

**TRADITIONAL ECOLOGICAL KNOWLEDGE OF THE IDU MISHMIS:**

**What do people say about wildlife?**



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Nature Conservation**

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## **Introduction**

Arunachal Pradesh is a frontier state of Northeast India that has been largely cut-off from mainstream economic and infrastructural development until recently. The government of India in its national policy has imagined the region to be 'backward' due to lack of infrastructure and connectivity (Baruah 2003). Parts of the region were claimed by China, resulting in border dispute resulting in India-China war in 1962 (Lamb 1964). The territorial dispute continues to cause tension between the two countries and constantly brings to the limelight this borderland region in South Asia's political discourse. Complimenting this, the proximity of Tibet makes this landscape contested geopolitically and strategically as the Indian state seeks to exercise its sovereign power through intense military presence along the India-China border, therefore making this state strategically important from a geopolitical point of view. The entry of outsiders, including Indian nationals from outside Arunachal Pradesh, has been restricted by Inner Line Permit, enacted by the British in 1873, which has resulted in very little interaction with the rest of India (Anonymous 2006) and ignorance of the region's social and cultural landscape post-independence.

Arunachal Pradesh is a tribal land where people's dependence on forests on a daily basis is very high. People have strong cultural linkages with forests and wildlife that are closely intertwined with their local animistic religion. Arunachal Pradesh has

26 major indigenous groups and 110 sub groups, 80% of whom are primarily agriculturalists practicing shifting cultivation on the community owned land. Many of these groups are known to migrate from neighbouring areas of China, Myanmar and Bhutan. They maintain their own distinct language, belief system and cultural practices. Languages in the state are Tibeto-Chinese or Tibeto-Burman in origin and most of them do not have a script. These borderlands are fast changing because of globalization and economic development leading to erosion of local knowledge and practices across the tribes in the state. This study aims to document indigenous ecological knowledge and oral literature related to the ecology of the Idu Mishmi. Idus have indepth knowledge of their ecosystem (wildlife, landscape and forests). There has been no serious attempt to document the traditional knowledge of the wildlife that Mishmi people use in their daily lives. This project aims to document the knowledge that Mishmi people have about their natural environment through folk tales, taboos and myths about wildlife.

## **Idu Mishmi**

Idu is one of the three sub-tribes of the Mishmi tribe, the other two sub-tribes are Taraon (Digaru) and Kaman (Miju). Idu Mishmis are Scheduled Tribes inhabiting mainly in Dibang Valley and Lower Dibang Valley of Arunachal Pradesh. Small populations are found in Upper and East Siang districts.

Idus, who are the main focus of this research, are primarily subsistence farmers. They follow animism and believe in the presence of spirits living in the natural surroundings. The main crops grown are rice (*hawe ku*), buckwheat (*eke*), maize

(*ambo*), millet (*Yaambaa*) and a variety of vegetables<sup>1</sup>. Orange plantations (*untira*) are not very successful in Dibang Valley compared to Anjaw, Lohit district and in Lower Dibang Valley. In Dibang Valley, there are small orange gardens mainly for local consumption and sale in the local market. Kiwi and plum plantations are very productive but apples are not yet ready for commercial sale though there is a great amount of effort and money being invested on apple orchards.

Idu Mishmi practice shifting cultivation (*mipu mrann*) and wet irrigated cultivation (*machchi mrann*) is largely practiced in Lower Dibang Valley. Because of the rugged terrain in Dibang Valley district, shifting cultivation is the only feasible way of cultivation along with kitchen gardens. Other than subsistence agriculture, some villagers go for musk deer hunting and the sale of musk pods supplements their income. People keep pigs (*ili*), mithun (*sha/saa*) and chicken (*eto*). Pigs are always stall-fed. A separate section either below the house or adjacent to the house is made where pigs are kept (*ili apa*). Mithuns are never stall-fed but let out in the nearby forests to feed on their own. There are gates to prevent them from entering the village areas. Chickens are kept in a compound attached to the house. Government is trying to encourage rearing of goats but people take less interest because of the time and effort required.

**Table 1: Lower Dibang and Dibang Valley districts**

<b>Features</b>	<b>Lower Dibang Valley</b>	<b>Dibang Valley</b>
District HQs	Roing	Anini

<sup>1</sup> See preliminary report submitted to Rufford Small Grant titled ‘Traditional Ecological Knowledge in the Mishmi Hills, Arunachal Pradesh, Northeast India’, September 2013, for list of plants used by Idus.

Borders	North: UDV*, South-Assam, East-Lohit and China, West: East, Upper Siang district	North-China, South-LDV*, East-China, West-Upper Siang
Population	53,986	9129
No. of villages	127	108
Population density	14	0.1
Tribes	Idu Mishmi, Adi, Mishings, Galo	Idu Mishmi
No. of towns	1 (Roing)	Nil
Circles	7	5
Nearest railway station	113 km (Tinsukia)	303 km (Tinsukia)
Protected Areas	Mehao WS	Dibang Valley WS

The conditions of the roads in these districts are poor. It takes 12 hours by road from Roing to Anini and there are frequent road blocks due to land slides. Phone network and internet connectivity are recent and is available only in the towns and in villages close to towns. There were helicopter services from Tezu and Dibrugarh to Roing and Anini till recently.

Though Mishmi villages are remotely placed, all Idus have land, though not enough suitable land for cultivation. I do not want to project Idu as completely 'isolated' and as people waiting to get 'empowered'. There are schools in all circles. Most of the present day Idu are the first generation who have been to schools and many of them are employed in the government offices. There are Idus who have PhDs working in Rajiv Gandhi University (Itanagar) as faculty members and in state colleges. There are journalists working in Arunachal Times, a regional English newspaper and some are independent journalists. One of the former Chief Ministers of Arunachal Pradesh, Mukut Mithi is an Idu Mishmi who lives in Roing

town. He also served as Governor of Puducherry (Tamil Nadu) and now is a Rajya Sabha MP (Member of Parliament).

