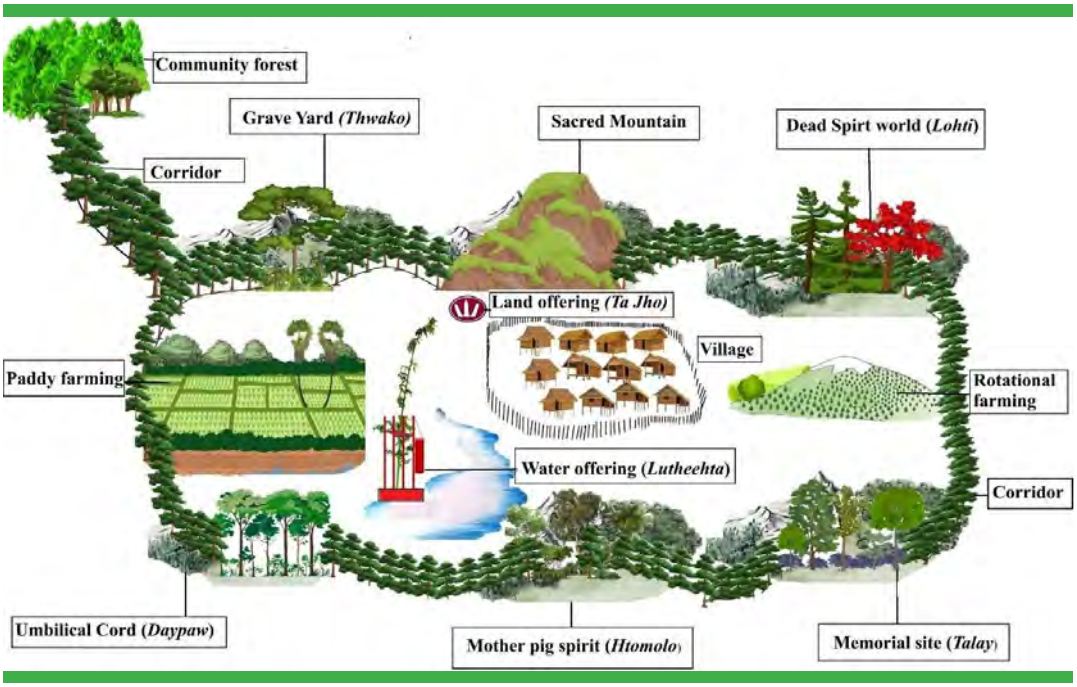
Lutheehta and Ta Jho - Water and Land Offering Sites

The locations for sacred water and land offerings vary by village. Some communities establish their offering sites at the head of their paddy irrigation canals, while others place them at the end of a specific river delta within the *Kaw* territory. The offering ritual

begins with the Head of Water, called *Htee Kho*, followed by the Head of Land, *Kaw Kho*, and is performed annually before planting or sowing begins.

The *Ta Jho* ceremony typically takes place every three years - once in the village and another time at a designated site outside the village, often in the *Kaw Kho's* paddy field. These sacred sites are strictly protected from hunting and fishing.

During each ceremony, offering, or feast, there is a specific order in which people must eat and drink. The *Kaw Kho* or *Htee Kho* and their spouse must partake first - the husband eats and drinks before sharing with his wife. Then, the second-ranking authority does the same, followed by the elder council members and, finally, the ordinary villagers. Without the wife's presence at the ceremony, the event cannot proceed.



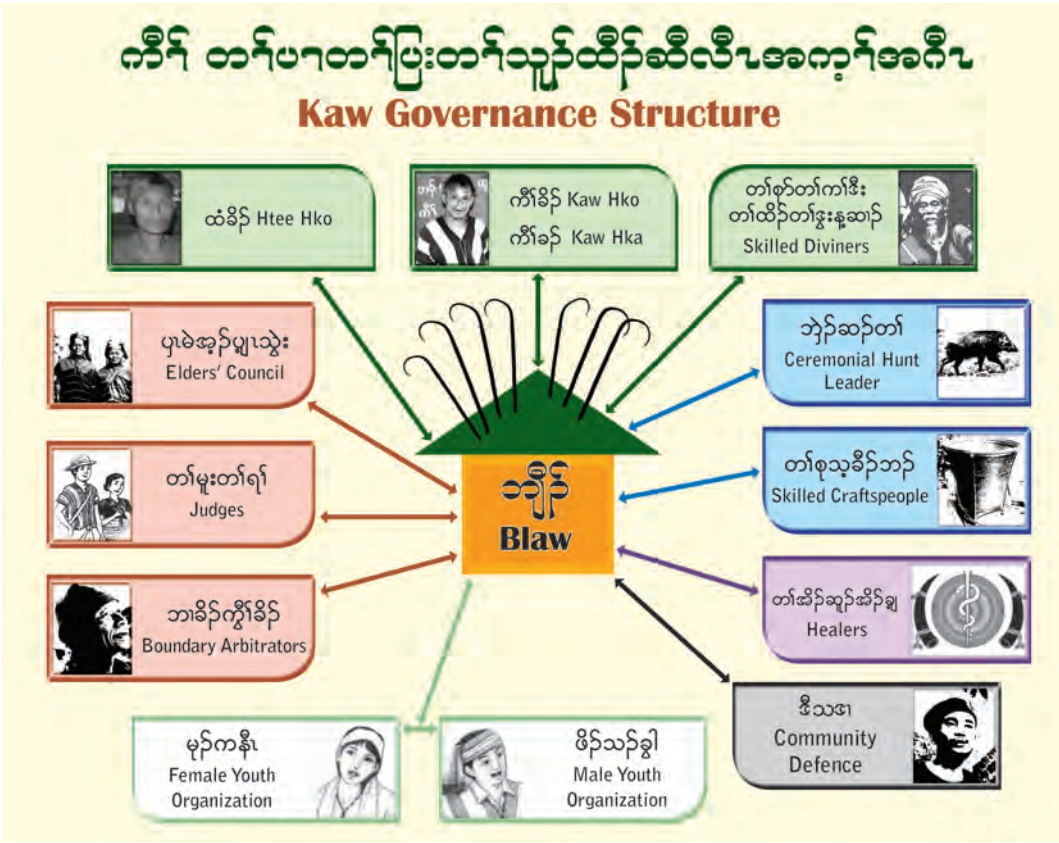
Traditional Land types zoning, and land management categories within a village or a Kaw system.

Maintaining Spirit Relations

Humans and Spirits

Kaw, in Karen means land, and it refers to both customary land and a governance system. The *Kaw* governance system is rooted in hereditary and communal leadership, with *Htee Hko, Kaw Hko,* and *Kaw Hka* (vice head of the *Kaw*) serving as male ceremonial leaders (see diagram below). While they oversee rituals, governance is also shaped by elders, diviners, and other knowledge-holders recognized for their wisdom. At the heart of the *Kaw* is the *Blaw*, a ceremonial meeting hall where elders conduct rituals, hold community discussions, and pass down traditions. Spending time in the *Blaw* while growing up was instrumental in passing down ancestral knowledge to the author of this paper.

Rather than directly controlling land and resource use, governance relies on the guidance of elders and diviners, who interpret ecological conditions and spiritual relations. Through ceremonies, taboos, and collective decision-making, the *Kaw* system maintains environmental stewardship and social harmony.



Traditional Kaw governance structure (Kaw Policy Briefer)

Humans can inhabit and use the land only through negotiation with the *K'sah* through offerings and prayers, seeking their protection and blessings over the land and community. Each *Kaw* maintains a unique, hereditary relationship with these spiritual owners and entities, ensuring a deep spiritual connection to their ancestral lands.

All beings exist under the law of the divine and should be treated equally, with mutual respect on Earth. In the Karen worldview, humankind is physically and spiritually tied to their ancestral land, as their way of life, culture, and traditional and religious practices are rooted in it. The head of the *Kaw*, the *Kaw Kho*, represents the entire community and has the exclusive role of communicating with the spirits, a connection that is restricted to ancestral land. Religious performances serve to maintain this bond, reinforcing a reciprocal relationship in which people exchange food offerings and traditional feasts with the spirits.

Prayers, Rituals, Feasts

Traditionally, ceremonies and spiritual protocols govern every aspect of life in a Karen *Kaw*. To restore harmony following social conflict or moral violations, there is a ceremony. Before ploughing paddy, fields or clearing forest fallows for upland farming, there is ceremony. To protect growing rice from pests, there is ceremony. After the rice harvest, there is ceremony.

The head of water management within the *Kaw*, *Htee Koh*, holds the right and responsibility to offer prayers to the spirit owners of water during traditional feasts, while the head of the land does the same for the god of land. Maintaining a good relationship with the spirit world - through offerings based on seasonal cycles and the growing calendar or predictions by local shamans - is essential. These leaders must memorize the names of mountains, rivers, and sacred sites within the territory, as well as those in the surrounding areas, including megaflora, megafauna, sacred rivers, mountains, seas, oceans, the sun, moon, and stars.

