

Documentation of Community Conserved Areas of Nagaland

Submitted to
Department of Environment, Forests & Climate Change
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Abbreviations

CCA	Community-Conserved Area
FDA	Forest Development Authority
FES	Foundation for Ecological Security
FGD	Focused Group Discussion
GIS-	Geographic Information System
GPS	Global Positioning System
IEK	Indigenous Ecological Knowledge
KNCTS	Khonoma Nature Conservation and Tragopan Sanctuary
MoU	Memorandum of Understanding
Msl	Mean Sea Level
NBDR	Nagaland Biological Diversity Rules
NEPED	Nagaland Empowerment of People through Environment Development
ISFR	Indian State of Forest Report
IUCN	International Union for Conservation of Nature
PA	Protected Area
PBR	People's Biodiversity Register
SACON	Salim Ali Centre for Ornithology and Natural History
SFR	State Forest Department
TERI	The Energy and Resources Institute
VC	Village Council

Chapter 1. Introduction

The state of Nagaland harbours a total forest area of 9222 km² which accounts for 55.62% of the state's geographical area of 16,579 km² (FSI 2013). Falling in the Indo-Malayan Region, it is located in one of the 35 biodiversity hotspots of the world. This hotspot is confined to 1.4% of the earth's land surface, but harbours about 35% of known vertebrate species with high levels of endemism. The remarkable floral and faunal diversity of the area can be attributed to the wide range in climatic conditions, elevation gradients and vegetation types that are characteristic of the state. Geo-morphologically, the terrain can be broadly grouped into four topographic units - alluvial plains (150 to 200 meters above m.s.l.), low to moderate linear hills (200 to 500 meters above m.s.l.), moderate hills (500 to 800 meters above m.s.l.) and high hills (800 meters and above). The main rivers that flow through the state are the Dhansiri, Doyang, Dikhu, Tizü and Melak.

Much of Nagaland's natural heritage is being rapidly eroded today. Deforestation, degradation of forest resources, change in land-use patterns, hunting and an illegal trade of wild flora and fauna are the major challenges that threaten the fragile ecosystems of this state.

In Nagaland, customary rights are protected under Article 371 A of the Indian Constitution, and the majority of natural habitats are owned and managed by individuals and clans overseen by village councils, district councils and other traditional institutions. Hence customary land ownership and management practices characterise forest management in the North-East including Nagaland. However, in the absence of alternative livelihood options, most of the economic activity in the villages is based upon utilization of natural resources. This has led to over exploitation of forest resources due to the increasing needs of local people, and sometimes due to the weakening influence of traditional institutions. As per the ISFR 2013 report (FSI, 2013), the state has shown the highest decrease in forest cover compared to other north-eastern states. This calls for urgent action to prevent further degradation of these biodiverse forests, and to inculcate a sustainable life style amongst the people.

However, there is a silver lining in form of an age old practice of conserving areas/forests. In Nagaland, traditional conservation practices have helped protect biodiversity, and there are records of Community Conservation Areas (CCAs) being declared in the early 1800s, especially in response to forest degradation and loss of wildlife. In 1842, the tropical evergreen forests of Yingnyu shang were declared a Community Conservation Area by the Yongphang village in Longleng district. In 1983 in a Chakhasang tribal settlement called Luzophuhu, the local student's union (LSU), resolved to conserve a 500 ha (5 km²) patch of forest land above the village. The motivation was to protect key sources of water. In 1990, the LSU declared another patch of forest below the main village, between the settlement and paddy fields, as a wildlife reserve with a total ban on hunting and other resource use. In 1998, the Khonoma village council declared its intention to protect about 2,000 ha (20 km²) of forest as the Khonoma Nature Conservation and Tragopan Sanctuary (KNCTS). Khonoma is probably the only known example in Nagaland where hunting is banned in the entire village through the year (Kalpavriksh, 2006).

Today, various communities in Nagaland have come forward and declared protected reserves or CCAs due to increased awareness. Organizations like Kalpavriksh, NEPED, SACON and FES who have been working on different aspects of CCAs, have reported a large number of established and potential CCAs from different parts of Nagaland.

ICCAs, i.e. Indigenous and Community-Conserved Areas are areas that are governed by local communities, tribes or indigenous people that lead to conservation of cultural traditions and biodiversity. As per the IUCN definition, Community-Conserved Areas can be described as, "natural and/or modified ecosystems containing significant biodiversity values and ecological services, voluntarily conserved by (sedentary and mobile) indigenous and local communities, through customary laws or other effective means (The IUCN World Parks Congress of 2003, as cited in Corrigan and Granziera, 2010). CCAs may represent the continuation of traditional conservation practices or ones where ancient practices have been revived, modified or even newly created to protect nature. These CCAs seek to address threats to natural ecosystems and cultural values from changing socio-cultural, economic and developmental imperatives and mores, as well as unsustainable resource extraction practices-e.g. hunting and poaching or shifting cultivation practices on a reduced fallow cycle. Both exogenous and endogenous factors may exert an influence on cultural and resource conservation practices, and work alone or in tandem to strengthen or weaken these CCAs.

The modern rationale for conservation in Nagaland are many, and can be driven by resource scarcities, declining wildlife populations, the need to generate alternative livelihoods for example through the rearing of mithun or ecotourism. Irrespective of the exact motivations, conservation of biodiversity is reviving in the State of Nagaland.

The Energy and Resources Institute (TERI) in partnership with Department of Environment, Forests and Climate Change, Government of Nagaland has carried out an inventory and documentation of Community-Conserved Areas in Nagaland. This report highlights the findings of this study, and provides an exhaustive list of community conservation initiatives in the 11 districts of Nagaland. As part of this project, TERI has also prepared a People's Biodiversity Register (PBR) for the village Sükhai located in Zunheboto district, as well as a documentary highlighting the efforts of the Naga communities in preserving their forests through community conservation. The results of the PBR are documented separately.



Photo 1 A view of Yaongyimchen CCA, Tuensang district

Chapter 2. Methodology

The Study Area

Nagaland with a geographical area of about 16,579 km² lies between 25 60" and 27 40" North latitude and 93 20" and 95 15" East longitude. The state is bounded by Assam in the North and West, by Myanmar and Arunachal Pradesh in the East, and by Manipur in the South. Nagaland, one of the "Seven Sister" States of the North-Eastern region, is a land of lush green forests, rolling mountains, enchanting valleys, swift flowing streams and beautiful landscapes. The inhabitants of Nagaland are almost entirely tribal with distinctive dialects and cultural features. The state is predominantly rural with 82.26% of population living in villages¹.

The state comprises of 11 administrative headquarters with 52 blocks and 1428 inhabited villages (Census data, 2011). Each district in general has the predominance of one of the major/minor tribes of the state, thereby making districts distinct in their linguistic, cultural, traditional and socio-political characteristics.

For this documentation study, surveys were carried out in all the 11 districts of Nagaland and 1428 villages to estimate the total number of Community-Conserved Areas initiated by the people.

Approach

The following approach was used for data collection.

Participatory approach: All relevant stakeholders including the local people, *Gaon burrahs*, village councils and village development members as well as women and youth members were consulted to provide their viewpoints on historic and prevailing conditions in the CCA.

Mixed methods framework: A mix of quantitative and qualitative methods such as visits, key informant interviews, questionnaire surveys and focus group discussions (FGD) were used to collect and analyse data. These methods provided robust and reliable data to estimate the number of CCAs, their nature, management and degree of functionality.

Investigation Team

TERI conducted a training workshop on 8th September 2014 for forest officials and staff on data collection tools and methods for the documentation of Community-Conserved areas in Nagaland. A detailed questionnaire was prepared and discussed at length with the senior forest officials, Divisional Forest Officers (DFOs), Ranger Officers (RFOs) and frontline staff present at the workshop. The study was led by the Divisional Forest Officers (DFOs) and Range Forest Officers (RFOs) of various districts and ranges who were trained at the workshop in Kohima, and who in turn sensitised the frontline staff for collection of information and questionnaire surveys.

Currently, there are 17 Forest divisions in the Forest Department of Nagaland of which nine are territorial divisions namely Mon, Tuensang, Mokochung, Zunheboto, Kohima, Dimpaur, Phek, Wokha and Peren divisions, six are functional divisions, and two are wildlife

¹ <http://www.nagenvis.nic.in>

divisions. A total of 814 staff from the Nagaland Forest Department was directly involved in collection of information on the Community-Conserved areas of Nagaland. The Forest Rangers, Deputy. Rangers, Foresters, Forest Guards and Game Watchers visited each of the 1428 villages in 11 districts and filled up the questionnaire survey forms through focus groups discussions and key informant interviews. They in turn passed on the information to Assistant Conservators of Forest (ACF) and Divisional Forest Officer (DFO) who after a thorough-check submitted the final data to TERI. A schematic representation of the team that was involved in data collection is presented in Fig. 1.



Photo 2 Forest Officers undergoing training on preparation of PBR



Photo 3 Forest Officers undergoing training on methods for data collection in Kohima