In the last few years, Idus were active participant of anti-dam protests<sup>2</sup>. In 2008, the Mishmi people in New Aanaya, Dibang Valley district staged a road blockade to prevent the officials of National Hydro Power Corporation in reaching the proposed site of dam construction. A journalist from the region writes, ‘no compromise upon construction of dam in our soil’. Incidents like these make the Mishmi hills a hot seat of tension between local needs and India’s development agenda. Idu are constantly positioning and negotiating their voices on digital media. For example, there is a website created by the Mishmi Scholars Association (MSA) which projects the history and lives of Mishmi people ([themishmis.com](http://themishmis.com)) and platforms like Facebook are sites for discussions and debates about the local issues concerning the Idu community.

In this fast changing times, knowledge of Idu people about their culture, language and healing practices is disappearing. In this study, I attempt to document Idu’s knowledge about their environment, especially wildlife. Initially I tried to record ethno-botany and ethno-zoological information. All the plants used by Idus were not scientifically identified, though the common names of around 60 plants and their uses were provided in the preliminary report. In this study I provide information on wildlife only.

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<sup>2</sup> The Dibang river basin is proposed with 17 large dams with hydro-power generating capacity ranging from 20 MW to 4500 MW. There are over 100 proposed dam constructions sites across Arunachal Pradesh.

## Methods

I initially started my work in a village called Koronu, around 22 km from Roing in Lower Dibang Valley district and during winter 2013 I to Kongo-I village near Anini (Dibang Valley). Anini is known for wildlife hunting and I was advised to be in Anini during winter for understanding wildlife hunting practices.

The name Koronu comes from the Koronu river. According to the government records, there are around 100 houses in Koronu. Idu Mishmi people are the primary inhabitants but there is large labour migrant population from outside the village for example, there are Nepalese who work as agricultural labourers, families from Jharkhand who work as construction workers and few government staff such as school teachers, forest department and other government staff who are from different parts of India. The road to Koronu is under construction and General Reserve Engineering Force (GREF), a branch of Border Roads Organisation (BRO) is responsible for road construction. During monsoon, reaching the village is very difficult and at times not possible. When the Injano river is flooded, it is not possible to reach Koronu. Situation will get better after the completion of the bridge. My host in Koronu is a 53-year-old widow. People call her *Nani* (mother in Idu language). The first few weeks were spent observing village activities. I met the *Gaon Burrah*, GB (village headman), public leaders, school teachers and village council members. I accompanied *Nani* to her farm, followed her to collect bamboo shoot, shrubs, maize, herbs, pig fodder. Villagers speak Hindi fluently and some could speak English well. I communicated with villagers in Hindi and have started to understand basic Mishmi.

Kongo-I is a small village lying in the vicinity of Anini town. Kongo has a population of around 200 people and 30 households. I stayed with an Idu family in the village. I interviewed men and women of different age groups. Men who frequently hunted were interviewed to understand the role of animals in their lives. I showed pictures of wildlife using mammal and bird identification guides. I recorded what they have to say about wildlife. Taboos, uses of animals, where the animals are found, hunting methods and folklores were documented. Any wildlife sighted was also recorded. Appendix 1 has a list of animals reported by the local people in the study area.

During interviews, I used a recorder with the respondents' permission. I participated in official meetings, social gatherings, healing rituals and village functions. Meetings with Idu priest (Igu) helped in understanding their belief system and information about spirits and hunting taboos.

## **The Mishmi Hills: A Historical Account**

The British administration in the hills had limited control over Mishmis due to their non-corporation and hostile attitude to the visitors. The strategic location of the Mishmi hills was of major interest to British frontier administration because of its proximity to Lhasa, the forbidden land. Surveys in this region began in the early 19<sup>th</sup> century following the course of the mighty Brahmaputra that resulted in building physical infrastructure to penetrate the hills for trade and to establish political presence in the hills (Anonymous 1910; Cooper 1873; Mitchell 1883).

Explorers like Colonel F.M. Bailey, Major Jenkins, and later the Survey of India staff made attempts to explore the Mishmi area and further north in Tibet to find out which of the rivers did the water of Tsangpo (Tibet) eventually flow (Cox 2008; Swinson 1971). In 1862, the Survey of India started collecting information on these regions with a purpose to demarcate the frontier (Bailey 1957). Moreover, some explorers claimed that route through Mishmi hills was the shortest way to reach China (Marshall 2005). Thus British trade related interests with Tibet brought in a number of explorers, missionaries and botanists to pay visit to these remote corners of the empire.

The earliest record of European visitors to the Mishmi hills was in 1825 by Lt. Burton who visited upper Brahmaputra (Upper Dihing) and reported that Mishmi were averse to strangers. Lt. Wilcox in 1827 managed to pass through the villages of Miju Mishmi. Next William Griffith, a doctor and a botanist explored the hills in 1836 documenting its rich vegetation and forests. Sadiya<sup>3</sup> on the foothills on the boundary of Assam and Arunachal Pradesh became an important military post for keeping check on the tribes who were known to raid the villages in the foothills. The climate and terrain was found ideal for tea gardens (Swinson 1971). Sadiya became a busy market and became a meeting point for colonial officials to develop friendly relations with Khamptis, Singphos, Mishmis and Adis. Exchange of textiles, machetes, musk, mishmi *teeta* (*Coptis teeta*), ornaments, salt and many more items of trade took place in these foothill and trade centers. This was also a period when Christian missionaries traveled in this region till Tibet but

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<sup>3</sup> Sadiya lies at the junction of Lohit and Dibang rivers. It was a very important trade center until flooded in the 1950 earthquake, the Sadiya bazaars shifted to Pasighat after the floods (Rose and Fisher, 1965). The bazaar could not be accommodated at Pasighat and only a few shops were shifted. Tinsukia town in Assam emerged after Sadiya's decline.

failed terribly when two young French missionaries were murdered (Heriot 1979). A small booklet 'First Martyrs in Arunachal Pradesh' tells of two French missionaries, Fathers Krick and Bourry, who visited Mishmi hills, now Anjaw, with the mission to reach Tibet to spread Christianity but were murdered on their way back in 1854 by a Mishmi headman (Heriot 1979). This chilling incident is repeated in all subsequent writings about Mishmi (Elwin 1959; Hamilton 1912). Hamilton (1912) reported that the tribesmen were of uncertain temperament and frequently at war among themselves. After 1826, intense fighting among the Mishmi prevented visitors from outside the region for around five years (Hamilton 1912). William Griffith, a botanist, failed to proceed further into the Mishmi hills due to uncooperative behaviour of the *Miju Mishmi*. Bailey (1945) in his writings during his tours in *Mishmi* hills referred to the people as 'troublesome and unpleasant'. These negative perceptions and difficult terrain in the frontier region may have hampered administrative interventions and academic research.