When praying and offering to the *K'sah*, the heads of the *Kaw* will recite a prayer calling or invoking the spirits to come to the offering or the special feast sites. For these prayers, it is important to know the specific names of all the spirits including the spirits of specific mountains:

"Oh K'sah of water, K'sah of lands, K'sah of sky, K'sah earth, K'sah of sun, K'sah of moon, K'sah of stars, May La Kar, Sha Ker Chaw ("elephant star" in Karen, Big Dipper in English), Der Mu (Little Dipper), Der Klay, K'sah of mighty ocean, K'sah of mighty rivers, mighty lakes, mighty mountains, K'sah of Salween River, K'sah of Mekong River, K'sah of Sittaung River, K'sah of Yuzalin river, K'sah of Nattaung Mountain, K'sah of Thawthee Mountain, K'sah of Luthaw Mountain, K'sah of Paw Day mountain, K'sah of Lumu and Ler Ghoe rocky mountain, K'sah of local rivers, local mountains, K'sah of plains, K'sah of forest, K'sah of megaflora, K'sah of megafauna: today I am offering you food and drink. I call you to come to our feast; please come, eat and drink with us all big and small, blind and deaf, disabled and sick, without hesitation. Enjoy the feast with us and if you see a bad curse, bad luck, harmful thing, enemy, come in our way, please divert it back to its own areas and defend us from those harms. Clean away our sin and all bad things and sickness, and bless us with abundant harvest, good health and prosperity. We pray and call upon you from the genius of love and respect. So, please fill our additional needs that you see that we did not mention to you. Please look after both of our men and women, because women will cook and prepare food for you while the men offer food and feed you. If you can do that, you will be giving such offerings from time to time, and we will have a good relationship and keep your name on high. We pray this in the name of our ancestral gods; the sky seven layers and the earth seven strata, which is the matriarch eating up from the earth and the patriarch eating down from sky."

This is how they address the *K'sah* while dripping the traditional wine and rice whiskey on a small piece of prepared food: betel leaves, betel nut, and tobacco. After this kind of ceremony, offerings, or feast, there will be a holiday for the whole community. This kind of holiday is called *Tadu* and no one is allowed to work or collect food for the family. The family members are able to visit each other, play sports and sing, but not to work for family agriculture or paddy farming.

During *Lahkue*, to protect themselves, communities gather their children and family members for *Lahkue Keesue*, the August wrist-tying ceremony. During this festival, people prepare and distribute free food to both villagers and visiting strangers. As the *T'puko* travel upstream to the headwaters, human souls may be led away or taken by the water spirits to protect them. To call back lost souls and ensure safety, everyone ties white threads around each other's wrists. The presence of these threads signifies that a person has undergone the ceremony. This ritual reflects a deep spiritual belief in safeguarding custodian spirits and warding off harm, while also reinforcing intergenerational values of collectivism and reciprocity.

For Indigenous Karen peoples practicing *Ku* (upland rotational farming), *Lahkue Keesue* follows the *Thet Ku* offering ceremony, where prayers are made to *Htee K'Sah* and *Kaw K'Sah*—the spirits of water and land—for crop protection and abundance. Pigs are important for Karen communities for many reasons, including for conducting rituals and ceremonial feasts. A high-quality pig's gallbladder is essential for the *Lahkue Keesue* ceremony. If the liver covers it, it is seen as a bad omen, requiring another ritual. After the ceremony, guests share food, including *Tar Ka Por* (Karen pork porridge), and partake in *Thi Ki Sue* (rice whisky) to give thanks to *Htee K'Sar* and *Kaw K'Sar*. Traditional *Tadu* are observed to ensure the ceremony's effectiveness: if an earthquake occurs, an animal dies, certain objects break, or there is a birth or death in the village, the ritual must be repeated (KESAN, 2023).

They will say a prayer while tying people's wrists with white threads as following:

"*It is the time of July and August where there will be severe flooding, bridges broken, trees falling, stones rolling, landslides. T'puko is traveling up and down the river to visit relatives and workers. At the same time, there will be a lot of natural disasters. For all the men and women, boys and girls, spirits, I call to you (souls/ human spirits), please come back to your body to be saved from killing or sickness. I call you with good food and drink to come back and enjoy your life with your fellow family members and friends here. You will then be full of good health, happiness and enjoy your long life. Later you will be able to travel all around the world until your hair turns as white as the thread on your hands.*"

Rituals for Death

After a person passes away, the animist community conducts a death ceremony to guide the spirit away from family members and toward the spirit world. During this time, the entire community gathers to sing traditional poems for at least three nights. These poems serve as a way to communicate with the deceased and the evil spirit responsible for their death. The community also curses the evil spirit, sending it back to the spirit realm.

During the day, traditional dances - such as pestle dancing and bamboo pipe flute dancing - are performed to help the spirit transition quickly. After two days of mourning, the body is buried in the designated burial site. On the third and final day of the ceremony, the deceased's spirit is sent to the *Lohti* (dead spirit world), which in Kawthayghu is a mountain called *Pworbee Kho*. A ceremonial team carries a basket containing a piece of

the skull or a few strands of the person's hair. Sometimes, personal belongings like coins, necklaces, fabrics, or money are included. Over generations, the *Lohti* has accumulated countless offerings, including old pots, jewelry, and other sacred items left for the spirits of the departed.

Rotational Farming

The traditional farming system of the Karen people is essential to maintaining their religion and fostering relationships with natural spiritual leaders in their communities. For generations, rotational farming - also known as shifting agriculture - has shaped the landscape by creating different forest stages through ecological succession. This process has resulted in diverse habitats, sustaining abundant food sources for both humans and wildlife until the land is fully restored as a climax forest. Step by step, the land transitions from being occupied by annual plants to perennial plants, shrubs, and trees before reaching its mature forest stage.

As an integral part of Karen life, rotational farming defines both their physical and spiritual existence. This upland agricultural system goes beyond rice cultivation to include a diverse array of vegetables, fruits, roots, and flowers. At least 30 varieties of perennial species are planted, serving as food, materials, and ornaments. Mixed with rice, these edible plants enhance food abundance on the farms. Additionally, rotational farming includes medicinal plants, cotton, and other materials used for clothing and traditional tools.

Beyond its agricultural benefits, rotational farming plays a crucial spiritual role for the Karen people. Many plants used in religious rituals, offerings, and ceremonies are cultivated within this system. The forest fire celosia and golden celosia flowers, for example, are grown specifically for use in spiritual practices, including offerings to the rice spirit bird, the Asian Fairy Bluebird (*Htobeegha*). Likewise, yams and taro roots, planted alongside rice, are essential for religious and traditional events. Without rotational farming, the animist religion, which relies on a diverse range of plants and animals - both domesticated and wild - would be at risk of disappearing.

Rotational farming followed a cycle of 15 to 20 years in the past - however with displacement the cycle has shortened to around 8 years - with strict forest fire management rules that allow time for soil and forest rehabilitation, helping maintain forest cover. Recognized by the Karen Indigenous People as an eco-friendly agricultural system, it ensures the preservation of forests, biodiversity, and sustainable livelihoods. The shared traditional

knowledge embedded in this system serves as a vital cultural resource, informing social structures, self-governance, health, and well-being. It also offers a time-tested model of conservation practices.

Mythology of Visible Members of the Natural World

In Karen cosmology, wildlife is not separate from human society but an integral part of it, woven into the fabric of daily life, traditions, and spiritual beliefs. Animals, trees, rivers, and mountains are not just resources but living beings with their own spirits, histories, and relationships. They are part of us, and living in harmony with them is essential to maintaining balance in the world.

The spiritual communities imbued in the land, water, air, and wildlife are ever-present, guiding and influencing the well-being of nature. Some animals are believed to be messengers of these spiritual owners, carrying omens or warnings, while others embody ancestral connections, linking present generations to those who came before.

This deep connection to the natural world shapes Karen governance, ethics, and identity. The mythology of visible nature is not just a story - it is a way of life, reminding the community that they are stewards of a world where humans, animals, and spirits coexist.

Rhino

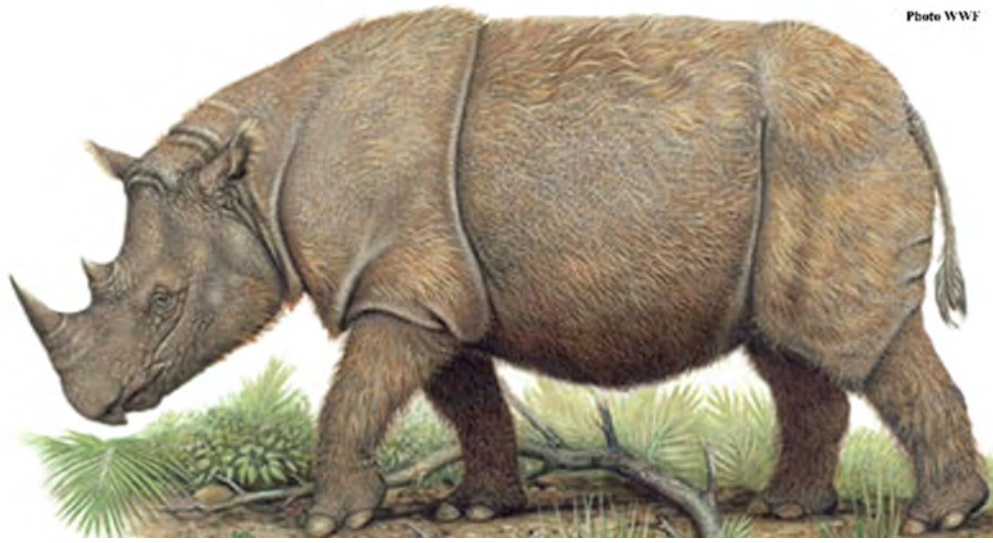
တၤဖိၣ် (တၤဖိၣ်ကဆီ)– Northern Sumatran rhinoceros (*Dicerorhinus sumatrensis lasiotis*)
သံးဖိၣ်ခီၣ် (တၤဖိၣ်ချံး)–Javan rhinoceros (*Rhinoceros sondaicus*)