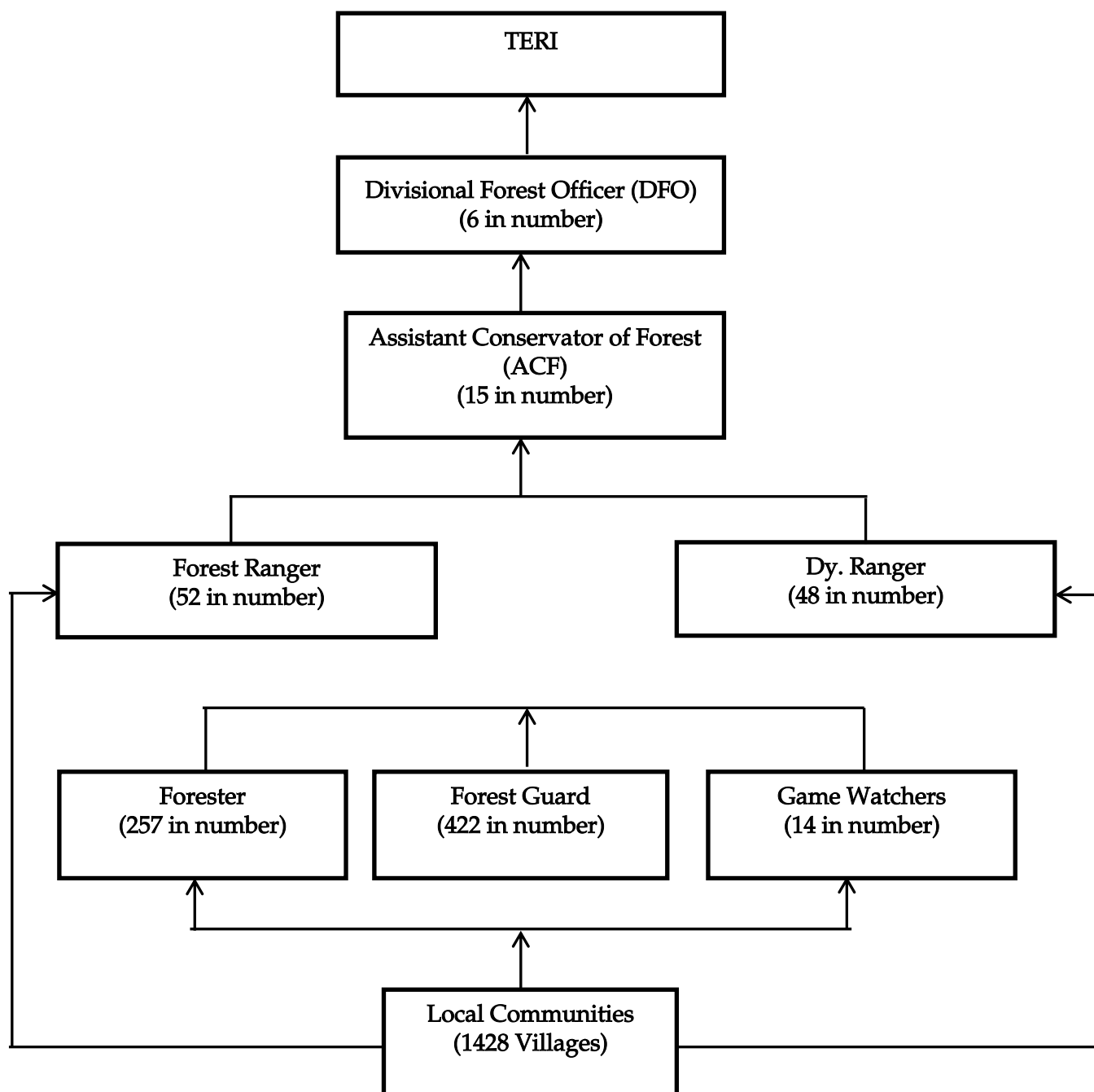


Figure 1 Schematic representation of the data collection team

Study Tools and Techniques

The following techniques were adopted for this study:

1. **Interviews:** Information related to the conservation history of the village, local institutions, decision making in setting of rules and regulations pertaining to CCAs, major challenges, landscape aspects and biodiversity was collected from *Gaon Burrahs* and knowledgeable individuals, through questionnaire surveys and personal interviews. In addition information was collected on village level

legislations and the legal status of land under CCA. Data was also collected on fines imposed for violation of rules, and the impacts it had on the conservation efforts of the community.

2. **Field visits:** Field visits were carried out by the investigating forest officers along with members of the village council, and knowledgeable individuals to each CCA. This was done to mark the GPS points and document the local biodiversity.
3. **Group discussions:** The investigating team of forest officers conducted group discussions with *Gaon Burrahs* and knowledgeable individuals in each of the CCAs. Discussions were mainly held to validate the information gathered at various levels.
4. **Village Council Meetings:** Apart from discussion with *Gaon Burrahs*, a village council meeting was conducted in each village involving all the stakeholders. The village council members and the village development board members were invited to the meeting along with church members and women group members. The meetings helped to understand various aspects pertaining to the Community-Conserved areas.
5. **Mapping:** GPS reading of all the CCAs were taken by the forest officers visiting them. The GPS points were later plotted on a map using various GIS tools.



Photo 4 Community Representative sharing information on rules and regulations pertaining to CCA



Photo 5 Community Representative giving a brief profile on the history and formation of the CCA



Photo 6 Forest Department Staff visiting the CCA along with communities

Chapter 3. A synopsis of Nagaland's Community-Conserved Areas

Introduction

Long before Nagaland became a part of India in 1963, there were several indigenous cultural and political tribes and local organizations representing the interests of hill people. Nagaland became the 16th state within the Indian union with one distinctive condition that land and the forests in particular, remain under local control under article 371 A of the Indian constitution. The result is that today 88.3 per cent of the forests are in local control, while only about 11.7 per cent is under ownership of the state government (Nagaland Forest Department, 2014).

Wildlife hunting has always been a way of life for the Naga tribes (including the major 16 tribes; Ao, Angami, Chang, Konyak, Lotha, Sumi, Chakhesang, Khiamniungan, Bodo-Kachari, Phom, Rengma, Sangtam, Yimchunger, Thadou, Zeme-Liangmai (Zeliang and Pochury). Nevertheless, traditional conservation practices of Naga society have helped conserve biodiversity and prevent the local extinction of species. The declaration of Khonoma Nature Conservation and Tragopan Sanctuary (KNCTS) in 1988 conserving 20 km² area, and Sendenyu biodiversity conservation area in 2000 conserving 16 km² area (*Kalpavriksh 2002*) has motivated a number of tribes and clans all across Nagaland to come forward and officially declare Community-Conserved areas through village resolutions that penalize defaulters who hunt, fish and lop the forests.

Organizations like Kalpavriksh, SACON (Salim Ali Centre for Ornithology and Natural History), FES (Foundation for Ecological Security) and NEPED (Nagaland Empowerment of People through Economic Development) have attempted to document the CCAs of Nagaland, in order to highlight the conservation efforts taken by local communities. A detailed study carried out by NEPED in partnership with SACON in 2012 documented around 765 CCAs in five districts of Eastern Nagaland (Mon, Tuensang, Longleng, Kiphire and Phek) of which only 157 were declared by resolutions passed by the village councils, while the rest had an informal understanding. As this was one of the first attempts to document the CCAs of Nagaland, all the good forest patches in these five districts (which were traditionally conserved or which had the potential to support good biodiversity in future) were termed as Community-Conserved Areas. Communities were also made aware of the positive outcomes of protecting such areas, and a number of them came forward and declared CCAs. Hence this exercise proved to be successful in empowering the local communities and strengthening their efforts for conservation by providing technical know-how and motivation. This TERI study, however, uses a different approach including the use of well-defined criteria for considering an area to be a community-conserved one. Moreover, this study includes the whole of Nagaland.

As mentioned in chapter 2, survey teams of forest officials visited all 1428 inhabited villages in 11 districts of Nagaland. It was observed during the field surveys, that many villages had set aside patches of forests where there was a partial/full ban on hunting/fishing/ felling of forests. For this study, we, identified five criteria that best fit with the well-accepted definition of a Community-Conserved Area, as, “ *a Natural Ecosystem (forest/marine/wetlands/ grasslands/ others), including those with minimum to substantial human influence, containing significant wildlife and biodiversity value, being*

conserved by communities for cultural, religious, livelihood, or political purposes, using customary laws or other effective means.” Accordingly, five clear cut criteria formed the basis of whether an area was considered to be a CCA, namely:

1. The CCA is managed by local communities;
2. The CCA has been declared by resolution passed in the village council.
3. Various management practices are being stringently enforced such as regulations/bans on hunting, log felling, fishing and *jhum* cultivation in the CCA
4. The CCA uses traditional knowledge and practices for the conservation of biological resources and ecosystem services.
5. The CCA has signed a Memorandum of Understanding (MoU) with the Forest Department for Conservation.

Although we defined five criteria for the selection of CCAs, only those CCAs that at a minimum fulfilled criterion 1 and criterion 3 were selected for final inclusion in the TERI study.

The Findings

District-wise number of Community-Conserved Areas

Utilising the strict criteria suggested above, our survey of 11 districts of Nagaland resulted in the identification of 407 CCAs that satisfy at least criteria 1 and 3 mentioned above. This number of 407 CCAs accounts for almost a-third of the total number of villages in the State of Nagaland. Figure 2 gives the district-wise number of CCAs in Nagaland.

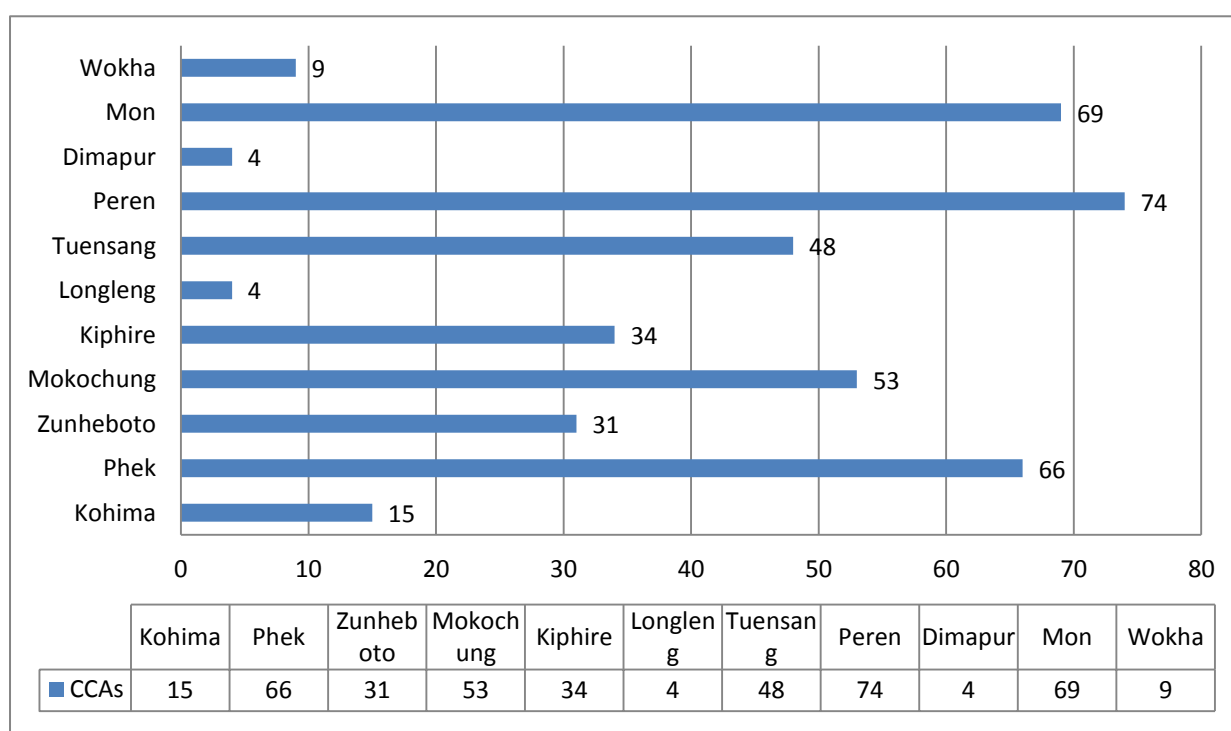


Figure 2 District-wise number of Community-Conserved Areas in Nagaland

Fig 2 indicates that community-conserved areas are well distributed across the state of Nagaland with Peren district having the maximum number of CCAs (74 CCAs accounting for 18%). This could be because of the peculiar location and topography of Peren which is covered by biodiverse Sub-Tropical Mixed Forest characterized by broad-leaf evergreen trees and deciduous trees. The district of Peren endowed with natural beauty still boasts of many good forests like Intangki National Park, Mt. Paona, Mt. Kisa and Benrue.