Several political officers from the Assam administration were posted in Sadiya and they made surveys through Mishmi hills towards the India-China border to access the practicality of road construction, to build frontier posts and to resolve inter-villages disputes and rivalries (Godfrey 1940; Mainprice 1945; Routledge 1945; Williams 1944). These officers carried with them steel for making machetes and repairing bridges, yarns for making coats, cigarettes, opium, tea, salt, tobacco, rum and guns as 'political presents' for the Mishmi. Till India's Independence, the British continued mapping the region, counting villages and encouraged Mishmi to grow vegetables and fruits (peaches and apples) by giving

them seeds and teaching them how to maintain orchards. Agricultural officers were deputed in these hills and new crops like potatoes were introduced.

The European visitors were intrigued not only by the magnificent landscape and fascinating wildlife but their encounters with villagers resulted in curiosity and desire to explore further their material culture and social organization. Some of the junior officers, like Ronald Kaulback was very keen to visit this area and he wrote several letters to Kingdon-Ward, the well renowned colonial botanist asking his advice to visit this region. Kaulback later took the position of assistant for Ward's botanical survey (Kaulback 1935). The reports by these visitors created an image of 'untouched' hills waiting to be explored and this might have motivated the British officials who were equally good naturalists and hunters. The explorers saw these frontier Himalayas as site for exploration, trade and natural laboratory.

The end of the British Rule resulted in decrease in these expeditions and missionary evangelism. The post-independence period was opened to official research commissioned by Pt. Nehru with an anthropologist Verrier Elwin as its head. The Government of India's Tribal Studies network in the hills was mainly focused on bringing 'development' to the frontier people without disturbing their culture (Elwin 1959). However, these ideas of protection have changed over time in post-Nehruvian era of liberalization. The state is currently witnessing the construction of several hydro-electric and inter-state road building projects (Anonymous 2006).

## **Wildlife in Dibang Valley: What do local people say about them?**

**Aame Epaan** (Hoolock Gibbon, *Hylobates hoolock*): Mishmi do not hunt Hoolock Gibbons. Gibbons visit close to the village periphery in Koronu but not inside the villages. One can hear Gibbon's calls in the morning around the village and sometimes even in Roing town. People believe that it is a taboo to hunt them, even to see one is a very bad omen. One hunter told me that they do not even take their name at night, this bring bad dreams. A researcher working on Gibbons had a difficult time with a local assistance who refused to accompany him during his field visits for the fear of seeing one! And of course it is a taboo to hunt one.

Hoolock Gibbons are not found in the upper regions of Dibang Valley district and its distribution is restricted to east bank Dibang river (Choudhury 2001b). There are rescue and rehabilitation programmes by a Delhi-based NGO, Wildlife Trust of India. Though Gibbons enjoy the status of religious protection<sup>4</sup> by the Idu, their habitat has been altered for orange plantations and for agricultural purpose losing trees and canopy that is needed for gibbons. There are reports of capped langur in Dibang wildlife sanctuary by Choudhury (2001). Idu people take credit for conserving Hoolock Gibbons because of the taboos.

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<sup>4</sup> Adi community who also inhabit Lower Dibang Valley do not have a taboo on hunting Hoolock Gibbons.

**Aame** (Monkey sp.): This is a common term for all monkeys. A villager in Koronu had an infant Assamese macaque (*Macaca mulatta*) as a pet. The mother was hunted and the villager captured the infant. *Ame* is hunted for meat and to prevent the crop damage. People say they are nasty and difficult to control them when they visit farms in large numbers. They are mostly hunted when these animals raid the crops. Unlike the taboo on hunting Hoolock Gibbons, these monkeys do not have such privilege.

A survey by Chetry et al., (2010) report 4 species of primates in Dibang Wildlife Sanctuary. Rhesus macaque (*Macaca mulatta*), Assamese macaque (*Macaca assamensis*), presence of slow loris (*Nycticebus bengalensis*) were recorded. They report another macaque that could not properly identified. Assamese Macaque is reported to occur upto 2,800 m (rarely to 3,000 m, especially in summer in Dibang Wildlife Sanctuary (Choudhury 2001b).

**Aalaa** (Himalayan Musk deer, *Moschus chryogaster*): Dibang Valley district is known for musk deer. These are mainly hunted in the upper regions of the district. People say this animal carries 'gold' indicating musk pod (*Aalaapee*), which has a high market value, both in local and in the international market. Only males are hunted for musk pods which cost around INR 20000-30000 per *tola* (10 gms). People talk about the strong good smell like perfume from the pod. Meat is consumed and pods are sold quickly. Musk deer skin cannot be stored for longer period of time like goral or bear skins. The hairs drop easily, often people tend to burn the skin and consume it. In a Mishmi house, a pillow was stuffed with musk deer hair and the villager said he also made a quilt from musk deer

hair. According to this villager, the quilt is light, warm and easy to dry. It is not a common practice to make a quilt or pillow out of musk deer hair but people do make use of animal products in many different ways.

Hunting season is from June to September. Hunting is very difficult and hunters may spend upto 25 to 30 days sometimes in search of musk deer. *Ale* is hunted using guns and are also trapped. In June and July, there is more visibility and gun hunting is effective. During October and November, when mountains are covered with snow, animals come down to forested areas. Visibility is less here and hunters use traps (*Aanpaan*) for capturing musk deer (see Appendix 2 for information on traps). Musk deer hunting is an age-old tradition. In the past, Idus sold musk pods to tibetans across the border. Two trade routes existed from Dibang Valley (from Malinye to Keya and from Dambeun to Agoya). Other than musk pods, animal skins and *Mishmi Teeta* were bartered for brass gongs, machetes and even guns.