Rhinoceroses are considered a noble species by the Karen indigenous people in the Salween Peace Park. Karen people are prohibited from killing, eating or harming them. They believe that the Rhinos are the guardians of water and land, one of the spirits of rice and the masters of prosperity. Also, they are the domestic animals of the gods of nature and are used for special occasions. Rhinoceroses live, use mud baths, and eat salt licks in places where gold and precious stones are abundant. They will have many salt lick sites and mud bath pools which they have used for generations. However, it is said that they will visit all sites in their ancestral territory at least once a year. During their visit, they will pass through paddy fields, rotational farming areas and bless them with a good harvest with plenty of grains. A long time ago, around 500 years ago in Ler Mu Plaw, rhinos were once domesticated by the Karen people and used in a grand family feast called *Bwa Doh*,

which took place once every seven years to honor the Karen ancestors. This feast occurred when the father ruler (patriarch of the family lineage) invited his relatives, up to their ninth cousins, meaning thousands of people, to gather from far and wide and join the feast along with the spirits of their deceased ancestors. These feasts would also cause people to fall in love and find relationships. A rhino was only killed for this special occasion. One day, the patriarch's daughter's father-in-law asked the patriarchy for a rhino. The patriarch agreed but instructed that rhinos, except for the albino one, could be taken. However, the son-in-law's father insisted on taking the albino rhino. When he did, the albino rhino escaped from the farm, and the son-in-law's father and his crew pursued it, eventually killing it.

As a result, the patriarch decided to release all the domesticated rhinos back into the wild and cursed them. From that point on, anyone who killed a rhino would face a curse of seven generations of misfortune, with their descendants doomed to failure. Now for feasts the Karen use pigs, and since then *Bwa Doh* has never happened and Karen people have spread all over the world.

Today, if a rhino is accidentally killed, either through a pitfall or gunshot, its body must be brought back to the community hall, known as *Blaw*. Before the body is brought back, the person who finds it must answer a series of questions. If the correct answers are given, the body can be returned to the community hall. If not, the rhino is buried at the site where it was found. One of the questions asked is: "Oh my friend, someone has been killed, what should we do about him?" The correct response is: "As the sky cannot be free from cold, humans will not be free from mistakes, so if someone killed it by accident, we



Northern Sumatran rhinoceros *(Dicerorhinus sumatrensis lasiotis)*

need to bring it back to the community hall to conduct a funeral ceremony and send its spirit back to the spirit world." If the response is incorrect, the body will not be allowed back to the village.

Once the rhino's body is brought to *Blaw*, anyone may take some of the meat, though it is mainly the elders who will eat it, as young people avoid consuming it since rhinos are considered a protected species. The family members of those who killed the rhino will be shunned by the community, and their children will not be allowed to marry into other families. This is because it is believed that the curse of seven generations of bad luck and unsuccessful offspring will fall upon them.

Villagers believe that the rhino brings blessings of abundant harvests and prosperity. Every year, the rhino travels along its ancestral territories, visiting mud baths, salt licks, grazing areas, and places that their ancestors once used. During this journey, the rhino passes through rotational farmlands, paddy fields, orchards, pastures, and villages, blessing people, domestic animals, farms, and water along the way. The rhino is also thought to patrol the ancestral land, extinguishing forest fires as it goes. Therefore, the villagers treat the rhino with great respect. They pass on a warning poem, called *Hta*, to their children, reminding them of the noble nature of this animal:

တၤဖိၣ်ဟဲဝီၤလၢဟံၣ်ပူၤ
ဖိၣ်မ့နှ်၊စၢလၢပျံၤထူ
တၤဖိၣ်ဟဲဝီၤဟံၣ်ခိၣ်ဒ့
ဖိၣ်မ့နှ်၊စၢလၢပျံၤစ့

It said if you see a rhino passing through your village, catch them and tie them only with golden and silver ropes. The villagers should be careful if they see rhinos passing through their areas, because they are noble animals, which will need to be respected and unharmed.

There is a story about one incident which occurred about 50 years ago in a village where a rhino was killed after it came close to their village, leading to disaster. This took place near Kheshorter community forest, in a village known as "Hot Spring Village." At the time, the village had about a hundred households. Beside the village was a hot spring stream where wild animals would drink as a salt lick.

One day, a villager killed a female rhino while it came to drink from the hot spring. He shared the meat with all the villagers. A traveler who happened to visit the village saw people eating rhino meat. The villagers tried to offer him some, but he refused. As the

traveler returned home, passing through the thick Kheshorter forest, the Bwa *K'sah* (master of the deep forest in Kheshorter forest) appeared to him as a married couple dressed in new Karen clothes. They asked if he had seen any rhinos because they had lost their mother rhino (which was important for their ancestral feast). They also inquired if anyone in the village had eaten rhino meat. The traveler replied that he had seen people eating rhino meat in the hot spring village. The couple sniffed him from head to toe and said they didn't sense he had eaten rhino meat, so they would not punish him. However, they warned, "The villagers who ate our rhino will face severe punishment."

When the traveler returned to his village, he shared the story with the villagers and advised them not to visit the hot spring village. A week later, news spread of a virus outbreak in the hot spring village, with hundreds of people dying each day. The remaining villagers fled to other areas, causing the entire village to collapse. Today, there is still a hot spring, but no village remains—only a forested area. Some people who know the story are still alive today. This is one of the stories of bad luck and curses that followed the killing of a rhino.

Malayan tapir

တၤကွီ Malayan tapir (*Tapirus indicus*)

The Malayan tapir is one of the Karen Indigenous protected species. The species was once distributed all over Kawthoolei, but their range is now shrinking with them only found in two districts in Kawthoolei. The black and white stripe is the symbol of clouds and earth, which are considered sacred to the Karen people. The indigenous Karen people have long believed that an animal with a single white stripe should not be killed or exploited. The colorings are believed to represent a mark of a sinner by the gods. It is believed that the gods of nature marked this animal as a wicked animal or a prisoner. The tapir is a species that produces a very bad smell and when it

Malayan tapir *(Tapirus indicus)*

enters the salt lick, all other animals leave the site. If people kill them, they will inherit bad luck from the Malayan Tapir. Similarly, to the rhino, this animal also uses their ancestral salt lick and patrols their ancestral territories. It is a solitary animal and avoids others. Therefore, people consider this animal an unclean species and people should not kill or touch it. Based on its unclean and bad luck curses, the animal is protected.

Elephant

ကဆီမံး Wild elephant (*Elephas maximus indicus*)

The wild elephant is considered a sacred species by the Karen people. The elephant is a noble and honest animal, dwelling in virgin forests far from human settlements. According to Karen belief, the elephant has the remarkable ability to sense if humans commit adultery. As an honorable creature, the elephant is thought to dislike those who cheat, especially husbands and wives, and will show its disapproval through negative behavior toward those who offend it.In Karen mythology, the elephant was once believed to be human and possessed supernatural powers, capable of reading people's intentions, whether good or bad. One popular story tells of a woman who drank water from the footprint of a wild elephant. Soon after, she became pregnant and gave birth to a baby boy. The elephant, in secret, is believed to have taken on the role of caring for the child while his mother was away. It brought food and protected the boy from danger. The child and the elephant shared similar physical traits, as the angles of the human body were said to resemble those of an elephant. Unlike humans, animals such as cattle, buffaloes, and other ungulates were seen as different from the elephant.

Wild elephant *(Elephas maximus indicus)*

The elephant is also believed to have once been a human father, earning the respect of humans as a relative. Domestic elephants are treated like family members, with wrist-tying and spiritual rituals performed for them. The white elephant, in particular, is considered sacred, believed to bring peace and prosperity to the land.

Elephants are thought to be gentle, loyal creatures with a kind and faithful nature. Though large and strong, they are herbivores and do not hunt other animals for food. They rarely attack other species, often avoiding confrontation and instead living peacefully with smaller creatures, sharing resources like salt licks and natural water pools. Due to these positive qualities, elephants are considered sacred by the Indigenous Karen people, and killing them is strictly prohibited.

Tiger

ဘိန်သိန် Tiger *(Panthera tigris)*

The tiger is the largest cat species commonly seen in Kawthoolei State territories. According to the Karen myth, there are two kinds of tigers; one from the tiger's origin itself and the other which comes from humans. Both are used by the god of the forest to act as the forest's most powerful guards.

The Karen people believe that tigers wander around in the territory to see if anyone has committed a crime against nature or the forest. If a crime is committed by villagers or village leaders, the tiger will give warnings by killing villagers' domestic animals, calling out, and traveling around the village or showing itself to the villagers.