Next to Peren, Mon district (69 CCAs accounting for 17%) followed by Phek district (66 CCAs accounting for 16% of the total) has the highest number of CCAs. According to the study conducted by NEPED and SACON in 2012, 468 CCAs and 96 CCAs have been documented from the districts of Mon and Phek respectively. However, only a fraction of them satisfy the crucial criteria necessary for declaring a CCA according to our study.

The least number of CCAs were documented from Longleng and Dimapur ditrict (4 CCAs each accounting for 1% of the total number of CCAs). This could be because the former is a new district carved out of Tuensang in year 2004, and the latter is a major urban center which supports almost 21% of the total population of Nagaland.

Declaration of Community-Conserved Areas

Out of the documented 407 CCAs, a total of 311 CCAs (77%) were declared by resolutions passed in the village councils and tribal *hohos* while 91 CCAs (22%) had an informal understanding (Fig 3). A small number of 5 CCAs (1%) were declared by specific clans, but are now being managed by the entire village. District wise number of CCAs and their mode of declaration are given in Annexure 5.

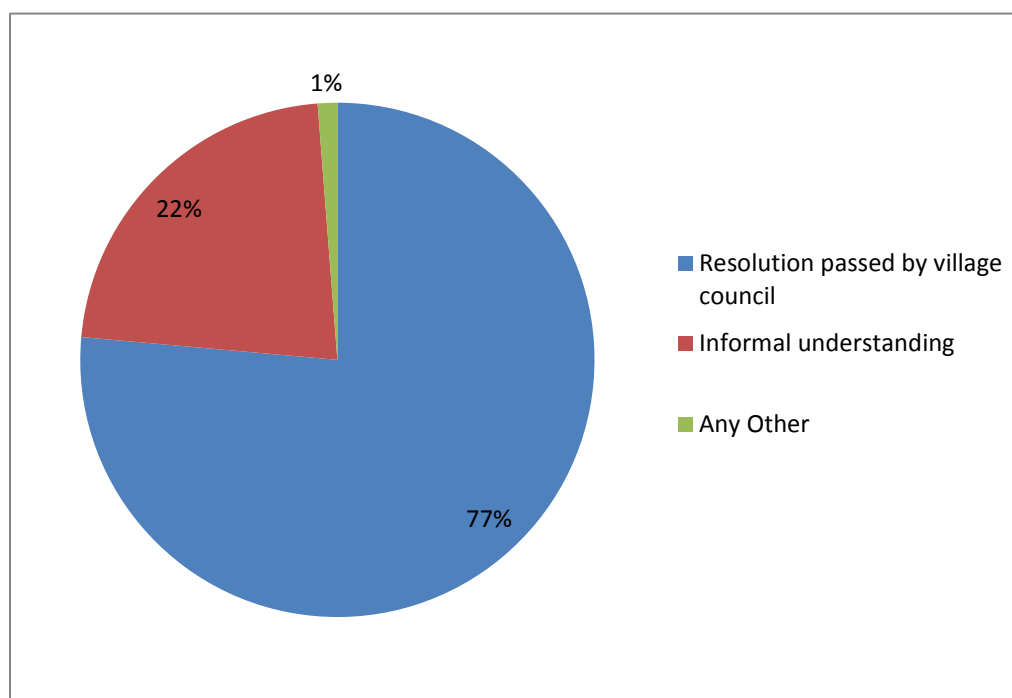


Figure 3 Declaration modes of Nagaland's CCAs

Box 1 Case Study: Declaration of CCA by Sendenyu Village, Kohima

In Nagaland, there are records of Community Conservation Areas being declared in the early 1800s, especially in response to forest degradation and loss of wildlife. The modern rationale for declaring CCAs in Nagaland are many, and can be driven by resource scarcities, declining wildlife populations, the need to generate alternative livelihoods for example through the rearing of Mithun or ecotourism. Most of the villages in Nagaland have some arrangement either to conserve a patch of forest or to protect a particular wild animal or plant. However, this type of conservation adopted by the village is based on an informal understanding and the villagers may or may not comply with it. On the contrary, villages who want to manage their CCAs well have been observed to pass resolution with well-laid rules and set goals issued by the village councils, tribal *hohos* or *Gaon burrahs* of respective CCAs. One of the best known examples of a CCA declared by passing a resolution is of village Sendenyu. It's formation is narrated below (Kalpavriksh 2006).

The wildlife reserve in Sendenyu village was formed as a result of discussions initiated in the village council (VC) by some village members who had studied outside the state and are currently serving as government officials. These members were good hunters themselves, but decreasing wildlife population became a grave concern for them. The village elders immediately understood their concern, as they had themselves witnessed a very sudden decrease in wildlife populations within their lifetimes. The discussions, therefore, soon resulted in the creation of about 10 sq km of wildlife reserve. The objective was to conserve and protect the rich wildlife heritage of the village and to maintain ecological balance as also to check local extinction of wild animals. The VC selected the land for the reserve based on its low productivity, high gradient and rocky geology. The land belonged to the individual owners and was used for timber and firewood collection. The owners originally objected to the plan but were persuaded by the VC to donate the land for the larger cause. In return, the owners received LPG connections from the forest department under Forest Development Authority (FDA) funds. Similar other benefits for the landowners are being considered by the VC. Subsequently, the VC has passed a Sendenyu Village Council Wild Life Conservation Act, 2001. The declaration of 'Sendenyu Village Wildlife Protected Area' was announced in a written resolution on 1 January 2001, along with a map specifying the boundaries of the protected area (PA).

The village of Sendenyu has added an additional area of 5 sq km to the existing CCA in order to protect local wildlife like sambar and barking deer. Bans on hunting of wildlife in Sendenyu CCA expired in September 2015. However, given the visible increase in the population of wild animals, the members (Village Councils of Sendenyu, Sendenyu New and Thongsunyu, Sendenyu Youth Organisation etc)



Photo 7 Sendenyu Village Community Conservation Area

Individual and Jointly Managed CCAs

Subsequent to several deliberations held with communities by organizations like NEPED, SACON and FES, there are now a number of Joint CCAs or CCA networks in Nagaland where two or more than two villages have come together to effectively conserve and manage areas jointly. The aim is to conserve flora and fauna, prevent fragmentation and manage the area for sustainable use of bio-resources by the community. In these cases, an Apex Committee is formed by a nomination process by each of the member villages and it comprises of a President, Vice President, General Secretary, Financial Secretary and Treasurer. The roles and responsibilities are well-defined and the tenure of office is mostly 3-4 years. The rules and regulations formulated by the committee are applicable to all the villages that are a part of the CCA network, and everyone has to abide by it. About 80% of any income that is generated from the CCA is shared amongst the member villages and the remaining 20% goes to the committee account where the funds are used in protection and management of the CCA. Some of the important CCA networks highlighted by NEPED, SACON and FES are in Table 1.

Table 1 Important existing CCA networks

Joint CCA	District	No. of Villages	Approximate Area (sq km)
Saramati Awung Conservation & management Society	Kiphire	17	100
Hongmong Conservation committee	Mon	6	35
Phoyisha Range Conservation	Phek	4	10
Meluri Common Community Conservation	Phek	12	50
Helipong Khong Joint Biodiversity Conservation Area	Tuensang	3	15
Yai Zone Wildlife Control Managing Committee, Shamator	Tuensang	6	20
Noksen CCA	Tuensang	6	15
Dikhu Green Zone	Mokochung	2	-

Source: NEPED, SACON and FES, 2012



Photo 8 Dikhu Green Zone: A Joint CCA managed by Ungma and Longsa villages

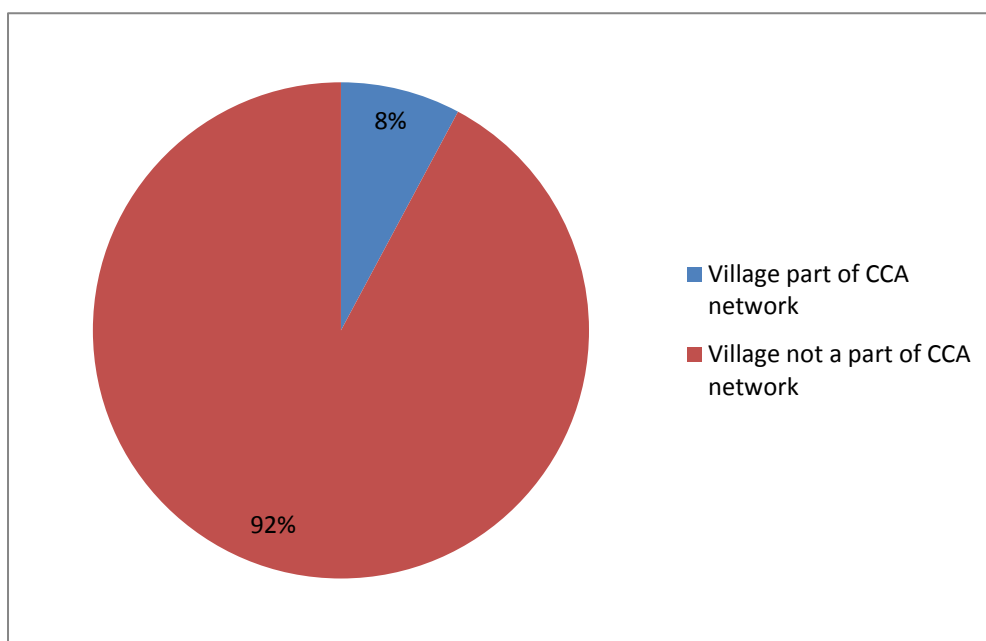


Figure 4 Percentage share of villages forming part of a CCA network

Our survey indicated, however, that 92% of the CCAs belong to individual villages which are responsible for governance of that particular CCA. Only 8% of the CCAs are a part of a larger network where two or more villages have come together to share their community forests and form a much larger CCA (Fig 4). These larger CCA networks appear to be particularly effective in protecting biodiversity as well as in providing myriad ecosystem services beneficial to the communities. Some of the examples of the CCA network

documented during this study are the Saramati CCA in Kiphire district, Niathu Mount CCA in Cheiphobozou block and PKR biodiversity area in Tseminyu block of Kohima district, Nanga green zone in Zunheboto district, Jinghu CCA in Kiphire district and Ngaulotu CCA in Peren district.