***Maanjo*** (Indian Muntjac, *Muntiacus muntjak*): This animal is commonly found in Dibang Valley districts. Idu houses have skulls of barking deer decorated on the walls along with other wild animal skulls. Villagers prefer the meat of barking deer because they say it is very soft and tasty. *Maanjo* visit the kitchen gardens at night. In Lower Dibang Valley, two kinds of barking deer are reported (*Maanjo Akuma* is blackish coloured deer and *Maanjo Adachu* is the brown or reddish coloured deer), could be Black Barking Deer and Indian Muntjac respectively. There is no season for hunting. People say they have a weak heart and it is a *ripo* (Idu word) or *dar-pok* (Hindi) meaning coward.

**Maanjo Imbu** (Black Barking Deer, *Muntiacus crinifrons*): Hunters in Anini say these are very rare and when this not so common animal is hunted, hunters feel lucky. One of the villagers had a key chain with an antler of this animal attached to it. They are not found close to the villages or on the plains. *Imbu* means large trees in the forests and is also referred to areas beyond human settlements where there is no cultivation but has only dense forests.

**Maachcho** (Sambar, *Cervus unicolor*): People say there are plenty on the plains near Diphu naala in the Lower Dibang Valley but not found in mountainous areas of Dibang valley. During my fieldwork in Koronu, I observed Sambar meat being prepared for cooking. It was shot the previous night. By daybreak, meat was distributed to some villagers and rest was sold in the nearby town. The villager who shot the animal followed followed certain restrictions (see section on rituals and taboo). The skull board in Mishmi houses has one or two *Maachcho* skulls and their antlers are used as pegs to hang petty things (torches, ropes). According to the villagers, adults look blackish in colour and are called *Machcho Akuma* whereas young ones are red coloured and they are called *Machcho chen*.

**Aakrun** (Takin, *Budorcas taxicolor*): Mishmi hills are known for Takin, also called Mishmi Takin. The labourers working in the cane cutting camp in Lower Dibang Valley spoke of salt licks where takins visit regularly. Takin skulls can be commonly seen in Idu houses. People report that there are large herds of Takin that can be upto 300-400 animals that gather in some sites in Dibang Valley district. Their meat is consumed, skull and horns are mounted on the wall, and

skins are used as mats (*Kopraa*). Smoked meat can be stored for long time. Calf is called *Aakrun che* and *adult is Aakrun jo*.

**Why are takins' horns twisted and curved?**

According to the Idu folklore, takins horns were straight in the past. Idu people could not make out what kind of animal is takin because of its peculiar features like slanty back and goat-like face. Both the mountain spirit Golon and the Idu people claimed takin to be theirs. There was a tug of war between Golon and Idu people. Idu held the tail and Golon pulled the horn. The competition was tough and takin got pulled on both the sides during which takin's horn got curved and its tail broke off. After a long struggle, Golon ultimately won and takin became Golon's property. Therefore takin's body is slanted, horns are curved and the tail is short.

**Maaren** (Serow, *Neamorhedus sumatrensis*): According to the local people, *Maaren* are found alone, not in herd. They are not commonly found in the region. Skulls can be seen mounted on the skull board. Sometimes *Maaren* comes down to plains but very rarely. They can be hunted but a taboo need to be followed for 5 days (see section on hunting rituals and taboos).

**Aamee** (Red Goral, *Naemorhedus goral*): *Aamee* are founds in herds on mountainous rocky slopes. Hunters say goral can be seen on every mountain! Goral skull is the most common skull on the skull board next to barking deer skulls. Same taboo to be followed if hunted.

**Aamme** (Wild pig, *Sus scrofa*): People have no tolerance for wildboars. Villagers complain that they visit maize farm (*aambon mraan*) and says it is dangerous. The meat is much preferred because of the taste, especially with the fat. Wild boar's lower jaws and skulls are decorated in large numbers in Idu houses. Tusks of wildboar are in demand by the naga people and they come to villages near Lower Dibang for purchasing tusks costing INR 200-300 per tusk. Every villager has a story or two about wild boar damaging crops and attacks on people. Attacks by wild boars on hunters are also common, mainly in the plains and not on the high mountains. They are hunted using both traps and guns. According to hunters, wild boars are known to escape even after getting shot. There is a taboo on hunting wild boar.

**Aiminjini** (Red Panda, *Ailurus fulgens*): People say they are found in the high mountains but very difficult to see, so hunting with guns is difficult and traps are effective. Local people make caps out of skin, According to people, red pandas steal from the carcass and it is a nuisance. There is no taboo on hunting and no rituals need to be performed. Occurrence of red panda in Dibang Valley is reported by Choudhury (2001a).

**Aahun** (Bear): Two kinds of bear are reported (*Aahun* and *Aahun-tho*). *Aahun* (Himalayan Black Bear, *Ursus thibetanus*) is the large bear, furry and has a white patch on the chest. According to hunters, they are very dangerous because they can climb trees making difficult for hunters to escape. These bears are known to attack back after getting shot and can follow the hunter till the smell of the fire/cartridge. Weak hearted hunters cannot shoot. Like wild boars, bears have

the habit of attacking after the first shot and before the hunter is ready for the second shot. *Aahun tho* (Sun Bear, *Helarctos malayanus*) is smaller and is 'naked', according to a hunter, indicating lack of thick fur. Bears are hunted for bile (*eemu*) and sold in the market fetching a very high price (INR 5000-7000 per tola). Gall bladder is used for treating fever. Fat is used for joint pains in the earlier days but rarely now. Meat is consumed and their skin is used to make bags. Bear bags (*Aahunko akochi*) are commonly seen carried by men. During special occasions men wear it along with their traditional dress. Bear skins are also made into mats (*Aahun kopra/Jeepra*).

***Apupru*** (Wild dog, *Cuon alpinus*): Villagers speak of wild dogs as animals that live in groups, living on the mountains and they come down during winters in September and October. *Apupru* are sometimes in a pack of 10-20 animals and even in small groups of 2-3 animals. There is a local belief that their urine is poisonous. *Apupru* wet their tails and splash it on the prey's eye to blind it, and then kill them. Footprints were seen inside Dibang Wildlife Sanctuary. People complain that *Apupru* kill mithuns and are wasteful hunters because dholes kill every animal, big and small but do not eat all of them. Meat is not eaten and there is no taboo on killing *Apupru*.