Tiger *(Panthera tigris)*

This kind of tiger will be more likely to punish higher level people such as the *Kaw Kho* and *Htee Kho* in the community. A common

crime occurs when the head of the land or the head of water fails to perform the annual feast, does so incorrectly, or allows someone outside the social hierarchy to perform the ceremony. The tiger is believed to punish the head of the community if the feast is not done properly, offered at the wrong time, or if offenders are not punished as they should be.There is one story from a village who lost its *Kaw Kho,* when he left the community after the villagers did not follow his commands. Later, the vice village head decided to conduct a ceremony on behalf of the *Kaw Kho*. The villagers supported him without any issues. About three days later, he performed the feast rituals in his paddy field, ensuring everything was done correctly. Suddenly, without anyone noticing, a tiger appeared at the offering site and approached the bamboo spirit house that had been constructed. The tiger attacked the site, destroying it right in front of the villagers at noon. Afterward, everyone fled back to their homes, leaving him alone on his farm. Since that incident, no one has dared to conduct such a ceremony for the community again.

Additionally, there is a story that tells of one tiger species that was once a human who transformed into a tiger after consuming a traditional medicine made from a combination of 30 plant species. Initially, one of two friends became a tiger and began stealing pigs from the villagers. He would bring the pigs back and occasionally revert to human form. By hitting him hard with a pestle, his friend could make him vomit up the medicine. However, the second friend also became a tiger. When he went to the village, he couldn't tell the difference between people and pigs, so he killed a girl and brought her back as food. His friend, witnessing this, was too afraid to hit him to change him back into a human, and as a result, the second friend remained a tiger forever. Due to these stories, the tiger is considered a sacred species by the Karen, and killing a tiger is strictly prohibited.

Leopards and large cats

ဃ့ကံ့ဉ်တိ Indochinese leopard (*Panthera pardus delacouri*) also considered sacred by the Karen Indigenous People.

Leopards are sent by the *K'sah* of nature to punish villagers who have committed adultery. Since each village has forested sites around their villages, leopards and other cats are common. Every year, during or before the harvest, leopard calls will be heard on the mountain ridges close to the village. However, they rarely enter the village to kill domestic animals. But when a domestic animal is killed or taken in a certain village, the head of the villager will inspect the person and question them about the incident. If the village head discovers the crime, the head will then ask the person to plead for forgiveness to the *K'sah*, and this person may need to kill a domestic animal, in some villages you must burn a chicken and, in some villages, or in some cases you may need to offer a buffalo. The offering depends on the village and the crime committed. Sometimes you need to kill the head pig, and in those cases you have to do *Aw Bwa* feast. Based on many traditional and cultural links to the species, the animal is protected from killing.

Indochinese leopard *(Panthera pardus delacouri)*

Gaur

တၤဘီနၢ်– **Gaur** (*Bos gaurus*)

The Gaur is a protected species for Karen people. Gaur is a species of wild cattle which is common in Karen territories. The myth behind this animal's relationship with humans is that a human became a gaur. There was a man named Kawthuehow. He got married and had seven children, who were all boys. He lived with his seven children and his wife until she died from a serious sickness. Kawthuehow then remarried a woman called Daymubaw, who was suspected by his children of being a witch. By the time the seven boys became adults, they had come to believe that their mother had been killed by their stepmother, Daymubaw, using witchcraft. One day, the seven brothers met together and planned to kill their stepmother using sharpened horns carved from wood. They carved enough for each of them to set them on their heads, and they went to attack their stepmother. Daymubaw did not notice her stepsons approaching her. They attacked their stepmother, and killed her. After that, they returned home and took off all their horns, but the youngest brother couldn't take his horns off because he had attached them on his head three times stronger than the other siblings. He told his brothers that he couldn't stay in the village anymore because he had horns, so he left the village for the forest. His brothers brought

Gaur *(Bos gaurus)*

food for him every day until he became a complete wild animal and couldn't recognize his brother and killed all of them one day. He stamped his brothers to death and the brothers' intestines were torn up, and their faeces stuck to the gaur's legs, so the legs became yellow, as they are today. When the gaur's mind settled and calmed down, he realised that he had killed all his brothers. He then promised never to stamp people to death again, even if attacked by humans. Over time, he came to believe that the spirits of his deceased brothers became stars in the Little Dipper constellation. So, every year when the rainy season ends and the stars begin to appear, gaur looks up at the sky and makes a loud call in a memorial ceremony for his brothers. The gaur will gather the herd, run around a specific area, and call out loudly throughout the night while gazing at the sky. In Karen tradition, this is called *Eer Ghuen*.

The memorial ritual lasts for several days, and during this time, villagers are advised not to enter the forest where the gaur is usually found. It is believed that the gaur will become aggressive and attack people if they approach during this particular period. Due to this myth, the Karen people consider the gaur to be a relative and, as a result, do not kill them. Over time, this belief has contributed to the Gaur becoming one of the traditionally protected species among the Karen communities.

Gibbon

သယ့်ပှ်နံး–Skywalker hoolock gibbon (*Hoolock tianxing*), Eastern Hoolock Gibbon (*Hoolock leuconedys*)

သယ့်ပှ်ဟီဉ်– Lar gibbon (*Hylobates lar*)

The gibbons are Karen's traditionally protected species, regardless of the species official status in Kawthoolei State. There are two main species of gibbons: the Hoolock gibbon and the Lar gibbon. The Hoolock gibbon in northern Kawthoolei has two different species of hoolock gibbon: the Eastern Hoolock gibbon (*Hoolock leuconedys*) and the Skywalker Hoolock gibbon (*Hoolock tianxing*). However, there is only one Lar gibbon species which is distributed in the middle and southern Kawthoolei. The killing, eating, capturing and trading of gibbons was originally forbidden by the Karen ancestors.

Eastern Hoolock Gibbon *(Hoolock leuconedys)*

The reason why the Karen people considered gibbon as a protected species is based on myths.

Called "*Ther yu pwa*" by the Karen, the gibbon has a meaningful place in the forest. The gibbon's call, antics and agility in the forest canopy bring life and joy to anyone who happens to chance upon this mammal. Its death brings anguish to a place and it is said that seven ridges and seven valleys in the local area mourn for the great loss, and fall silent missing the echoes of the gibbon.

Karen ancestors believe that the gibbons are a species that is tied to each other, and loyal to their partners until death. They take time to successfully reproduce, often requiring multiple mating attempts. Even after birth, the juvenile takes a long time to mature, and in some cases, the mother may not survive childbirth. So, it is difficult for their population to prosper. Therefore, if you kill them, curses will be on you and your wife's pregnancy will suffer the same difficulties as the gibbon.

Unlike other animals, gibbons do not forage on villagers' crops or steal food from the community. Instead, they sometimes play with people, further endearing themselves to the villagers. Their beautiful calls are eagerly anticipated, bringing joy to those who hear them. Beyond their charm, gibbons play a crucial ecological role as effective seed dispersers, helping to maintain the balance of life in the forest ecosystem (Htoo and Grindley, 2010).

For the Karen, who are traditional rice paddy farmers, the presence of gibbons near their fields is a positive sign. Gibbons help deter other wild animals that might otherwise eat or damage crops. For example, if macaques enter the fields to feed on the rice, gibbons will often chase and play with them, sometimes even grabbing their tails and scaring them away. Since gibbons themselves do not have tails and are more active in the treetops than monkeys, they pose no threat to the crops.

Additionally, gibbons are considered natural weather forecasters. During the harvest season, when prolonged rains and flooding occur, a gibbon's call signals the end of bad weather. Similarly, in the rainy season, when thick clouds obscure the moon, Karen Animists observe the traditional practice of resting on the dead moon (New Moon). They wait until the new moon is visible before resuming work. Hearing the call of a gibbon marks the end of the dead moon period, signaling that it is time to begin working again. Like many other animals, Karen ancestral wisdom teaches that gibbons were once human neighbors with close relationships and able to marry one another. One day, a man married

a gibbon and his wife took him home and kept him on a giant tree without allowing him to go down to the ground, fearing the husband would leave her. His wife made him a babysitter, and collected wild fruits and vegetables for him. Her husband did not like the place and planned to make a rope from coconut shell fiber to escape. Finally, he was able to escape and go back to his home.

Lar gibbon *(Hylobates lar)*

When the gibbon's wife returned and found her child crying alone, with her husband gone, she searched for him. Eventually, she saw a rope hanging from a tree branch to the ground, realizing that her husband had already left her. In her sorrow, she took her child, tore it in two at the waist, and said to herself, "I love my husband with all my heart." She then offered the lower half of the child to her husband and kept the upper half for herself, as a symbol of her final love. She threw the lower half to the ground and said, "You will never stay on the tree again," and held the top part, saying, "This part belongs to me, so I will never let you live on the ground. However, I will never build enemies with humans, but will live on the tree forever. I will only call when I miss my husband from a distance to show love, but will forever love my own gibbon races and be loyal to him to the end of my life."

The traditional belief and various kinds of *Tadu* protecting the gibbon were inherited by the Karen Indigenous People from their ancestors.

Another teaching is that, if a gibbon is killed and eaten by at least three people, some of them will die in the forest or far from their homes. When someone kills a gibbon, they will see the mouth of the gibbon will open, which means "look, did you see any grains in my mouth? I do not destroy your crop, so why kill me?" Also, when one dies, seven forest sites grieve the lost and will fall silent after the death.