Due to initiatives taken by various organizations and government institutions, a Nagaland CCA forum has been formed since September 2013 to bring all the CCAs on one common platform. The CCA forum comprising of CCAs like Khonoma, Tzula Green zone, Mt Pauna, Nanga green zone, Sendenyu, PKR, Saramati, Kanglatu Chantongya, Phom, Zanubu, Ghosu bird sanctuary, Ziphuhu-Meluri and many more, have come together in order to influence policy decisions in the state regarding conservation. As of now, many more CCAs are being motivated to participate in this forum which is in fact making the conservation movement much stronger.

Signing of an MoU with the State Forest Department

The state forest department of Nagaland has also been encouraging the creation of CCAs including areas where the village councils and tribal *hohos* have been traditionally conserving the forest patches or are now willing to give up hunting and *Jhum* cultivation in order to secure green areas for future generations. According to the TERI survey, 34% of the CCAs have signed a Memorandum of Understanding with the Nagaland Forest Department. The larger proportion (66% of the CCAs) has not, however, signed a MOU with the Nagaland Forest department to date (Fig 5). The maximum number of CCAs that have signed MoU are in Phek district (36) followed by Mokochung (28). All the documented CCAs in districts of Dimapur and Wokha (4 and 9 CCAs respectively) have signed a MoU with the Nagaland forest department while none of the documented CCAs from the Kiphire district have signed a MoU with the forest department yet.

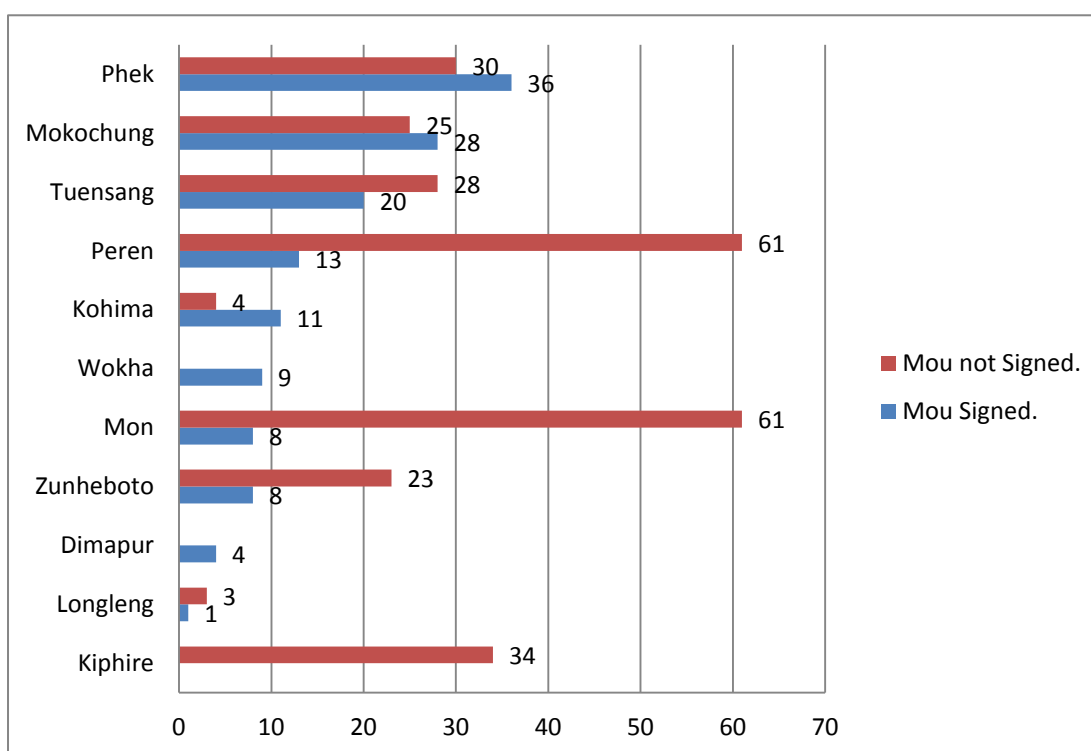


Figure 5 District-wise listing of number of CCAs that have an MoU with the Nagaland Forest Department

The MoU signed between the Nagaland forest department and the village councils who have been preserving the existing forests, improving their quality, increasing tree cover and conserving biodiversity through community participation, is a step towards recognising these commendable efforts of local communities. The MoU is signed for 5 years. The major two criteria used by the forest department to sign a MoU with a CCA are:

- a) The CCA should be a habitat with dense forest (defined as area having 40-70% canopy cover) or very dense forest (defined as an area above 70% canopy cover).
- b) The total area earmarked should not be less than 100 hectare per village (unless contiguous villages are willing to participate and keep aside this area together)

Details of the sample MoU signed between the forest department and the village councils of Tsiemekhuma and Phek are given in Annexure 6 & 7. The objective of this partnership between the forest department and the village councils who are the rightful guardians of the CCAs is to protect fauna, flora and traditional or cultural conservation values and practices in the identified forest. In lieu of this, the forest department's role is to carry out awareness generation programmes, provide technical support and build capacities of the village to manage their forests scientifically. In addition, they may introduce livelihood linked schemes, particularly for communities that have earmarked additional areas, out of their current jhum farms, for long-term conservation. Forest department also provides financial aid to CCAs that have signed a MoU with them.



Photo 9 Initiatives taken by Forest Dept. after signing of MoU

Land ownership patterns in Community-Conserved Areas

The governance structure in Nagaland is a combination of customary decision-making processes combined with a statutory system set up by the state and central governments (Pathak and Hazarika, 2012). As described earlier, community ownership and management of land is the norm amongst most tribes in Nagaland, and forest lands are communally owned. Of the recorded forest areas as much as 8,628 sq. km falls under Unclassed Forests or 93.5% of the recorded area (FSI, 2013) which are owned and managed by individuals, clans, village and district councils and other traditional communities. These traditional and

customary rights of people in the North East are protected through the sixth schedule of the Indian Constitution, under which in many States, Autonomous District Councils have been constituted where tribal councils have legislative, administrative and financial powers over 40 subjects including forests (Chatterjee *et al.* 2011). In Nagaland, customary rights are protected under Article 371 A of the Constitution, and while no autonomous councils exist, each village has a village council (Jamir, Undated). Hence customary land ownership and management practices characterize forest management in the North East including Nagaland.

According to Pathak (2009), existence of CCAs is often not dependent on the ownership of land. She further states that the majority of natural habitats in Nagaland are owned and managed by the individuals and clans, but these are overseen by village councils, district councils and other traditional institutions. It has been observed in cases of established CCAs like Khonoma and Sendenyu that the land in the protected reserve mostly belongs to individuals and clans, while the percentage of community-owned land is minimal. Though the ownership rights of the individuals and clans who own a patch of land in CCA are recognized in the overall management, governance still lies with the village council. In a few cases, small patches of land owned by clans and individual families are donated to the village council to support the larger cause of conservation. District-wise information on legal status of land in CCAs is provided in Annexure 5. Fig 6 provides the land ownership patterns in the documented CCAs.

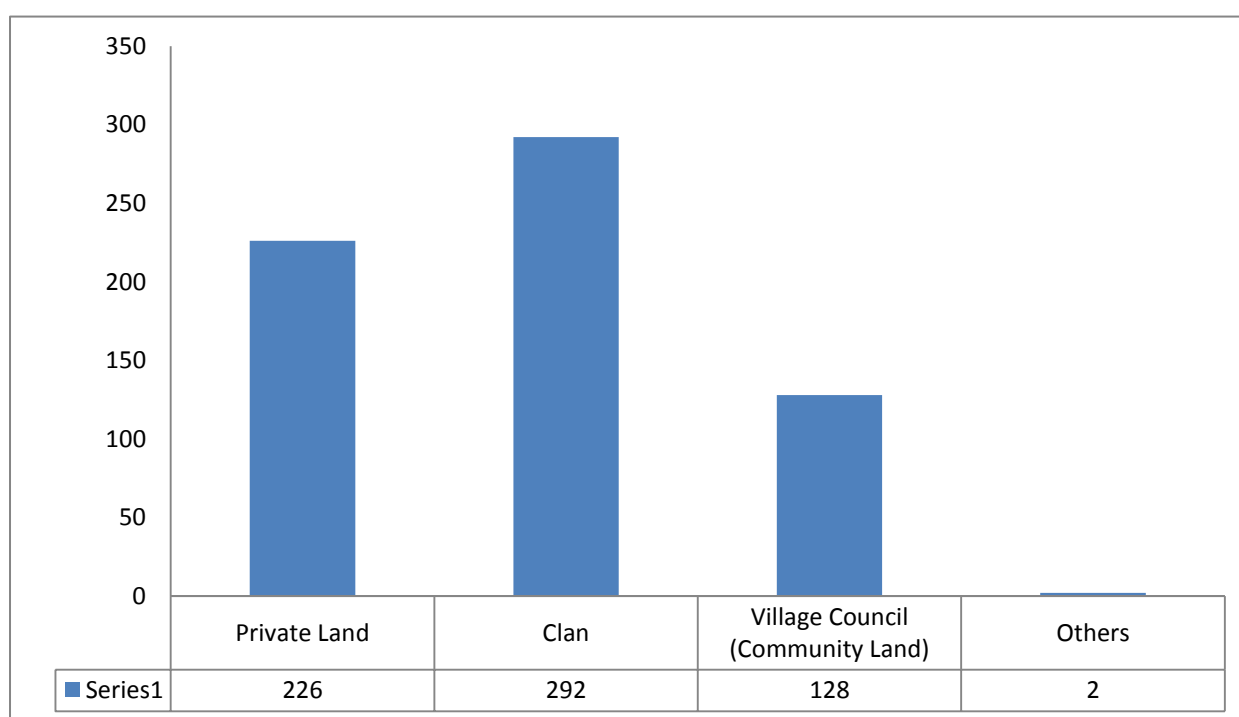


Figure 6 Land ownership patterns in Nagaland's CCAs

Note. The figures add up to more than 100%, since multiple responses are possible.

Land ownership patterns of CCAs in Nagaland are variable with ownership largely belonging to various clans (72% of the CCAs) followed by individuals (56% of the CCAs). Only 31% of the CCAs have land holdings that belong to village councils and can be termed as community land.



Photo 10 CCA initiated by Metha clan which is being managed by Village Council

Vegetation Status of Community-Conserved Areas

A CCA may be a mosaic of different vegetation types and can be broadly categorized into five types; primary forests that never have been *jhummed*, secondary forests which have not been *jhummed* for more than 25 years, *jhum* land and plantations. The study conducted by NEPED and SACON between 2008-2010 on CCAs in Eastern Nagaland found 220 primary forest patches, 326 secondary forest patches and 66 plantations.