***Aamra*** (Tiger, *Panthera tigris*): This is the most revered and feared animal for Idus for whom killing tigers is prohibited. People say that to sight a tiger or even to talk about them is avoided. Tigers are killed only when their own lives are in danger or when their cattle are attacked and killed by tigers. Tigers are considered elder brothers and killing one is equivalent to killing a sibling. A

senior Igu is invited to carry out a big ritual (*Taamaamran*) that requires huge expenditure because the ritual is equivalent to the one conducted for human funeral. Role of Igu is very important for this ritual. Not all Igu can perform this ritual, specialist in capturing tiger spirits is invited.

People reported that attacks on cattle by tigers in Dibang Valley are frequent. Though dholes are also responsible for killing mithuns, people complained more about tigers and not dholes. There are some reports of retaliatory killing by setting traps or by shooting. Research on tigers has just began in the district. A major rescue operation was carried out by Wildlife Trust of India in December 2012 to rescue three tiger cubs, which were initially shifted to Roing zoo and later to Itanagar zoo. One cub died of pneumonia. Since then there has been several visits by wildlife researchers to get information on the tigers in Dibang Valley.

***Aamra ipungoo*** (Leopard, *Panthera pardus*): also called *Aamra kichi*. Villagers describe them as 'goat-lifters'. Two years ago a leopard used to roam around Korono and even killed one dog. A villager shot the leopard later. Dogs are used to drive them out and people fire guns in the air to scare away the tigers. Moreover, wild animals entering village premises is not an auspicious sign and should avoid killing them. Villagers believe that wild animals should be hunted in the forests, away from villages.

***Aamrama*** (Black Panther): This is considered as very dangerous animal, rarely seen and believed to live on top of the mountains. People say that this is the king of all animals and carried tigers on its back.

**Clouded Leopard** (*Neofelis nebulosa*): Image of a Clouded Leopard was captured in camera trap exercise by Wildlife Institute of India inside Dibang Wildlife Sanctuary organized in January 2014. When a porter saw picture of clouded leopard in the camera he did not recognize it. Similarly villagers and even hunters did not recognize the picture of clouded leopard in the field manual. I could not get a local name for clouded leopard.

**Aapoee** (Civets): *Aapoee* is the general term for all civets. Villagers spoke of three types: *Aapoee Akolo* – large; *Apoee Akumma* – medium; *Aapoee Kren* – small.

Villagers say that civets mostly eat *gutti* (seeds) and have plenty of fat in its body during winter. Mostly hunted during winter season and at night. They are hunted using guns. Civets are mentioned as '*murghi-chor*' (chicken thieves). Hunters curse palm civets because they bring bad luck for hunters. Killing civets is not a taboo.

**Aakonkon** (Yellow-throated Marten, *Martes flavigula*): The description by villagers is that they stink very badly and is a *lodrey or abuyii* (unlucky). Hunters expressed dislike for this animal. Seeing this animal when one goes for hunting brings bad luck resulting in failure in hunting. *Aakonkon* keep running in pairs day and night and often follow *Maanjo* but cannot hunt big animals. Like civets, martens also lift chickens and killing them is not a taboo. Meat is eaten by local people and there is no taboo on hunting *aakonkon*.

**Aakrusoron** (Chinese Pangolin, *Manis pentadactyla*): One hunter said that it has paisa-paisa (coins) all over its body. When it sees people, it becomes round like a ball. Pangolin is hunted for meat. Skin used for making drums (*eenpun*) that are used by Igu during rituals. There is not taboo on hunting and women can eat without any restrictions.

**Aasonn** and **Aali** (Porcupine, *Hystrix* sp.): If the animal is angry, it shoots its quills (*aasonno*) like arrows. They are mainly trapped. The one found in the plains in Lower Dibang Valley is called *Aasonn* (*Hystrix indica*). It is not a taboo to hunt porcupine. Women are free to eat its meat. *Aali* is the name for Himalayan Crestless Porcupine (*Hystrix brachyura*) found in the areas near Hunli.

**Aantaan** (Elephant): Elephants are seen as dangerous animals that raid their crops every year. People say the farms are on their route so elephants come every year. Earlier elephants used to come inside the villages when the size of the village was small and there were more forests but now they come only to the farmlands on the periphery of the village adjoining the forest area. People in the village have shot several elephants to protect their crops and see elephants as a nuisance. People spend more effort and energy to prevent elephants from raiding their crops.

## **Hunting Rituals and Taboos**

Idu Mishmi people regard hunting (*aambe*) as a serious activity and many restrictions and taboos (*aangi*) are observed during hunting and trapping. Musk deer hunting is the most serious and dangerous of all. There is a lot of preparation before hunting. Hunters stay at home to prevent any untoward incidence during hunting. They avoid attending funerals, eating mushrooms and avoid food cooked by women who are menstruating. Hunting kit is prepared that contain essential items, such as rice, dal, salt and bedding (see Appendix 3). Just before starting, a small ritual (*aambo*) is carried out either by Igu or by the hunter himself but this ritual is a must. If the hunter goes with a group, then one of the group members should perform the ritual. Through this ritual, hunters ask for animals and safety during the trip. After hunters leave, wives follow taboos for the safety and success of their husbands (see section on women and hunting).

During the hunting trip, hunters follow a 'moral code' of conduct, for instance getting angry, abusing or cursing someone, swearing should be strictly avoided. Hunting is considered a very risky activity, therefore no jokes or ridiculing someone is against the rules. If proper conduct is not followed, then hunters may face major accidents or sudden illness during the trip.

When an animal is hunted, the hunter performs a ritual (*aanphun aangi*). He 'pays' for the animal he hunted to a spirit called *Golon*. '*Hum ko daam dena*

*padta hai'*, said a hunter, which translates to 'We have to make a payment or pay a cost'. The payment is the form of meat and a metal. A small piece from the ear of the animal hunted is cut with machete (*dao/ eyenchen*), inserted into bamboo fork and is planted on a nearby tree or on the ground. Using *dao*, hunter scrapes the brass metal (*aanphoodi /paaoyute /seekhiyute*) over the dead animal and chants which roughly translates to:

*This animal has been killed. When I come again, please give more animals. One who rears the animal, let more animals be produced. Give us more animals whenever we come again. We have given you the payment, do not disturb or harass the one who eats this meat and the one who hunted this animal. The restrictions will be observed and do not follow us and watch us whether we did the right thing or not. Do not disturb us.*

Hunters always carry a metal piece, usually a brass or even use a cartridge. *Golon* is the most feared spirit for hunters and this spirit is believed to live on the high mountain and in the forests. People believe that *Golon* is the one who supplies animals to the hunters so when there is a successful hunt, an offering has to be made. If failed to do so, *Golon* gets angry and can cause accidents to both hunters and consumers of the hunted animal, and may cause severe sickness to either the hunter or his family members.