Asian Fairy Bluebird

Hto Bee Gha Bee Yaw - Asian fairy-bluebird (*Irena puella*)

The Asian fairy-bluebird, is a spirit bird of rice. Every year this bird visits farmers to bless them with plenty of harvest. Once upon a time, there was an orphan who had lost both his parents and had no siblings. To survive, he scavenged for food under people's houses and in garbage bins. He was often hungry and sick, but no one in the village wanted to adopt him. He wished to cultivate a rotational farm to grow his own food, but the villagers refused to grant him land, giving him only a barren rock beside a marsh.

Determined, the boy attempted to farm on the rock. Since he could not plant rice without soil, he secretly gathered dust from the village, carrying it back bit by bit. By mixing the dust with water, he slowly created enough soil to plant a small patch of thirty rice plants. He built a tiny hut beside the rock and lived alone, tending to his fragile crops.

One day, while searching for discarded food in the village, he came across an elderly woman trapped in a tangle of spiny rattans. She had been caught for a whole day and pleaded for his help. She told him that many villagers had passed by but ignored her cries. Without hesitation, the boy spent the entire day cutting through the sharp vines until he freed her.

Grateful, the old woman asked if she could stay with him, as she had nowhere else to go. The boy hesitated, explaining that he was an orphan with little food, but she assured him she did not need much. He took her back to his small hut, and from that day on, they lived together. Though the boy still collected food scraps, now even the smallest portions seemed enough for both of them.

Seeing that the orphan and the old woman were no longer struggling, the villagers grew jealous. One night, they attacked and killed the woman, dumping her body into the marsh. Devastated, the boy wept for days. But then, something strange happened—the marsh began to stir. To his amazement, the old woman emerged from the water and returned to him.

Asian fairy-bluebird (Irena puella)

She told him, "I cannot stay with you anymore. If I do, the villagers will keep killing me." But before she left, she promised to bless his harvest. After the boy gathered his rice, she instructed him to call upon her. He followed her words, and when she arrived, she transformed into a snake and entered his rice barn. Miraculously, his stored rice multiplied until the entire barn overflowed.

When the villagers heard of this, they rushed to the barn and, upon seeing the snake, killed it immediately. Once again, the boy was heartbroken. He cried himself to sleep.

That night, the old woman appeared in his dream. "I can no longer remain on this earth," she told him. "I will transform into a blue bird and return to the sky. But whenever you need me, call upon me, and I will come down during the farming season to watch over you."

She instructed the boy to perform a special feast before sending her back to the sky. This feast, called *Ghohtawhto*, involved preparing a dish called *Aung Aue Aung Khaw*, made from rice mixed with vegetables, meat, fish, and insects. After the meal, he had to speak the words:

"Htobeegha, bee yaw. I call to let you know that after our feast, you may now return to the sky. But when you see the tree trunks darken on the rotational farm, come down once more."

The darkened tree trunks here refers to the burnt tree trunk on the rotational farm which is burnt before planting rice.

Since then, Karen farmers have continued this tradition, passing it down to their children. The fairy bluebird, believed to be the old woman's spirit, is now a protected species and can still be seen in the Karen Hills during the rainy and early winter seasons.

Great Hornbill

ထိန်ကိုး–Great hornbill (*Buceros bicornis*)

The great hornbill bird is loved by people because of its partners' faithfulness which ties them to each other. They form monogamous pairs and never leave each other unless they are killed or lost. When hatching, the female builds a nest in the hollow of a large tree trunk, sealing herself and her chick inside the opening with a plaster made up mainly of feces. The female and the chick depend solely on the male bird for food and water until the chick is about half-way through its development. If people kill the male bird, the whole family will die along with it.

Tragically, if the nest is destroyed—whether by poachers or if the tree is felled—the male is believed to take his own life. It is said that he may hang himself, soar high into the sky only to plummet to his death, or crash onto rocks below.

The Karen people prohibit the killing or eating of these birds, as they are the largest flying species in the region and depend on forests with towering emergent trees and abundant fig trees. They cannot rest on small trees and are highly vulnerable when forced to land in open areas, where they risk being attacked by domestic dogs or other predators.

These birds roost primarily in emergent trees, often deep within untouched forests near mountain peaks or headwaters. If one is accidentally killed, the person responsible must perform a ritual to seek forgiveness and ward off misfortune. This involves taking the bird's bones to at least seven fig trees and pleading for absolution to escape any curses that may follow.

Great hornbill (Buceros bicornis)

This *Hta* means ‘thou shalt not kill the great hornbill because they consume the fig fruit and care for its branches. To be faithful to each other.’

မၤသံထိဉ်ကိးမိ်ါတဂ့ၤ, အီဉ်ချဉ်သဉ်သးဝံဉ်ချဉ်ဒ့
နိ်ါထိဉ်ခံစိမ့်ါထိဉ်ကိး, စိဉ်ချဉ်ဒ့စီစိ်ါချဉ်စိး

This *Hta* teaches that we should behave like the great hornbill because they did everything together with its partner and follows each other all the time. The bird is an example of eating without wasting, caring for the host, and being loyal to each other. For these reasons, it is worth protecting. Therefore, the Karen Indigenous People of Salween Peace Park are prohibited from hunting the great hornbill bird.

Greater racket-tailed drongo

ထိဉ်ချုဉ်–Greater racket-tailed drongo (*Dicrurus paradiseus*)

These birds are highly noticeable in forest habitats, often perching in the open and drawing attention with their wide range of loud calls, including remarkably accurate imitations of other birds. The greater racket-tailed drongo plays a key role in the ecosystem, forming mixed-species foraging flocks where various insectivorous birds feed together. Though diurnal, they are especially active in the early morning and late afternoon.

In Karen culture, the greater racket-tailed drongo is believed to be the first bird on Earth, playing a role in the creation of the world. As a result, it is a protected species among the Karen Indigenous People. According to tradition, this bird belonged to Mugkha Kler, who once worked alongside Ywa to shape the Earth. It is also believed to have come from other planets, making it the “king bird” of all species. With its exceptional ability to mimic different bird calls, it is seen as a leader of diverse flocks that include both insectivores and omnivores.

Greater racket-tailed drongo (Dicrurus paradiseus)

Beyond its mythological significance, the drongo serves as a natural timekeeper for the villagers. Its morning call signals the break of dawn, reminding people to wake up. During the rainy season, if the drongo sings joyfully alongside other birds in the morning, it is believed to predict rainfall later in the day or evening. After a downpour, the bird often sings enthusiastically, helping villagers gauge weather patterns and prepare for their daily activities.However, the drongo is also associated with omens. If one is found hanging dead at a proposed rotational farming site, it is considered a sign of misfortune. In such cases, the site is abandoned for at least three years before any farming can take place there.

Mountain Scops Owl

ထိဉ်ဒိဉ်=Mountain Scops Owl *Otus spilocephalus vulpes*

This nocturnal bird is known for its beautiful calls that fill the night. Local people believe its song brings a sense of peace and loneliness. On nights when the full moon illuminates the land, it's "Htor Htor" call echoes among the crickets and other owls, creating a serene atmosphere. It is also believed that when this bird sings frequently at night, it is a sign that the land will remain peaceful and free from oppression. However, if its call disappears, another bird, known as Ghoe Ghoe Ghen, will take its place, signaling a shift in the night's harmony.

It said in the *Hta* as a warning to the Karen as:

ထိဉ်ဒိဉ်မှၤထံယ့ၢ်ကီၢ်ယ့ၢ်
ဃိဃိဃဲဉ်မှၤကီၢ်တဒုး

Which means, when you hear Mountain Scops Owl's sound it means your country will be full of peace and happiness, but if you hear the Ghoe Ghoe Ghen bird instead, disaster is coming your way soon. This is one of the reasons that the Karen Indigenous People protect the Mountain Scope Owl bird from being killed.

Mountain Scops Owl
(Otus spilocephalus vulpes)

There are many different species of bird that are protected by Karen people, with many different reasons and myths behind these protected species which may vary from community to community. Table one in the annex shows a list of bird species protected by Kawthayghu communities.

Big-headed turtle

ချံးခွံ့(ချံထိ့ကံ့ဘီ)–Big-headed turtle (*Platysternon megacephalum*)

This big-headed turtle is considered a pet of the upstream water gods. It is marked by the water god with a distinct body structure with a parrot-like beak mouth and lizard-like tail. It lives in clear water at the head stream of cold forest and virgin forest. The ancestors passed knowledge on to their children to not kill or sell these turtles because the curses bestowed upon people who kill or displace them would lead to a fatal incident which could include drowning, or dying from mudslides. Karen ancestors knew that if people took this big-headed turtle downstream, there would be flooding and erosion in the downstream area within that year. Therefore, they are listed as a protected species.

Big-headed turtle (Platysternon megacephalum)

Burmese Python

ကလိၤ– Burmese python (*Python bivittatus*)

The Karen are prohibited from killing pythons, a belief rooted in an old myth that has been passed down through generations.This is a simplified version of a much longer story: A Karen man left his village to study abroad, promising to return and marry his beloved, Naw Mu Aye. Before he left, he asked her to prepare for their wedding. After completing his studies, he returned home, but on the way, he broke a sacred rule set by his teacher—he killed and ate a squirrel with a Lasia plant. As a result, he suffered intense pain in his spine and began transforming, growing taller and longer until he became a python. Ashamed of his transformation, he captured Naw Mu Aye's pig, tying himself to it so it would call out to her for help. When she came to rescue the pig, the python grew larger and ultimately captured her as well, taking her to a cave near the village. The villagers tried to save her, but she was tragically killed.The full story is much longer and ends in sorrow, but its message remains deeply ingrained in Karen culture. Since then, the Karen have refrained from killing pythons, believing that they were once human. The python, along with the big-headed turtle, is one of many reptile species protected by the Karen Indigenous People in the Salween Peace Park, reflecting their deep connection to the natural world.