Similar broad categories were considered during this study and the vegetation types of the CCAs were determined depending on whether the land under the CCA was a primary forest, secondary forest, Jhum land, plantation or any other category. Figure 7 provides information on the vegetation status of the CCAs of Nagaland.

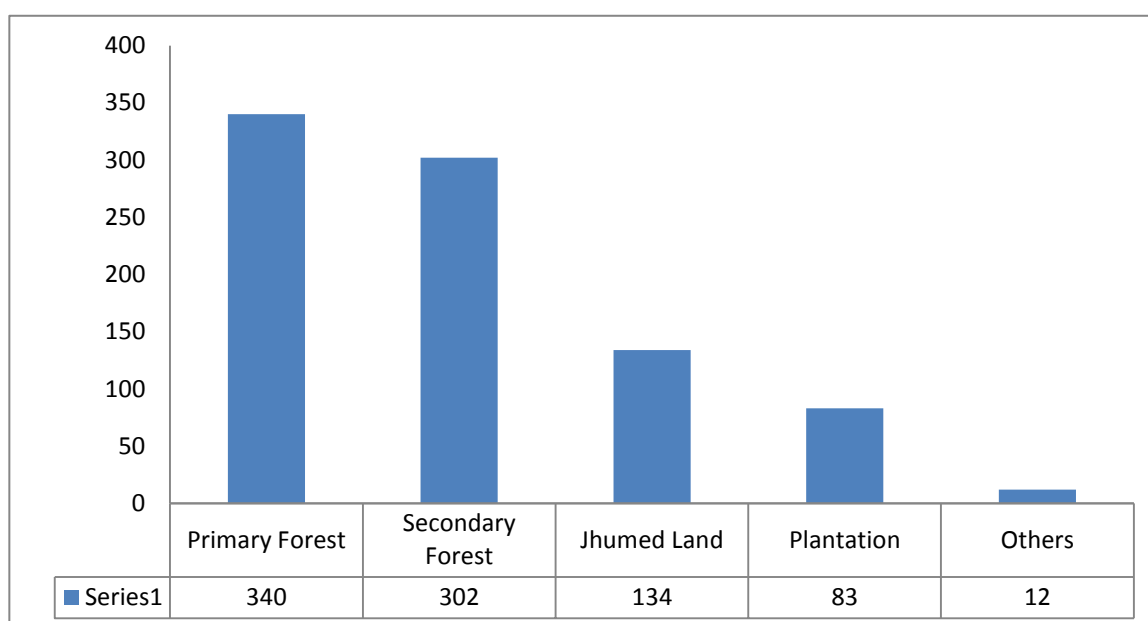


Figure 7 Vegetation status of Nagaland's CCAs

As many as 84% of the CCAs include areas with primary forests that have never been *jhummed*, while 74% of the CCAs also have areas of secondary forests that have not been *jhummed* for more than 25 years. This suggests that a significant number of CCAs include either primary forest or old-growth forests within their CCAs, although the area under each is not known, or whether they cover significant areas of each CCA. A significant percentage of CCAs (33%) also include abandoned jhums and/or plantations (20%) within their territories.



Photo 11 A view of the vegetation in Khonoma village, Kohima



Photo 12 Forests near Pungro village (Saramati CCA, Kiphire District)

Chapter 4. Biodiversity of Nagaland's Community-Conserved Areas

Introduction

Nagaland state is endowed with rich biodiversity. Falling in the Indo-Malayan Region it is also part of a global biodiversity 'hot-spot' and the Eastern Himalayan endemic bird area, indicative of the region's rich biological wealth. The remarkable floral and faunal diversity of the area could be attributed to the wide range in climatic conditions, elevation gradients and vegetation types that are characteristic of the state. It has over 2400 species of angiosperms and more than 360 species of orchids belonging to 87 genera. Though there is no exact information on the species diversity of Nagaland, it is estimated that there are 92 species of mammals, 500 species of birds, 490 species of butterflies and 110 species are likely to occur in the state. It lies between 25° 6' and 27° 4' N of latitude, 93° 20' E and 95° 15' E longitude which is generally a sub-tropical climatic zone. (Source: State report 2002, National biodiversity action plan and ZSI). Though geographically a small state, Nagaland has several types of forests mainly 1) Northern tropical wet evergreen forests in the Namsa-Tizit area of Mon district, 2) Northern Tropical Semi Evergreen forests along the foothills of Assam-Nagaland border in Mokukchung, Wokha and Kohima, 3) Tropical Moist Deciduous Forest, 4) Northern sub-tropical Broad leaved wet hill forests (Between 500m and 1800m), 5) Northern sub-tropical Pine forest (Between 1000 m to 1500 m) in Phek and Tuensang district and 6) Northern Montane Wet Temperate Forests (above 2000m) – Japhu, Saramati, Satoi, Chentang ranges.

The main trees in Nagaland include *Tectona grandis* (Teak), *Gmelina arborea* (Gamari), *Melia* composite (Ghora neem), *Terminalia myriocarpa* (Hollock), *Artocarpus chaplasi* (Sam), *Chukrasia tabularis* (Bogipoma), *Duabanga sonneratioides* (Khokan), *Anthocephalus cadamba* (Kadam), *Michelia champaca* (Tita chap), *Pinus petula*, *Pinus kesiya*, *Albizia procera* (Koroi) etc. (Nagaland FD, 2014). According to a survey conducted by the Forest Department of Nagaland, there are more than 340 species of orchids belonging to 87 genera and that is about 27% of India's 1255 orchid species. This includes those orchid species that are most common and commercially valuable in the international and national market. The dominant orchid species are *Dendrobium*, *Bulbophyllum*, *Calanthe*, *Coelegyne*, *Liparis*, *Eria*, *Cymbidium*, *Oberonia*, *Pholidota*, *Goodyera*, *Habenaria* and *Peristylus*. The largest orchid genus found is *Dendrobium* which accounts for about 10.52 % of the total species. Besides these, there are many other rare, endangered and threatened species of orchids in Nagaland, such as *Arundina graminifolia* (Bamboo orchid), *Renanthera imschootiana* (Red vanda), *Rhynchostylis retusa* (Fox tail orchid), *Paphiopedilum insigne* (Lady's slipper orchid), *Vanda coerulea* (Blue vanda), *Cymbidium tigrinum*, *Dendrobium wardianum*, *Dendrobium thyrsiflorum*, *Ascocentrum ampullaceum*, *Bulbophyllum rothschildianum* (Red chimney orchid), *Thunia* sp, *Phaius* sp and *Pleione* sp. Not less than 37 genera with a single species are known. Tuensang district records the highest largest number of rare, endangered and threatened orchid species. *Cymbidium tigrinum* was first discovered in Nagaland and is rare even in this state. *Bulbophyllum rothschildianum* is another endangered and rare species in India. Nagaland also has several bamboo species; according to the Forest Department there are 22 species of bamboo in Nagaland.

Previous Biodiversity Surveys

A documentation study conducted by NEPED and SACON in 2008-2010 on the CCAs of Eastern Nagaland reported a total of 390 species that included 42 mammals, 120 birds, 50 reptiles and 171 butterfly species. A number of surveys have also been conducted in various parts of Nagaland recently by researchers including Ramki Sreenivasan, Bikram Grewal and students of Wildlife Conservation Society-India and National Centre for Biological Sciences Bangalore. Many mammals that are on the verge of local extinction due to anthropological pressures were documented by them. A total of 503 bird species were documented through detailed surveys from 2005 to 2010. However, records of 21 birds like the Small buttonquail, Chestnut-bellied Partridge, Grey spotted Woodpecker, Grey bellied Cuckoo, River Tern, Long-tailed Sibia, White-naped Yuhina and many more that were recorded as being present in Nagaland by Ripley in 1952 have not been recorded recently. Herpetofaunal surveys conducted by the NCBS researchers documented 30 species of snakes and 5 species of lizards. Several snakes like the Burmese Rat Snake (*Maculophis bella bella*), Medo Pit Viper (*Viridovipera cf menadoensis*), Boulenger's Water Snake (*Sinonatrix percarinata*), Kaulback's Lance-headed Pit Viper (*Protobothrops kaulbacki*) turned out to be new species for the country while species like Jerdon's Pit Viper (*Protobothrops jerdonii xanthomelas*) were new sub-species for the country. A total of 32 amphibian species were also recorded however, many of them could not be identified due to lack of available literature.

Though only 11.7% of forest is under the governance of the state, four protected areas namely, Intangki national park (202 sq km), Fakim wildlife sanctuary (6.4 sq km), Singhpan wildlife sanctuary and Puliebadze wildlife sanctuary (9.2 sq km) are protected and managed by the forest department. Apart from this, the state forest department is also managing a conservation breeding centre for Blyth's Tragopan (*Tragopan blythii*) that is recorded as Vulnerable by the IUCN Red Data List. According to the survey conducted by NEPED and SACON to assess the distribution of Blyth's Tragopan (*Tragopan blythii*) in 269 villages in 5 districts of Eastern Nagaland, 83 villages accounting for 31% reported the presence of this vulnerable bird. However, 41 villages indicated that it had become extremely rare, and that it only inhabits primary forests.



Photo 13 Blyth's Tragopan (*Tragopan blythii*) - State bird of Nagaland

Apart from the forest department, the communities in Nagaland also manage forests. Several of these community-managed forests like Saramati and Pungro, Ghosu bird sanctuary, Shatuza, Khonoma, Dzulekie, Benreu and Sendenyu are rich in wildlife, and are visited by a number of wildlife enthusiasts. As a result of a number of awareness campaigns, the communities too are now involved in protection of species like the Blyth's Tragopan (*Tragopan blythii*) and Amur Falcons (*Falco amurensis*).

Box 2. Case Study: Success of Amur Falcon Campaign

Up until 2012, an estimated 120,000 – 140,000 Amur falcons (*Falco amurensis*) were being slaughtered near the Doyang Reservoir Area in Wokha district of Nagaland. However the successful efforts put in by the government, NGOs along with the Forest Department has helped provide safe passage to Amur Falcons since 2013, making Nagaland the 'Falcon Capital of the World' and showcasing the best community-based conservation models. The roosting sites located near three villages of Pangti, Ashaa and Sungro situated on the bank of Doyang reservoir were protected and a complete ban on hunting of Amur falcons was passed through a joint resolution of the three villages. The satellite tagging of 3 Amur Falcons (Naga, Pangti and Wokha) at the Pangti village is a landmark achievement in the history of wildlife conservation in Nagaland. This exercise for the first time revealed the migratory route and other interesting aspects about these Falcons.