When the hunter returns home, there is a restriction of many things for 5 days if there is a successful hunt. There are three kinds of key restrictions on (1) food (2) sex (3) place. Other than this, clothes are not washed for 5 days.

- Avoid eating onion (*elompran*), garlic (*eloni*), mushroom (*akupi*), a herb called *marsana* and fermented soyabean (*aadulo chhin*).
- Stay in a separate room and sex is forbidden. Food, even water and tea prepared by women who are menstruating is avoided.
- Avoid attending funerals.

Going for hunting after a wedding ceremony or a major ritual at home is avoided. During such events, there are ceremonial sacrifices (pigs and mithuns) and therefore while there is meat still at home, it is not advisable to kill wild animals or bring fresh wild meat to home.

## **Secret codes of hunters**

There are unique code words which only hunters know and use during hunting, especially in the high mountains (Table 2). It is important for hunters to have knowledge of these codes; not knowing them would have negative effect. Hunters who do not know these code words are advised to be silent and not call out names of animals. Animals have unique names, that should be used during a hunting trip, for example, *Aala* (musk deer) will be called *Tambe aaroku-chi* which means meat of the high mountains.

**Table 2: Code words for animals used during hunting**

<b>English names</b>	<b>Idu names</b>	<b>Hunter's codes</b>
Goral	<i>Aamee</i>	<i>azo chi</i> (the one on rocky slopes).
Takin	<i>Aakrun</i>	<i>ambeka chi</i> ( <i>tambe</i> -meat, <i>kachi</i> -big). The one with big meat.
Musk Deer	<i>Aalaa</i>	<i>tambe aaroku chi</i> ( <i>tambe</i> -meat, <i>aaro</i> -high mountain, <i>ku</i> -place). Meat of the high mountains.
Wild Boar	<i>Aamme</i>	<i>enabolon</i> ( <i>enambo</i> -nose, <i>lo</i> -long). The one with long nose.
Barking Deer	<i>Maanjo</i>	<i>tambre-shu</i> ( <i>shu</i> -small). The one with small meat.
Serow	<i>Maaren</i>	<i>aazo-chi</i> / <i>ama-dro</i> ( <i>ama</i> -tree name, <i>dro</i> -two horns).
Bear	<i>Aahun</i>	<i>ikku-zongon</i> (meaning not clear)
Monkey	<i>Aame</i>	<i>aadichi</i> ( <i>aadi</i> -above). The one who lives on the trees.
Satyr Tragopan	<i>Peba</i>	<i>apipa-chi</i> ( <i>apipa</i> =leaves). The one who lives near leaves.
Sclater's Monal	<i>Pidi</i>	<i>aaron chi pra-a</i> ( <i>aaron</i> -mountain). Bird of the mountains.
Himalayan Monal	<i>Chendan</i>	<i>kaanei</i> (colour)
Blood Pheasant	<i>Cheekhoo</i>	<i>brunshu</i> ( <i>brun</i> =leg, <i>shu</i> -red). The one with red legs.
Tiger	<i>Ketrebo</i>	<i>ketrebo</i> -stripes
Snake	<i>Kanlon</i>	kanlon-long
Elephant	<i>Enonohoya imina gila/chunlaa</i>	<i>Enonohoya-both sides, imina-tail, gila-chunlaa</i> ( <i>having</i> ).The one having tail on both sides

## **Women and Wildlife Hunting**

Women do not take part in wildlife hunting but they indirectly follow certain regulations and observe taboos to ensure success in their husband's hunting attempts.

A hunter avoids going on a hunting trip when his wife is menstruating. The left over food after packing husband's hunting kit is kept aside. Women eat it only in the evenings when men would have probably reached their destination. Eating it before would lead to failure in hunting. No rituals are held at home when the men have gone away for hunting. There should be no blood spilled at home, indicating no rituals. Performing any ritual means ceremonial sacrifice of chicken or pig. Women do not give money to anyone so no purchase of anything from anyone, even from shops.

There are some general rules for women. Touching guns are not permitted during menstruation. Women never touch poison arrows. These arrows are generally kept fixed under the roof out of children's reach. Animal skulls on the skull board (*Amuneenddon*) are considered to be sacred. Women do not touch the animal skulls and do not even go close to them during menstruation. While crossing the room, they make sure they do not walk past the skulls instead they walk around the hearth to go the next room. Blood is applied on the skulls by the head of the house.

Though women do not participate in long distance hunting trips, they are not completely restricted either to trap small animals in the farm rats and birds. Women prepare rice beer and keep it ready for the men when they return.

Idu women are prohibited from eating wild meat, mostly of large mammals and pheasants. The only meat they are permitted to consume without followed any restrictions are fish, birds and farm rats. Among birds, except the pheasants, they are allowed to eat small birds. If women eat meat of mammals or pheasants, they observe *angein* till the new moon phase, however many days it may take. The major taboos include not washing clothes till the new moon phase. Restrictions on not eating garlic, ginger and mushrooms are for five days.

A strong link to menstrual blood is expressed through these taboos that segregate all aspects of hunting (hunting trip, weapons, food, animal remains) from menstruation and sex. The taboos place the blood from menstruating woman and the blood of hunted animal opposite to each other. Mixing these bloods is seen as very dangerous and therefore menstruating women or their contact with weapons is prohibited (Morris 2000).

## **Perceptions of Nature**

Idu Mishmi's world has the presence of several spirits; in the farm, house, forests and mountains. These spirits help in providing farm produce, wild animals, safety, health and wealth to the Idus. To achieve this, people follow code of conduct and behavior so that they get the blessings and success in farming,

hunting and other resource activities. If people fail to satisfy the spirits, harvests may fail and hunts can be unsuccessful.