See table in the annex to see some of the species which the Karen are prohibited from killing or harming, comparing the protection states between customary law, KFD, and IUCN conservation status.

Burmese python (Python bivittatus)

Smith's Litter Frog

Smith's Litter Frog *(Leptobrachium smithi* Matsu et. al)

Smith's Litter Frog (Leptobrachium) smithi Matsu et. al)

The Smith's Litter Frog is strictly protected by the Indigenous Karen people, guided by deep-rooted myths that explain its significance. These stories, passed down through generations—such as those about the litter frog and the Muntjac deer—are too long to include in full here. However, beyond its cultural and spiritual importance, the frog also serves a practical role in daily life.During the rainy season, Karen farmers working in the fields rely on the frog's call as a natural timekeeper. When the frog calls in the evening—typically around 5 p.m. on rainy, overcast days—it signals the time to head home. Since many Karen people do not use clocks while working in the fields, they traditionally tell time by the sun. On cloudy days, when the sun is obscured, they instead depend on the Smith's Litter Frog to guide their daily rhythms.

In addition to the litter frog, the Karen people protect numerous other species, each tied to unique myths and traditional *Tadu*. These *Tadu* dictate when and where certain species cannot be hunted or collected, varying between communities. See the table in the annex listing the amphibian species protected by Karen traditions.

Fish

Many different fish species are protected by the Indigenous Karen people in Kawthayghu. These include rare and endemic species, as well as others with cultural significance. Additionally, certain sacred sites serve as natural sanctuaries, where all fish are protected for spiritual purposes. Many of these sacred places have been safeguarded for generations, preserving them for cultural and religious activities.Some fish species are also protected due to their unique coloration or rare physical traits. One such species, known locally as *Nya Ghwine* (Axe Fish), is protected because of its rarity. Other species, such as the Red Garra (*Garra* spp.), Indian Mottled Eel (*Anguilla bengalensis*), and Dwarf Snakehead (*Channa* spp.), are also safeguarded by different communities within their respective territories.

However, we are unable to provide a comprehensive list of prohibited fish species, as many of them do not have widely known English or scientific names. It is likely that some local fish species remain unknown to science. Because fish populations vary between rivers and streams, each community has its own set of protected species—some of which may not be recognized by neighboring communities. Despite these variations, efforts have been made to document protected species within Karen territories.

Beyond fish, local communities also prohibit the collection of certain freshwater species, such as crabs, prawns, and mollusks. The specific species and restrictions differ from one community to another, shaped by unique cultural beliefs and historical traditions. Similarly, sacred sites—such as fish spawning areas and fish sanctuaries—have been protected for generations, with each site holding its own cultural or religious significance.

Red garra spp

Wildlife Protection

There are many additional Karen culturally protected species, such as mammals, birds, amphibians and reptiles. The list of other cultural species considered *Tadu* is listed in the table below. Some of the species are not on the IUCN list or the CITES list, but the Karen Indigenous People have protected them since time immemorial. The list in the tables in the annex also compares the Kawthoolei Wildlife Act with species traditionally taboo or protected. With additional information, the albino species and rare colored species are believed to be gods-selected species. For example, they believe that the white and rare animals belong to the sky, and they live among the clouds and are used by the gods of the sky and the heavenly community, so people should not kill them.

The categories of protected species recognized by the Indigenous Karen people and the Kawthoolei Forest Department (KFD) differ in several ways. Indigenous protection is deeply rooted in religious beliefs, myths, cultural history, and the observance of *Tadu*. However, many of the myths and stories explaining why certain species are protected have been lost over time. Today, people often remember only the names of these culturally protected species, while the unique stories behind them fade. To ensure this knowledge is passed down to future generations, active research and documentation are urgently needed.

While some species still have oral traditions explaining their protected status, others have lost key parts of their stories, making it difficult to convey their significance to younger generations. Regardless of whether these protection myths remain intact, their role in conservation and resource management is crucial. In many cases, these traditional stories function as informal laws that regulate species protection, independent of international frameworks such as the International Union for Conservation of Nature (IUCN) and the Convention on International Trade in Endangered Species (CITES). The Karen people have safeguarded these species long before such international classifications existed, and their protection remains in place regardless of whether a species is locally common or rare.

By contrast, the KFD determines species protection based on ecological assessments. They evaluate the rarity of species within wildlife sanctuaries and protected forests, adjusting protection status over time based on population changes in local areas. Additionally, the KFD compares species status with international conservation lists, such as those of the IUCN and CITES, before including them in the Kawthoolei Forest Act's wildlife protection list.

Table 1 in the annex show the species protected by customary *Tadu* compared with the KFD's protected species list under the Kawthoolei Forest Act, and the IUCN conservation status. These do not fully align, reflecting the differences in their approaches to conservation.

Sustainable Hunting

Within Karen communities, each *Kaw* has a manager of the hunt, who oversees all wildlife management practices. This role ensures that hunting aligns with cultural traditions, conservation ethics, and spiritual obligations. Community members must seek permission from the manager before hunting, as it is his responsibility to conduct a ritual honoring the hunted animal.

Hunting typically takes place during communal holidays, reflecting the Karen belief that hunting in the forest is akin to "hunting the stars on earth," referring back to the story of creation where Mugkha Kler made them. The process is rooted in ritual: hunters rely on trained dogs to track game, while they use spears or guns to make the final kill. Commonly hunted species include sambar deer, muntjac deer, serows, and wild boars. Once an animal is killed, it is brought back to the village, where the manager of the hunt leads a thanksgiving ceremony to the god of nature. The ritual involves placing the animal's head on a table, cooking small portions of its organs in a clay pot, and offering the prepared food to the god of nature before feeding the lead hunting dog and then consuming the food himself. Only after this ritual is completed is the bushmeat distributed equally among all households.

Hunting is strictly confined to ancestral lands. If an animal crosses into the territory of another *Kaw*, hunters must call back their dogs and respect territorial boundaries. Similarly, if an injured animal dies on another community's land, the local villagers will seek out the original hunter to share the meat after the proper ceremonies. If the hunter remains unknown, the animal is buried to honor its spirit. These practices reflect the Karen's deep respect for nature and their commitment to maintaining harmony between humans, wildlife, and spiritual beings.

Sustainability is central to Karen hunting traditions. The manager of the hunt carefully selects which animals may be taken, avoiding pregnant females, juveniles, or those with young. Preference is given to mature males or older, unproductive females, ensuring that hunting does not disrupt the ecological balance. Since community members closely observe wildlife, they possess deep ecological knowledge about which individuals can be harvested without threatening population stability.

For the Karen people, hunting is not a primary livelihood activity but a supplementary source of nutrition and a cultural practice intertwined with spiritual beliefs. Group hunting typically takes place during breaks from farming, and certain species are hunted only during

traditional or religious festivals. The Karen view hunting as a way to honor the gods of the forest, reinforcing their relationship with the spiritual world. Unlike commercial hunting, which prioritizes profit, Karen hunting traditions focus on subsistence, sustainability, and intergenerational well-being. The guiding principle is to take only what is necessary, ensuring that future generations can continue to live peacefully with nature.

However, these time-honored traditions are at risk. The communities of Kawthayghu express deep concern that younger generations increasingly perceive traditional knowledge as outdated and irrelevant (Paul et al., 2021). Influenced by globalization, religious shifts, and cultural changes, many youth prioritize formal education while neglecting ancestral wisdom. This shift threatens not only Karen identity but also the ecological knowledge embedded in their way of life.

To bridge this gap, integrating Karen conservation practices into formal education systems could provide a solution. Developing a curriculum that highlights the scientific foundations of traditional ecological knowledge—showing its alignment with contemporary conservation principles—may help younger generations recognize its value. By preserving and revitalizing these practices, Karen communities can continue their legacy of living in harmony with nature while fostering environmental stewardship among future generations.

Discussion

This paper provides an overview of Karen ontology, offering an initial documentation of the animist belief systems in Kawthayghu, northern Salween Peace Park. It examines creation stories, the mythology of various more-than-human entities, and the ways in which Karen communities maintain reciprocal relationships with these beings through rituals and offerings.

Karen animist worldviews do not separate the human from the more-than-human; rather, they are deeply intertwined, shaping how people live, farm, govern, and protect their lands. The paper highlights the ways in which different animals, trees, wetlands, and mountains are imbued with spiritual significance and are governed by distinct spiritual entities, each with their own roles and expectations. Maintaining balance with these entities is central to ensuring the well-being of both humans and ecosystems.

An intricate system of traditional prohibitions, or *Tadu*, further structures these relationships. These *Tadu* dictate not only the treatment of sacred species, such as the python, gaur,

and various birds, but also guide the zoning of land, ensuring that certain areas remain untouched or are used in specific ways to maintain ecological and spiritual harmony. The concept of Kaw—ancestral lands stewarded by Karen communities—embodies this relationship, where different zones serve as spaces for agriculture, sacred rituals, and spiritual protection.