Photo 14 Boards put up to conserve the migratory Amur Falcons

Biodiversity listed in this survey

Data related to biodiversity of the Community-Conserved areas was mainly acquired through questionnaire surveys. Local communities were shown field guides on various taxa (e.g. birds, mammals, butterflies and reptiles) and asked to list the species found in their village, their local names and uses and their current status. While the books on birds and mammals elicited the most interest, discussion, and responses from the people, they showed less interest in the smaller fauna, particularly butterflies and reptiles. For ascertaining scientific names standard field guides such as, 'A Companion to the Birds of Nagaland', authored by Grewal, Sen, Ramki and Haralu; 'Indian Mammals- A Field Guide' by Vivek Menon;

'Butterflies of the Garo Hills,' and 'Butterflies and Moths of Pakke Tiger Reserve' by Sondhi, Kunte and Captain and Romulus Whitaker's book on 'Snakes of India', were consulted (details in Literature Cited). Houses of hunters were also visited to observe their animal trophies, and these were added to the species lists of the villages.

According to the data collected, the most common trees found across all the CCAs in 11 district of Nagaland include Gogra (*Schima wallichii*), Hollock (*Terminalia myriocarpa*), Koroi (*Albizzia procera*), Khakon (*Duabanga sonneratioides*), Bonsom (*Phoebe goalparensis*), Tita sopa (*Michelia champaca*) Alder (*Alnus nepalensis*) and Walnut (*Juglans regia*). Amongst wild fauna, Orange-bellied Himalayan Squirrel (*Dremomys lokriah*), Barking Deer (*Muntiacus muntjak*), Slow loris (*Nycticebus coucang*), Indian crested Porcupine (*Hystrix indica*) and Wild Boar (*Sus scrofa*) seem to be common mammal sightings in most of the CCAs. The carnivore species listed during the surveys are Jungle Cat (*Felis chaus*) and Himalayan Black Bear (*Ursus thibetanus*). The common birds recorded during the surveys include Indian owl (*Bubo bubo*), Red Junglefowl (*Gallus gallus*), Crested Serpent Eagle (*Spilornis cheela*), Pompadour Green Pigeon (*Treron pompadora*), Flavescent bulbul (*Pycnonotus flavescent*), Mountain Bamboo Partridge (*Ambusicola fytchii*) and Kalij pheasant (*Lophura leucomelanos*). Blyth's Tragopan (*Tragopan blythii*) was not reported from any of the CCAs. Apart from mammals and birds, species of reptiles like Pit vipers (*Trimeresurus spp*), Burmese Python (*Python bivittatus*) and Tokay Gecko (*Gekko gekko*) were also reported from many CCAs during the surveys.

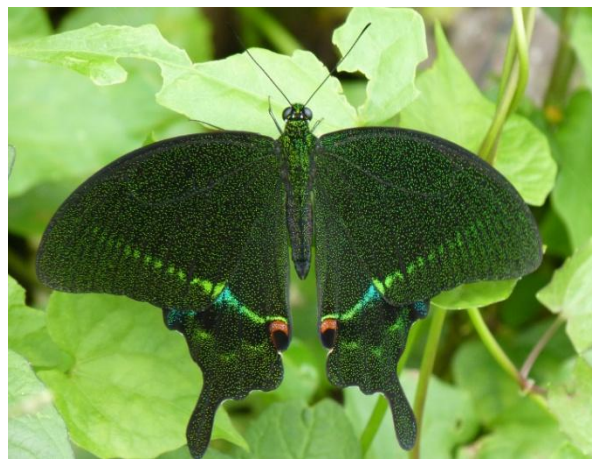


Photo 15 Butterfly Diversity from Nagaland

Glimpses of Biodiversity documented from Nagaland



Himalayan Black Bear



Hoary-bellied Squirrel



Kalij Pheasant



Crested Serpentine Eagle



Burmese Python



Red-tailed Bamboo Pit Viper

People's Biodiversity Registers

In Nagaland, traditional conservation practices have helped protect biodiversity, however, with socio-political changes and development, traditional ecological knowledge is getting rapidly lost. The implementation of the Nagaland Biological Diversity Rules (*NBDR, 2012*) framed in the local context has been an important step that takes into account customary laws and practices governing biodiversity, traditional knowledge and land tenure systems. The NBDR provides greater managerial control to the stakeholder communities to regulate local biodiversity assets and resources (*NBDR, 2012*). The *NBDR* rules respond to a number of emerging concerns, many of them the result of new developments in biotechnology and information technology. The rules safeguard the traditional ecological knowledge of the communities by ensuring proper documentation and by securing rights over associated intellectual property.

The Nagaland Biological Diversity Rules also provide for the establishment of Biodiversity Management Committees whose main function is to prepare People's Biodiversity Registers in consultation with local people, and to submit the information to the State Biodiversity Board. These registers, "contain comprehensive information on availability and knowledge of local biological resources, their medicinal or other use, or any other traditional knowledge associated with them" (Gadgil et.al., 2005).

Through questionnaire surveys, we tried to document district-wise details of the number of CCAs maintaining People's Biodiversity Registers (PBR) (Fig 8).

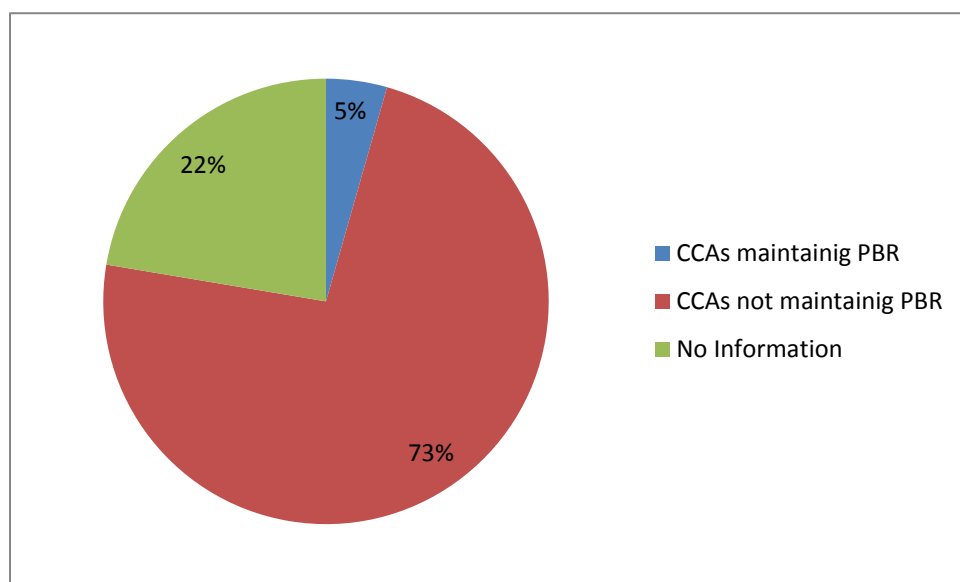


Figure 8 Percentage of CCAs that maintain PBRs

Only 5% of CCAs out of 407 maintain a People's Biodiversity Register (PBR) that documents their traditional knowledge. There is an urgent need to duplicate this activity in other parts of Nagaland. These PBRs will serve as a reference points and templates for the people, and help them to protect a written account of their traditional knowledge in perpetuity. This is important as practices and traditions are fast eroded, and knowledge of local culture is rapidly dying out. This PBR can also be used by the forest department to compile information on Indigenous Ecological Knowledge (IEK) in accordance with the PBR guidelines of the National Biodiversity Authority. Consequently, the information compiled

through this process of PBR creation would provide significant inputs to an integrated Biodiversity Information System that would act as the knowledge base for the implementation of the Biological Diversity Rules in Nagaland. Thus PBR creation process would be an on-going activity providing regulated access to information, where the database is expected to grow over time. A District-wise list of CCAs that have prepared a PBR is given in annexure 5.

The Energy and Resources Institute (TERI) supported by the Department of Forests, Ecology, Environment and Wildlife of Nagaland have initiated the process of preparing People's Biodiversity Registers (PBRs) for the people of Nagaland. Preparation of these PBRs forms a sub-set of a larger programme to prepare a comprehensive documentation of Nagaland's Community-Conserved Areas (CCAs). TERI has prepared a PBR along with the people of the Sukhai village of Zunheboto district. This document is the first published PBR for Nagaland, and documents the biological and cultural resources of the village Sükhai, located in the heart of Nagaland in Zunheboto district.



Photo 16 Villagers of Sukhai CCA documenting local fauna



Photo 17 Villagers of Sukhai CCA documenting local flora

Chapter 5. Nature of Nagaland's Community-Conserved Areas

Introduction

The status and sustainability of CCAs is critically dependent on the ability of local communities to make decisions about land and resource uses, hold secure tenure and exclude outsiders from appropriating resources. Some of the most important factors contributing to the effectiveness of CCAs in the region today are the statutory mechanisms for a) collective and equitable decision-making and representation at the community level and b) communal ownership of land. While conservation policy and legislation is important, it is this overall local governance, the land tenure, and the institutional environment that is most critical to the success of CCAs (Blomley et.al. 2007). In Nagaland, customary rights are protected under Article 371 A of the constitution, and most of the natural habitats are owned and managed by the individuals and the clans overseen by village councils, district councils and other traditional institutions. The Community-Conserved areas can be broadly classified into three categories based on their origin, practices and objectives (Pathak, 2003) shown in Fig.9

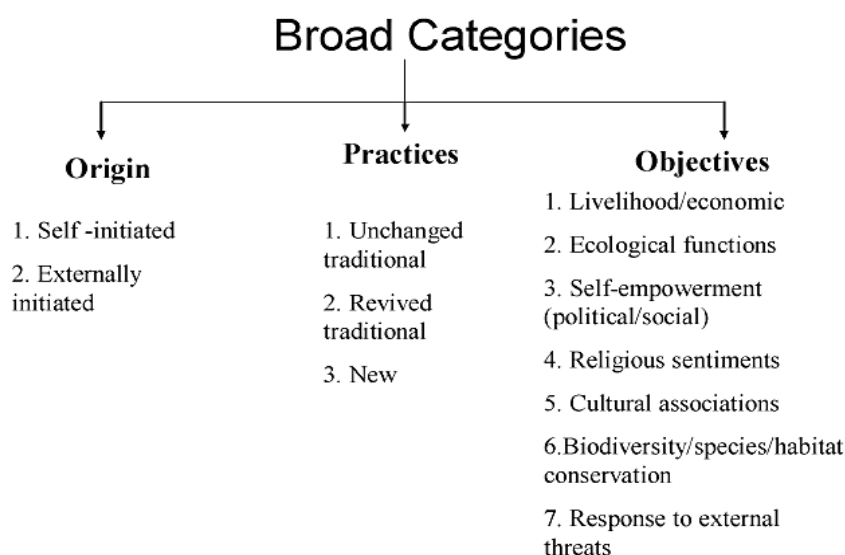


Figure 9 Broad categories used to categorize CCAs (Pathak, 2003)

In this chapter we discuss the origins, organising principles, practices and the objectives of CCAs in Nagaland to get a sense of what drives and motivates local people and what local communities perceive to be the benefits of community-conservation. We try to understand whether there are any unifying principles across Nagaland's CCAs or whether a diversity of local conditions, biodiversity and cultures in turn dictates a diversity of practices and principles.