Idus take part in an exchange process with the mountain and forest spirits. Among the Idu this engagement seem to be mediated by blood. In some societies, nature is seen as ancestors and there is a 'process of exchange' between nature and humans (Bird-David 1990). Among the Idu, tigers are regarded as brothers and therefore killing a tiger is a biggest crime and a strict *angein* (taboo) is observed not only by the hunter and by his family members but also by the entire village. According to Idu, tigers are only killed when their mithuns are attacked or for personal safety. If a tiger is killed, an elaborate ritual (*Taamaamran*) over few days is conducted with restrictions on both the family members and the villagers. Animals like tigers get protected through their belief system.

*Golon* is the most important spirit for long distance hunters like the musk deer hunters and is believed to be the caretaker of wild animals. *Golon* should be respected so they continue to provide wild animals to hunters and in exchange, hunters make a payment in the form of metal and a small meat piece from the dead animal. An offering after a successful hunt will make sure *Golon* is satisfied and will safeguard the hunters on their way back and in future hunting attempts. Appropriate behavior in the forests and in the mountains is crucial for hunters. In general large trees are not cut unless it is used for house construction. *Aasaan* is the spirit who looks after large trees and deep forest. Cutting trees may annoy spirit '*Aasaan*'. After cutting people cover the stumps with mud and trees to prevent *Aasaan* from seeing it!

The relationship between human world and spirit world is acknowledged through rules and regulations in the form of fear and respect. This fear is manifested in the way wild meat is cooked and the way animal skulls are arranged on *Amuneenddon*. There seems to be a strict separation of wild and domestic space. Mixing of meat from wild animal and domestic animal is seen as a taboo. Skulls of domestic animals and wild animals are never displayed together. Wild meat is cooked in a separate hearth in men's room. The utensils are always separate.

Bird-David (1990) explains the way people see nature in the form of reciprocity. People act in accordance with the obligation to give, to receive and to pay. For example, act of reciprocity is followed when an animal is hunted and when the meat is shared. The person who shoots the animal gets the head. The rest is shared with others. Idu have strong ethics when it comes to sharing of both domestic meat and wild meat. During Reh festival, meat is widely distributed to relatives and guests, similarly during weddings and funerals, sharing of meat with the villagers is crucial.

## **Conclusion**

For conservation and sustainable use of natural resources it is not only important to understand the resources that are used but it is equally important to understand what values and feelings people apply to these resources and why? Idu have indepth knowledge of the forests and mountains who frequently make expeditions to high altitude and know where wild animals are likely to be found.

They are not only familiar with the routes but are aware of the dangers in this difficult landscape. This knowledge can be of great value to the emerging biodiversity research and conservation efforts in the Dibang Valley.

The relationship of Idu Mishmi and the forests are strongly linked to the presence of the spirits, which take care of these resources and also supply them to people. The spirits are both respected and feared. Idu make offerings to these spirits and engage with them an exchange process and in some case a series of taboo is observed. In the post-hunting ritual, a payment is made to mountain spirit using a metallic object whereas during the hunting trip, a number of taboos are followed to make sure the spirits are not annoyed. With the breach of these taboos, negative impacts are believed to occur in the form of illness, natural disasters or also failure in hunting.

The concept of taboos by the local people can be infused in the conservation projects so that local people appreciate and willingly engage in the community-based conservation projects. State and non-state agencies are increasingly active in the frontier regions of Northeast India. These agencies carry good intentions but they fail to engage with the socio-political, historical and cultural realities of local communities. As a consequence, the knowledge of local communities are often underplayed or even ignored by powerful actors like the state forest department, conservation NGOs, funding agencies and 'scientific experts' in community conservation programmes. Studies like these would help in designing the projects with balance of science and socio-cultural foundations in consultation with the local communities.

## References

Anonymous

1910 Chinese activity on the Mishmi Border. Secretary of State for India in Council, Secret files The British Library, B 189.

—

2006 Arunachal Pradesh, Human Development Report 2005. Itanagar: Department of Planning, Government of Arunachal Pradesh.

Bailey, F.M., ed. 1945 China-Tibet-Assam, A Journey, 1911. London: Jonathan Cape.

—

1957 No Passport to Tibet. Hart-Davis. London.

Baruah, S.

2003 Nationalising Space: Cosmetic Federalism and the Politics of Development in the Northeast India. *Development and Change* 34(5):915-939.

Bird-David, Nurit

1990 The Giving Environment: Another Perspective on the Economic System of Gatherer-Hunters. *Current Anthropology* 31(2):189-196.

Chetry, D., et al.

2010 Status and Distribution of the Eastern Hoolock Gibbon (*Hoolock leuconedys*) in Mehao Wildlife Sanctuary, Arunachal Pradesh, India. *Primate Conservation* 25:87-94.

Choudhury, A.

2001a An overview of the status and conservation of the red panda *Ailurus fulgens* in India, with reference to its global status. *Oryx* 35(3):250-259.

Choudhury, Anwaruddin

2001b Primates in Northeast India: An Overview of their Distribution and Conservation

Status. *Envis Bulletin: Wildlife and Protected Areas* 1(1):92-101.

Cooper, T.T.

1873 New Routes for Commerce. London.

Cox, K.

2008 Frank Kingdon Ward's Riddle of the Tsangpo gorges: retracing the epic journey of 1924-25 in South-East Tibet. Woodbridge: Garden Art Press.

Elwin, Verrier

1959 A Philosophy for NEFA. Shillong.

Godfrey, R.W.