Through these systems, Karen animist communities practice a form of governance that upholds biodiversity, cultural continuity, and ethical relations with the land and its more-than-human inhabitants. This paper seeks to illuminate these complex interconnections, demonstrating how Indigenous Karen ways of life offer vital insights into sustainable, reciprocal relationships with the natural world.

Western scientists have proven that humans evolved from a common ancestor with primate or monkey species[2]. However, the Karen myth explains that most primates and other wild animals come from abandoning humans, unknown means of intercourse, or man committing crimes against nature. Therefore, all protected species myths show that many of the original protected wildlife came from a human descendant link.

Threats to Traditional Knowledge and Conservation

The loss of ancestral lands due to deforestation, mining, large-scale plantations, and dam construction poses an existential threat to Karen communities. Mega-development projects fragment territories and disrupt free-flowing rivers essential for religious rituals. Each piece of ancestral land holds both spiritual and ecological significance, and its destruction accelerates the erosion of traditional knowledge and cultural identity.

One of the most pressing threats to Karen environmental ontology is the loss of *Kaw Kho* due to displacement and religious conversion. *Kaws*—the traditional Karen land governance systems—are increasingly left without their customary leaders, weakening their ability to function. This does not mean that *Kaw* territories are abandoned; rather, they are occupied by secondary Indigenous communities who may not follow traditional governance and religious customs. Without adherence to these long-standing systems, ineffective land management can lead to environmental degradation.

2 *https://www.scientificamerican.com/article/how-scientists-discovered-the-staggering-complexity-of-human-evolution/*

Traditional knowledge is also frequently dismissed or discriminated against by those with formal education, who often perceive cultural taboos as superstitions of animist Karen communities. This perception discourages knowledge holders from passing down their wisdom, especially when school teachers—who influence the younger generation—are among those who discredit these traditions. As a result, the erosion of cultural authority and Indigenous governance systems threatens both Karen identity and the sustainable stewardship of their lands.

The consequences of land dispossession are devastating. Some religious leaders have taken their own lives after witnessing the displacement of their communities and the decline of their sacred practices. Once the traditional governance system is lost, it cannot easily be restored, as spiritual connections to the land are deeply embedded in Indigenous ways of life. The collapse of customary land management leads to biodiversity loss, cultural fragmentation, and environmental destruction, further endangering Karen communities and their ancestral territories.

Indigenous Knowledge in Conservation

Indigenous Karen people have successfully managed their forests, wildlife, and waters for generations. Their traditional knowledge includes biodiversity conservation, ecological governance, and sustainable land-use strategies. Strengthening conservation efforts in Indigenous territories requires recognizing and integrating these knowledge systems with contemporary environmental policies.

International conservationists must learn from Indigenous peoples to develop holistic approaches to land and resource management. Traditional knowledge has been proven to sustain livelihoods while minimizing environmental impact and mitigating climate change. The inclusion of myths and spiritual beliefs should not discredit the effectiveness of these methodologies; rather, oral storytelling and customary laws serve as invaluable repositories of ecological wisdom.

The Karen Indigenous People have already lost much of their vital knowledge due to political instability, displacement, and the oppression of knowledge holders. The erosion of traditional knowledge has deeply harmed communities, making it essential to seek external support to help revitalize and sustain these practices so that Karen people can continue living in harmony with nature.

Karen communities advocate for a peace park instead of a large-scale hydropower dam in their homeland, emphasizing the protection of biodiversity, cultural heritage, livelihood security, and self-determination. In collaboration with Karen leaders, local communities, and NGOs, they have proposed the creation of a 5,200-square-kilometer Indigenous-led protected area. This proposed park encompasses existing community forests and the planned site of the Hat Gyi Dam—an area rich in endemic, culturally significant, and globally important species.

Traditionally, Karen Indigenous knowledge is transmitted through lived experience rather than written documentation, making it less accessible in academic or policy spaces. As a result, their expertise is often overlooked or misrepresented by outsiders. Furthermore, Karen communities have been unjustly blamed for environmental destruction without evidence, while their deep ecological stewardship remains largely unrecognized. The Salween Peace Park stands as a clear example of Indigenous-led conservation, demonstrating the effectiveness of traditional governance in maintaining biodiversity.

There is an urgent need to document and compare Karen conservation practices with Western conservation models to highlight the successes of Indigenous stewardship. Global communities must take a closer look at these findings and acknowledge the value of Indigenous knowledge systems.

Protecting the rich biodiversity of the Salween Peace Park is not just about conservation—it is about self-determination. Safeguarding this territory ensures the survival of rare and endemic species that might otherwise be lost forever. The Karen Indigenous People have long upheld the principles enshrined in Article 8(j) of the Convention on Biological Diversity, which recognizes Indigenous rights to practice traditional ecological knowledge and stewardship. Recognizing and respecting Karen knowledge, identity, and governance is crucial for the future of both biodiversity and cultural survival.

Challenges

A significant challenge we face is the loss of knowledge as our elders and cultural experts pass away. For decades, much of this wisdom was preserved only through oral tradition, without being recorded in books or documented on video. As a result, valuable knowledge has been lost with the passing of these knowledge holders.

Additionally, despite being members of animist traditions, we are unable to resolve certain cultural or religious sensitivities within the limited time available, particularly in events that prohibit the involvement of outsiders. Since this type of knowledge has never been formally researched or academically referenced, our report lacks conventional academic citations. Furthermore, our backgrounds are not in anthropology, which may make it more challenging to convey Karen ontology—the worldview of living in harmony with nature—clearly to a wider audience. The complexity of Karen language also presents difficulties, as many terms do not have direct English translations and may be misinterpreted or lose their true meaning in translation.

Nevertheless, we have made every effort to communicate the importance of Karen ways of life, which have sustained wildlife and forests in Karen territories for generations without external intervention. Cultural myths, *Tadu*, religious beliefs, and deep care for the land form an interconnected body of knowledge that has enabled successful conservation and sustainable environmental management.

Conclusion

The Karen people come from the blood of *Mugkha Kler*, the creator of humans, land, forests, and animals. They have lived in their ancestral territories for generations, guided by customary laws, spiritual beliefs, and ecological practices that maintain harmony between people and nature. Their language, culture, religion, and way of life are deeply tied to the protection of their lands and biodiversity. When these lands remain intact, livelihoods, cultural traditions, and spiritual beliefs remain strong.

Land is essential to Karen identity. Their ancestral territories are carefully managed through zoning systems that balance human needs with environmental conservation. These zones include sacred sites, virgin forests, wildlife corridors, and areas designated for sustainable resource use. The presence of wild animals, plants, and fish is not just a source of livelihood but is also tied to Karen identity, spirituality, and social relationships. Customary land management ensures that species, habitats, and sacred lands remain protected. At the same time, the knowledge of local plants, animals, and ecosystems is passed down through oral traditions. The Karen language itself is rooted in these names and ecological knowledge. It is essential for Karen people to remember the names of mountains, rivers, forests, and sacred sites because they are crucial for offerings and prayers to *K'sah* of land, *K'sah* of water, and other spiritual entities.

Animist practices in ancestral territories follow customary laws. The *K'sah* of each land only accepts offerings from those who belong to that territory. If someone offers a prayer or makes an offering in another land, the *K'sah* may reject it, leading to misfortune. This is why Karen spiritual practices are deeply rooted in their own lands—they cannot be replicated elsewhere. If the forests, rivers, and wildlife disappear, so too will their religious traditions.

Waterways hold sacred significance. The *Tamugha* can only travel from the delta to the headwaters through free-flowing rivers. Sacred river sites serve as places for rituals and offerings to maintain harmonious relations with the *Htee K'sah*. However, large-scale projects such as mega-dams threaten these sacred spaces, disrupting spiritual and ecological balance. Every piece of ancestral land is crucial, as it is governed by traditional laws, spiritual beliefs, and cultural practices. When forests, rivers, or language are lost, knowledge is lost, leading to the erosion of Karen identity.

The consequences of displacement are devastating. Some animist leaders of ancestral lands have taken their own lives after their communities converted to Christianity and relocated to refugee camps in Thailand. Once these customary lands are abandoned, they can never be fully reclaimed—not just because of physical loss, but because the spiritual and cultural stewards are gone.

Karen customary law recognizes both unseen and visible spirits that govern nature. The *K'sah* of water, sky, land, and sacred sites work alongside traditional *Tadu* to enforce forest management policies and biodiversity conservation. There are also visible spirits of nature, which include protected species. According to Karen beliefs, some of these spirits were once human beings who transformed into animals after violating the laws of nature. This belief reinforces the importance of following natural laws to maintain balance. If people do not live in harmony with the land, they risk losing their human status and becoming part of the wilderness.

The Karen Indigenous people possess deep ecological knowledge of their lands. They have successfully managed forests, wildlife, water systems, and biodiversity through customary laws and traditional learning passed down through generations. These practices include traditional biodiversity knowledge, customary land management strategies, and traditional laws and policies for conservation. Strengthening biodiversity conservation in Indigenous territories is essential for sustaining livelihoods and ensuring that conservation efforts

incorporate Indigenous knowledge systems alongside scientific approaches. Around the world, Indigenous knowledge has proven effective in ensuring sustainable livelihoods while minimizing environmental impact and climate change.