Origins of Community-Conserved Areas in Nagaland

The conservation of common pool resources by local communities has a long history in India including Nagaland, as well as other parts of the world. Such conservation initiatives have been traditionally practiced in different forms with varied institutional structures, though they have received recognition only recently by researchers and policy makers. A number of field-based studies have found such community-based conservation initiatives to be efficient and effective. Several such practices are initiated by community organizations like youth clubs, women groups, religious/cultural groups and village councils within the community as a spontaneous reaction to address the problem of forest/environmental degradation. In other cases they have been spearheaded by a few motivated people in the village who have gone on to win the support of the village community. These conservation initiatives are also often initiated by external agencies like the Forest and Wildlife Department or other Departments of the Government or by donor agencies or NGOs working on environmental and socio-economic issues.

During the survey that was undertaken for this documentation exercise in Nagaland, questions were asked on whether the community initiated the CCA on its own (self-initiated) or the CCA was initiated in the village by an external agency that could be the Forest Department, other Government departments, NGOs or other groups. The findings suggest that 84% of the CCAs in Nagaland were self-initiated by the community (see Fig. 10). This is obvious given the institutional structure of forest ownership in the state. Around 15% of the CCAs were reported to be initiated by the State Forest Department. The State Forest Department has been very active in recent years in mobilizing community support for the conservation and protection of department-owned forests as well as forests owned by the village councils in the state. The Amur Falcon conservation effort for example has received widespread acclaim, both nationally and internationally. Of the 407 CCAs documented CCAs, only 1 each was reported to be initiated by other Government departments and NGOs.

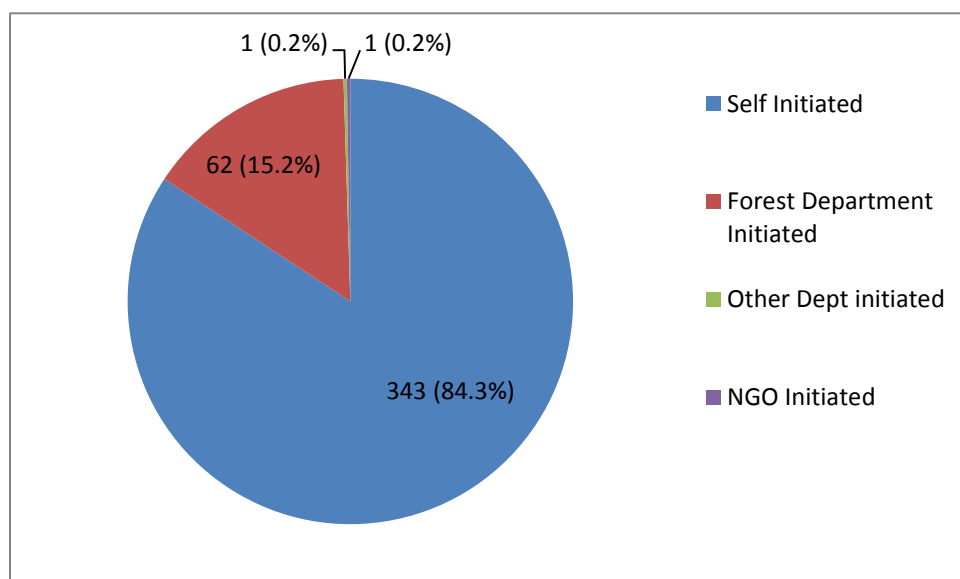


Figure 10 Agencies that initiated the CCAs

The details of the agency that initiated CCAs across different districts are presented in Table 2. Mon, Phek and Peren are the districts with largest number of self-initiated CCAs contributing close to half of the total number of self-initiated CCAs in the state. Peren, Phek and Mokochung are the districts with the largest number of CCAs initiated by the Forest Department. The fact that Peren and Phek have large numbers of both self-initiated CCAs and Forest Department-initiated ones raises the question of whether this is a mere coincidence or there is a connection. In general self-initiated CCAs are older than the FD initiated ones. The 1 CCA initiated by another Government Department is in Peren district, while the one initiated by an NGO is in Phek district.



Photo 18 Jotsoma CCA is an example of self-initiated CCA to conserve the water body

Table 2 District-wise Number of CCAs- Self-Initiated and Forest Department Initiated

Name of the District	No. of Self-Initiated CCAs	CCAs Initiated by the Forest Department	Total Number of CCAs*
Kohima	13	2	15
Phek	52	13	66
Zunheboto	31	0	31
Mokochung	41	12	53
Kiphire	34	0	34
Longleng	4	0	4

Name of the District	No. of Self-Initiated CCAs	CCAs Initiated by the Forest Department	Total Number of CCAs*
Tuensang	44	4	48
Peren	51	22	74
Dimapur	2	2	4
Mon	64	5	69
Wokha	7	2	9
Total	343	62	407

Note: *Peren has one CCA initiated by a Government Department other than Forest Department and Phek has one CCA initiated by an NGO.

Objectives of CCA creation

Communities appear to have a range of objectives for which they conserve biodiversity, indeed the primary objective is not necessarily always biodiversity conservation. To cite the example of Khonoma, according to Pathak (2003), *“the motivations for declaring the reserve appear to be multiple. Foremost was an increasing concern over the rapid decline of wildlife and forest cover, as rampant hunting and tree-felling have taken their toll. Elders of the village were concerned that the younger generation would never know what it was to live with wildlife. The village intends this area to be a breeding centre from where animals can increase and spread outside too. Another motive was protection of water sources, as villagers had heard from ‘learned people’ that these would dry up if forests disappeared.”*

In our survey, the village council members or CCA executive council members provided several reasons for the creation of these CCAs. These reasons clearly reflect priority concerns for the community. The concern of forest degradation, for example, appeared to be the paramount reason for initiating CCAs by the largest number of respondents (319) underlining the close human-forest relationships that the communities in Nagaland share. The lives, culture and livelihoods of Naga communities are closely tied to the forest and degrading forest resources impacts them negatively in many ways. Given rampant hunting and decreasing wildlife populations across Nagaland, it is not surprising that the second and third most frequently cited reasons, were concern for declining numbers of key wildlife species (265) and excessive hunting of wildlife (234). As forests degrade and land productivity decreases, livelihoods of these forest-dependent people becomes an issue. Consequently, the next important reason for CCA formation was the loss of livelihood opportunities (231). Interestingly, water scarcity is also perceived to be an important issue (220) as deforestation affects catchments, and reduces water availability in the hills (see Figure 11). The other motivating factors include decline or loss of key species of flora, and loss of other eco-system services.



Photo 19 Yaongyimchen CCA is an example of self-initiated CCA to conserve Amur Falcons

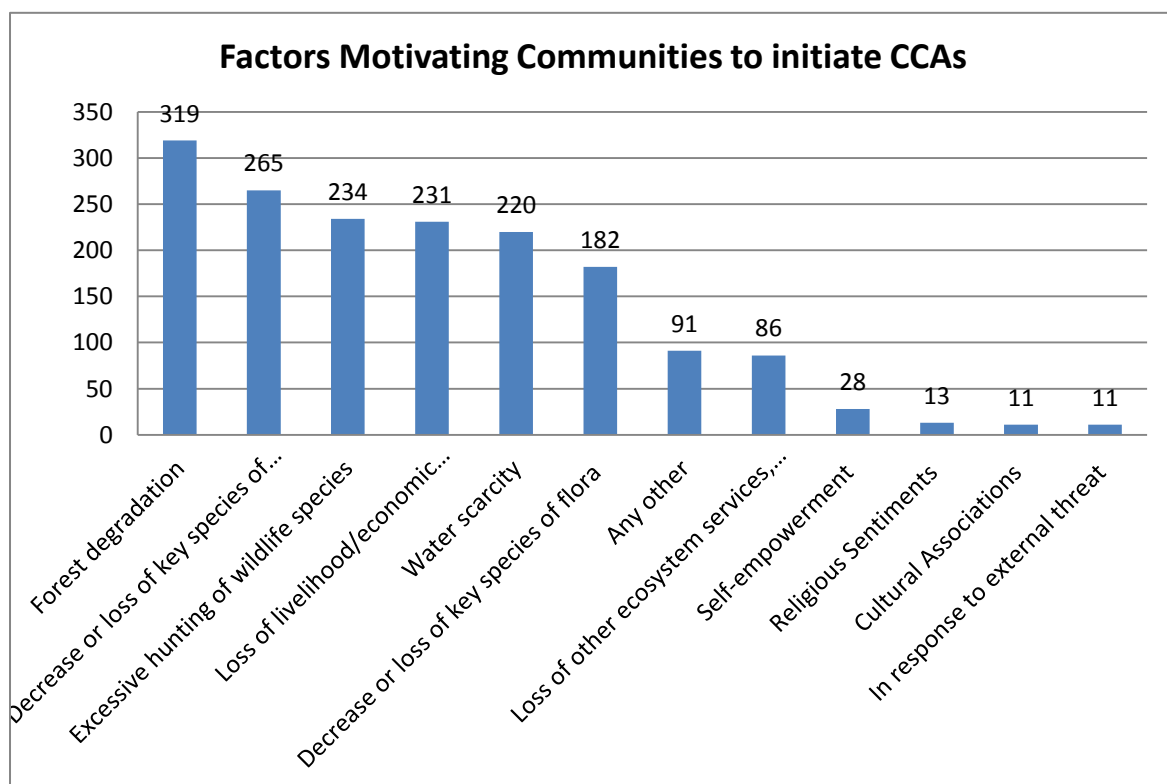


Figure 7 Factors motivating communities to initiate CCAs

Given the dependence of the local community on forest cover for a variety of provisioning and regulating ecosystem services, loss of forest cover has affected agriculture and the availability of water- both for domestic and agricultural use. These livelihood issues as mentioned above form a major impetus for CCA creation, to help conserve and protect key ecological interactions and ecosystem services. Several macro- and micro- studies across India including Nagaland indicate that rural households in general and households in

forest-adjacent villages in particular, depend on forests to collect a variety of forest products to meet their daily subsistence needs.