1940 Report on the tour by the Political Officer, Sadiya Frontier Tract by the Lohit Valley to Rima,. British Library.

Hamilton, Angus

1912 In Abor Junles: Being an Account of the Abor Expedition, The Mishmi Mission and the Miri Mission. London: Eveleigh Nash

- Heriot, Leo  
 1979 The First Martyrs in Arunachal Pradesh: The story of Frs. Krick and Bourry Foreign Missionaries of Paris. Bombay: Asian Trading Corporation
- Kaulback, R.  
 1935 Letter from Ronald Kaulback to Col. F.M. Bailey. The British Library.
- Lamb, A.  
 1964 The China-India border – The Origins of the disputed boundaries. London: Oxford University Press.
- Mainprice, F.P.  
 1945 Tour Diary of F.P. Mainprice, ICS, Assistant Political Officer, Lohit Valley, Nov 1943 - May 1945. Volume MssEurD1191/3. London: The British Library.
- Marshall, J.G.  
 2005 Britian and Tibet 1765-1947: A select annotated bibliography of British relations with Tibet and the Himalayan states including Nepal, Sikkim and Bhutan. London and New York: Routledge Curzon
- Mitchell, J.F.  
 1883 Report (Topographical, Political and Military) on the North-East Frontier of India. Superintendent of Government Printing.
- Morris, B.  
 2000 Animals and Ancestors: An Ethnography. Oxford: BERG.
- Routledge, B.H.  
 1945 Tour Diary of B.H. Routledge, Sadiya Frontier, Dec 1945-Dec 1946. Volume Mss Eur D1191/2 London: The British Library.
- Swinson, A.  
 1971 Beyond the Frontiers: the biography of Colonel F.M. Bailey explorer and special agent. Hutchison.
- Williams, J.H.F.  
 1944 Tour Diary of J.H.F. Willaims Esq I.P. Political Officer, Sadiya Frontier Trct for the months of Sept-Oct and Part of Nov 1944. . The British Library

## **Acknowledgements**

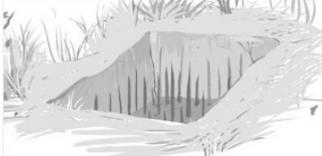
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## Appendix 1 - Idu names for wild animals

<b>SNo</b>	<b>Common Name</b>	<b>Scientific Name</b>	<b>Idu Name</b>
1.	Hoolock Gibbon	<i>Hylobates hoolock</i>	Aame epaan
2.	Rhesus Macaque	<i>Macaca mulatta</i>	Aame
3.	Himalayan Musk Deer	<i>Moschus chryogaster</i>	Aalaa
4.	Indian Muntjac	<i>Muntiacus muntjak</i>	Maanjo
5.	Black Barking Deer	<i>Muntiacus crinifrons</i>	Maanjo imbu
6.	Sambar	<i>Cervus unicolor</i>	Maachcho
7.	Takin	<i>Budorcas taxicolor</i>	Aakrun
8.	Serow	<i>Naemorhedus sumatrensis</i>	Maaren
9.	Red Goral	<i>Naemorhedus goral</i>	Aamee
10.	Wild Pig	<i>Sus scrofa</i>	Aamme
11.	Red Panda	<i>Ailurus fulgens</i>	Aiminjini
12.	Asiatic elephant	<i>Elephas maximus</i>	Aantaan
13.	Asiatic Black Bear	<i>Ursus thibetanus</i>	Aahun
14.	Sun Bear	<i>Helarctos malayanus</i>	Aahun tho
15.	Jackal	<i>Canis aureus</i>	Maabun
16.	Wild Dog	<i>Cuon alpinus</i>	Apupru
17.	Tiger	<i>Panthera tigris</i>	Aamra
18.	Common Leopard	<i>Panthera pardus</i>	Aamra ipungoo/Aamra kichi
19.	Clouded Leopard	<i>Neofelis nebulosa</i>	-
20.	Leopard Cat	<i>Prionailurus bengalensis</i>	Aachango
21.	Small-Clawed Otter	<i>Amblonyx cinereus</i>	Aawronron
22.	Yellow-throated Marten	<i>Martes flavigula</i>	Aakonkon
23.	Civet sp.	-	Aapoee
24.	Chinese Pangolin	<i>Manis pentadactyla</i>	Aakrusoron
25.	Indian Porcupine	<i>Hystrix indica</i>	Aasonn
26.	Himalayan Crestless Porcupine	<i>Hystrix brachyura</i>	Aali
27.	Orange-bellied Himalayan Squirrel	<i>Dremomys lokriah</i>	Aadaa
28.	Squirrel sp.	-	Aanache
29.	Squirrel sp.	-	Aadaka
30.	Flying squirrel sp.	-	Kaame
31.	Himalayan Rat	<i>Rattus nitidus</i>	Kaachigon
32.	Bat	-	Aaphun

## Appendix 2 - Traps

No.	Traps	Species targeted	Materials	Images
1.	<i>Sekhimbyaa</i>	Wild pig, bears, barking deer	Metal wire, bamboo	
2.	<i>Aayembya</i>	Pheasants, musk deer	Wires, bamboo	
3.	<i>Athombra</i>	For ground dwelling birds, specially for pheasants	Plant fibre, nylon ropes	
4.	<i>Singrimbra</i>	Large and small birds	Metal and bamboo	
5.	<i>Drepran</i>	Rodents, birds	Stone, bamboo	
6.	<i>Aadadi/ aadapo</i>	Birds	Bamboo	

7.	<i>Boon</i>	Bears	High altitude bamboo	
8.	<i>Koogi</i>	Birds	Nylon rope, bamboo	
9.	<i>Adapo</i>	Mainly rats		-----
10.	<i>La</i>	Large mammals	Bamboo, ropes	-----
11.	<i>Thron-dra</i>	Small mammals, monkeys	Logs, bamboo	-----

## Appendix 3 – Items in hunting kit

SNo	Items	Idu names and remarks
1.	Gun	<i>Aagere</i>
2.	Cane backpack	<i>Entonn</i>
3.	Bamboo basket with lid	<i>Boiyyon</i>
4.	Tarpauline	earlier people stayed in cave now use tarpaulin for making tents
5.	Bullets	<i>Ipitaa</i>
6.	Metal piece	<i>aanphoodi / paaoyute / seekhi yute</i>
7.	Match box	<i>aamikhe</i> . In earlier days, flint stone ( <i>aalondo/aamise</i> ) and plant fibre ( <i>aalunso</i> ) from <i>aalombo</i> tree was used to make fire
8.	Machette	
9.	Quiver	<i>Elaann aann</i>
10.	Quiver lid	<i>eroti</i>
11.	Arrow	<i>Epitaa</i>
12.	Bows	<i>Elipra (Mrayata)</i>
13.	Poison	<i>Mra (Aconite)</i>
14.	Rice	<i>Kebra</i>
15.	Salt	<i>pra</i>
16.	Chilly	<i>Inchi</i>
17.	Tea leaves	<i>Phla</i>
18.	Rice beer	<i>Yu</i> in bamboo tube
19.	Bag	<i>Akuchi</i>