For the Karen people, every plant, wildlife species, insect, fish, bird, amphibian, and reptile plays a vital role in the ecosystem and in Karen cosmology. Mega-projects such as dams, mining operations, monoculture plantations, and large-scale investments in Indigenous territories lead to displacement, loss of traditional livelihoods, destruction of religious practices and sacred sites, threats to food security, and biodiversity loss. These projects create not only physical and economic disasters but also spiritual and cultural devastation. True conservation must center Indigenous peoples and their knowledge systems to be effective. By protecting forests, rivers, and biodiversity, we ensure that the Karen Indigenous people can continue living in harmony with nature—not as a relic of the past, but as stewards of a sustainable future.

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Annex

Table 1. The list of Karen Indigenous People of SPP Protected species list

Karen names	Common names	Scientific names	Indigenous Karen	KFD Wildlife Act	IUCN
တၤဖိၣ် ကဆီ–တၤဖိၣ် ခီၣ်(နၢၤခံဘိ)	Asian Two-horned Rhinoceros	Dicerorhinus sumatrensis lasiotis (Fischer)	Protected by ta du/taboo	Protected by civil law	CR
တၤဖိၣ် ချံး–သံးဖိၣ်ခီၣ် (နၢၤတဘိ)	Java Rhinoceros, Lesser One-horned	Rhinoceros sondaicus (Desmarest)	Protected	Protected	CR
ကဆီမံၤ	Asian Elephant	Elephas maximus (Linnaeus)	Protected	Protected	EN
တၤကွိ	Malayan Tapir	Tapirus indicus (Desmarest)	Protected	Protected	EN
ခ့ဘီၣ်သိၣ်	Tiger	Panthera tigris (Linnaeus)	Protected	Protected	EN
ခ့ကွံၣ်ပိၢ်	Indochinese leopard	Panthera pardus delacouri (Pocock)	Protected	–	CR
တၤဘီနၢၤ (လါဖံး)	Gaur	Bos gaurus (Smith)	Protected	Protected	VU
သယ့ၢ်ပှၢ်ဟီၣ်	Lar Gibbon	Hylobates lar (Linnaeus)	Protected	Protected	EN
သယ့ၢ်ပှၢ်နံၤဆံး	Skywalker hoolock gibbon	Hoolock tianxing (Fan et al.)	Protected	Protected	EN
သယ့ၢ်ပှၢ်နံၤ	Eastern hoolock gibbon	Hoolock leuconedys (Groves)	Protected	Protected	VU
ကဆီမံၤ	Indian elephant	Elephas maximus indicus (Cuvier)	Protected	Protected	EN
စီၤအ့	Large-toothed Ferret-badger	Melogale personata (I. Geoffroy Saint-Hilaire)	Protected	–	LC
ယ့ၢ်ခ့ဗျိၤ	Back-striped weasel	Mustela strigidorsa (Gray)	Protected	–	LC
တဆ့	Slow Loris	Nycticebus bengalensis (Lacépède)	Protected	–	EN

Karen names	Common names	Scientific names	Indigenous Karen	KFD Wildlife Act	IUCN
ဘျါဝါ	Painted bat	Kerivoula picta (Pallas)	Protected	–	NT
ဆဉ်ဖိကီၢ်ဖိ လၢအဝါ	Albino Mammals	All Rare white animals	Protected	–	–
ဆဉ်ဖိကီၢ်ဖိမိၢ် လၢအဒၢတဖဉ်		All pregnant animals	Protected	–	–

တၢကွီ–Malayan Tapir Tapirus indicus (Desmarest)

တၢဟိဝါ–Albino muntjac: (Muntiacus muntjac)

ယိၤဟီၵ်ဘီ–Sunda pangolin (Manis javanica) CR

ထွံၵ်မံၤ–Dhole (Cuon alpinus) EN

တကျ့ၢ်–Binturong (Arctictis binturong) VU

Table 2. The Indigenous Karen People Propected bird species list in Salween Peace Park list

Karen names	Common names	Scientific names	Indigenous Karen	KFD Wildlife Act	IUCN
ထိန်ကီးဘီ	Great hornbill	Buceros bicornis (Linnaeus, 1758)	Protected by ta du/taboo	Protected by civil law	VU
ထိန်ဘံဃ်ါ (ထိန်သူလါ)	Asian fairy-bluebird	Irena puella (Latham, 1790)	Protected	_	LC
ဘံန်ဘ့ဖါဂီၤ	Scarlet minivet	Pericrocotus speciosus (Latham, 1790)	Protected	_	LC
ထိန်ချၤ်ဉ်	Lesser racket-tailed drongo	Dicrurus remifer (Temminck, 1823)	Protected	_	LC
ထိန်သံန်ကွဲၤ	Black drongo	Dicrurus macrocercus (Vieillot, 1817)	Protected	_	LC
ထိန်ဃဲၤဘၢ	Red-billed Scimitar Babbler	Pomatorhinus ochraceiceps (Walden, 1873)	Protected	_	LC
ထိန်တယူၤဝါခိဉ်	White-crested Laughingthrush	Garrulax leucolophus (Hardwicke, 1816)	Protected	_	LC
ထိန်ချၤ်ဉ်ခ့	Common green magpie	Cissa chinensis (Boddaert, 1783)	Protected	_	LC
ထိန်တဘဉ်	Large-tailed Nightjar	Caprimulgus macrurus (Horsfield, 1821)	Protected	_	LC
ထိန်တဖိုၤ	Red-headed trogon	Harpactes erythrocephalus (Gould, 1834)	Protected	_	LC
ထိန်ပှာ်	Green peafowl	Pavo muticus (Linnaeus, 1766)	Protected	Protected	EN
လီၤကတာ်	White-rumped vulture	Gyps bengalensis (Gmelin, JF, 1788)	Protected	Protected	CR
ထိန်ဒိန်သူခိဉ်	Black-headed ibis	Threskiornis melanocephalus (Latham, 1790)	Protected	_	LC

Karen names	Common names	Scientific names	Indigenous Karen	KFD Wildlife Act	IUCN
ထိန်ဆီဆု့	Common tailorbird	Orthotomus sutorius (Pennant, 1769)	Protected	_	LC
ထိန်ဒီန်	Mountain Scops Owl	Otus spilocephalus (Blyth, 1846)	Protected	_	LC
နါကွဲာ်ကွာ်	Indian roller	Coracias benghalensis (Linnaeus, 1758)	Protected	_	LC
ဘီကွံန်ဃီန်	Common Hoopoe	Upupa epops (Linnaeus, 1758)	Protected	_	LC
ထိန်တလ့	Great Slaty Woodpecker	Mulleripicus pulverulentus (Temminck, 1826)	Protected	_	VU
ကွာ်	Common hill myna	Gracula religiosa (Linnaeus, 1758)	Protected	_	LC
ထိန်ပန်အုန်	Common myna	Acridotheres tristis (Linnaeus, 1766)	Protected	_	LC

ထိန်ပှါပှါ–Grey Peacock Pheasant
(Polyplectron bicalcaratum)

ထိန်ပှာ်–Green peafowl
Pavo muticus (Linnaeus, 1766)

Table 3. The Karen Indigenous People Protected Reptiles species list in SPP.

Karen names	Common names	Scientific names	Indigenous Karen	KFD Wildlife Act	IUCN
ခုံးခွံဉ်(ခုံးထိဉ်ကံဉ်ဘီ)	Big-headed Turtle	Platysternon megacephalum (Gray)	Protected by ta du/taboo	Protected by civil law	CR
ကလီၤ	Burmese python	Python bivittatus (Kuhl)	Protected	Protected	VU
ဂ့ၢ်ဘီထိဉ်ပှာ်	Banded Krait	Bungarus fasciatus (Schneider)	Protected	Protected	LC
ကလီၤခီ	Blood python	Python brongersmai (Stull)	Protected	–	LC
တိတာ်	Tokay gecko	Gekko gecko (Linnaeus)	Protected	–	LC
ပျာ်မိၢ်သွဲ	Yathe Pyan Cave bent-toed geck	Cyrtodactylus yathepyanensis (Grismer et.al.)	Protected	–	–
ကလီၤဝါတဖဉ်	All Albino python		Protected	–	–

ခုံးခွံဉ်–(Big headed turtle)
(Platysternon megacephalum ssp. peguense Gray, 1870)

ခုံးဘိး– Impressed tortoise (Manouria impressa) EN

Table 4. The Karen Indigenous People Protected amphibian species list in SPP.

Karen names	Common names	Scientific names	Indigenous Karen Protected by ta du/taboo	KFD Wildlife Act Protected by civil law	IUCN
ခှဉ်ကွီဉ်	Smith's Litter Frog	Leptobrachium smithi (Smith et.al)	Protected	Protected	LC
ခှဉ်ဘ	Kuhl's Wart Frog	Limnonectes kuhlii (Tschudi)	Protected	_	LC
ခှဉ်ဖြိ	Karin Hills Frog	Brachytarsophrys carinense (Boulenger)	Protected	Protected	LC
တမာ်ယိဉ်	Crocodile Salamander	Tylototriton verrucosus (Anderson)	Protected	_	NT
ခှဉ်မှၢ်	Blyth's river fro	Limnonectes blythii (Boulenger)	Protected	Protected	LC

တမာ်ယိဉ်–Tylototriton verrucosus (Anderson)

ခှဉ်ဖြိ–Karin Hills Frog Brachytarsophrys carinense