What is interesting is that most of the communities provided utilitarian or ecological reasons for protection of forests, and only a handful of CCAs cited culture, erosion of traditional practices or religion as important motivating factors. It appears that traditional taboos and beliefs that encouraged wise-use practices in the past may be becoming increasingly irrelevant in part because of changes in religion, culture and globalisation. Nevertheless, virtually all communities in the state have strong cultural ties to hunting-hence initiatives to ban hunting in CCAs probably also reflect concerns that dwindling wildlife will wipe out this traditional activity.

The motivating factors for CCA creation also vary across the districts. The district-wise distribution of responses is presented in Table 3. Concern for forest degradation drives CCA formation in several districts including Kohima, Zunheboto, Kiphire, Mokochung, Longleng and Peren. Many of these districts appear to correspond with areas that have shown negative trends in their forest cover according to FSI (2013)². Similarly, loss of key wildlife species is the major motivating factor in several districts including Zunheboto, Longleng, Dimapur, Kohima, and Phek. These are also the districts with largest number of CCAs in the state, again suggesting that concern over dwindling wildlife is an important factor in CCA creation. Mokochung, Zunheboto, Kiphire, Peren and Mon are the districts where significant percentages of CCA respondents reported loss of livelihood opportunities as the prime motivating factor. The concern for water scarcity due to loss of forest cover is responsible for initiating CCAs in districts like Zunheboto, Peren, Kohima and Mokochung. Factors like forest degradation, declining water availability, and to an extent, livelihoods, are correlated. It would be interesting to see whether the motivating factors are in congruence with actual physical changes occurring in these areas (e.g. decreased water availability, extent of deforestation and degradation). Future studies need to evaluate this.



Photo 20 Local signboards banning hunting and lopping in order to conserve Blyths Tragopan found here

² Unfortunately, the most recent FSI data (2013) only lists 8 districts while Nagaland has 11. This makes it difficult to correlate these responses with the state of forests in each district.

Table 3 District-wise factors motivating CCA initiation

Motivations	Kohima	Phek	Zunheboto	Mokochung	Kiphire	Longleng	Tuensang	Peren	Dimapur	Mon	Wokha	Total
Loss of livelihood/economic opportunities	2	11	31	53	29	2	12	43	0	39	9	231
Decrease or loss of key species of wildlife due to habitat loss or degradation	12	50	31	37	1	3	25	61	3	40	2	265
Excessive hunting of wildlife species	13	32	31	29	2	4	37	52	2	24	8	234
Decrease or loss of key species of flora	8	19	31	30	1	3	25	46	1	18	0	182
Forest degradation	15	31	31	51	29	4	26	65	3	61	3	319
Water scarcity	10	29	31	32	17	3	8	67	3	19	1	220
Loss of other ecosystem services, specify	4	15	31	3	2	0	0	31	0	0	0	86
Religious Sentiments (forest and mountain God/Goddess, Adobe of God/Goddesses)	0	2	0	3	2	0	2	4	0	0	0	13
Cultural Associations (ancestral tradition, evil spirit)	0	3	0	0	0	0	2	4	0	2	0	11
Self-empowerment (our	0	1	0	0	0	0	0	27	0	0	0	28

Documentation of Community-Conserved Areas of Nagaland

Motivations	Kohima	Phek	Zunheboto	Mokochung	Kiphire	Longleng	Tuensang	Peren	Dimapur	Mon	Wokha	Total
forest)												
In response to external threat (unless conserved, people from other communities exploit)	0	1	4	0	0	0	3	0	1	2	0	11
Any other	0	3	30	20	1	2	5	4	0	18	8	91

Note: The figures add up to more than 407, since multiple responses are possible

Monitoring rules and conservation practices of CCAs

In CCAs, like any other community-based management regimes, the community institution frames rules for management and designs regulatory mechanism to check over exploitation and to exclude non-members. These rules may be facilitatory in nature, ensuring collective action for conservation and protection (provision rules) and/or rules to regulate the use of forest and other commons, particularly for any extractive activities (appropriation rules). As discussed earlier, the village councils in Nagaland control resources and manage civic affairs in the villages. The exact property rights in forests, however, vary across villages. In some villages, the clan owns the forest and in others the village council owns and manages them. There are also forests on private land. However, when CCAs are notified-either through a resolution in the village council or based on informal understanding or through some formal agreement with the Forest or other Governmental departments, the CCAs devise a set of provision and appropriation rules. During the survey of CCAs, questions were asked about such rules devised or adopted by the CCAs to ensure protection of the commons and conservation of biodiversity.

The rules range from provisioning rules like patrolling and social fencing to appropriation rules like regulating collection of different forest products, restrictions on grazing, bans on felling of trees or bans on hunting. These bans may take many forms depending on the local situation. So for example, a wide range of practices are in force for regulating hunting which may range from blanket bans on hunting of all species through the year, to seasonal restrictions (e.g. during the breeding season of hornbills), to bans on hunting particular species believed to be particularly vulnerable. Furthermore, when populations are perceived to be endangered, then the types of hunting weapons may be specified (e.g. use of only air-guns or traditional traps and snares that are less detrimental than rifles and other guns, or of fishing nets and traditional traps, while dynamite, electric currents, use of glue and poison are shunned). Similarly, the local communities may restrict wildmeat consumption for subsistence purposes, banning the sale of wildlife or forest products in local markets or for commercial purposes. The range of possible options the local people employ, particularly for regulating hunting and wildlife conservation, reflect their deep knowledge of animal behavior and of the impacts of different hunting techniques on wildlife populations.

The details of the rules, number of CCAs adopting such rules and the seasonality of these rules are presented in Table 4. As evident from the table, most of the CCAs (94%) have devised rules and norms for patrolling and social fencing of their respective CCAs. In most CCAs, these rules are enforced by the village council (242), whereas in 142 CCAs the youth groups undertake patrolling, and guard the forest from hunters and other offenders. Not surprisingly, those groups that did not have patrolling or social sanctioning rules in place did not require them, as their CCAs did not face threats of overhunting or extraction. About 30 % of CCAs had adopted rules to restrict collection of forest products whose extraction was detrimental to conservation.

Restrictions may be seasonal or year-long in nature. For most of the CCAs that restrict collection of forest products, the restrictions are seasonal while only 15 CCAs have year-long restrictions on collection of different products. Similarly, around 24 percent of the CCAs have restriction on grazing of livestock in CCAs that are predominantly seasonal. For more serious restrictions such as bans on hunting or felling of trees or bans on the sale of products in the market, most of the CCAs have imposed year-long bans. Around 85 percent of the CCAs have banned felling of trees. While 131 CCAs allow tree felling in specific season with permission of the village council or CCA council, the majority (213) impose year-long bans.

Interestingly, 82 percent of the CCAs have banned hunting of animals and birds with more than 2/3rd of these CCAs banning hunting throughout the year. The pattern of hunting bans vary across the CCAs with some enforcing the ban only in the vicinity of CCAs and others enforcing them even in areas surrounding CCAs or the entire village. Some CCAs (24%) have devised rules to regulate hunting; in most such cases these regulations are seasonal in nature, mostly in the breeding season. The nature of such restrictions is also highly variable. For instance, in some villages, hunting of wild animals is allowed if they raid crops (e.g. wild boar) but only when such animals venture into crop lands. Some CCAs allow such killings only for specific species like wild boar or some specific ungulates. Some of the CCAs (58%) also restrict sale of bush meat or forest products by villagers in the local market. Fishing in rivers and streams is regulated in some of the CCAs (36%). While some CCAs ban use of gums or explosives or chemicals for fishing, the use of nets or rods may be allowed. However, all the fishing restrictions are reported to be seasonal with CCAs enforcing such regulations in specific months in a year (eg. periods when fish spawn).

Table 4 Conservation Rules Devised / Adopted by the CCAs

Conservation Rules	Number of CCAs Adopting these rules (% of respondents in parenthesis)	Pattens of Restriction/Enforcement
Patrolling and Social Fencing	384 (94%)	Village Council: 242 Youth Group:142
Restrictions on collection of different products	121 (30%)	Seasonal:106 Complete:15
Restrictions on grazing	96 (24%)	Seasonal:71 Complete:25
Ban on felling of trees	344 (85%)	Seasonal:131 Complete:213
Ban on hunting	335 (82%)	Seasonal:105 Whole Year:230
Restrictions on hunting	99 (24%)	Seasonal:96 Whole Year:3
Ban on sale of bushmeat/ forest products in local markets	237 (58%)	Seasonal:26 Whole year:211
Restrictions on fishing	145 (36%)	Seasonal:145

Note: The figures add up to more than 407, since multiple responses are possible

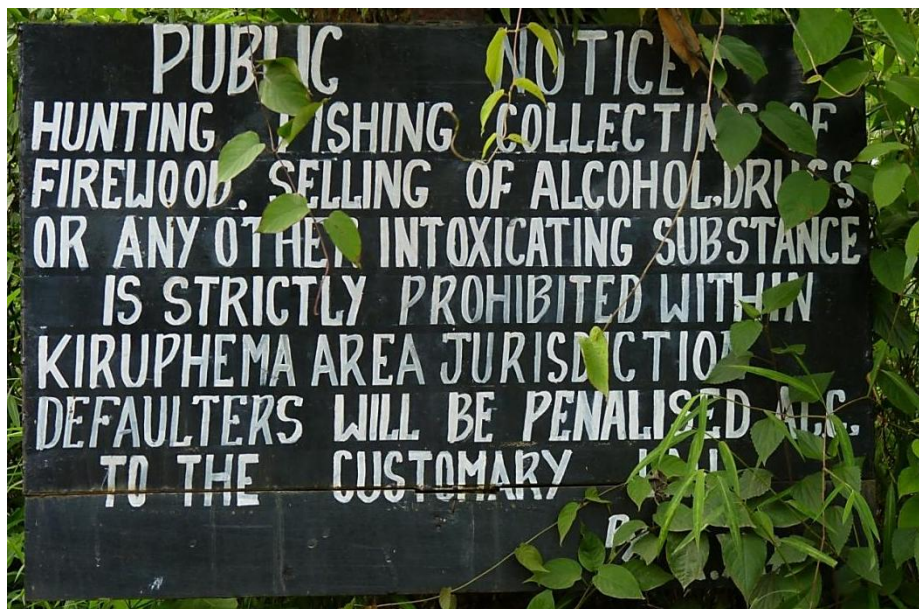


Photo 21 Some of the rules highlighted by Kiruphema

Sanctioning and rule enforcement in CCAs

CCAs can only function effectively if local communities collectively work together to ensure that regulations are stringently adhered to, and where needed, enforced. Ideally, if there is considerable support for the CCA amongst the majority of the village, then rule violation will only be occasional, mostly comprising people from neighbouring villages or a few dissenters and defaulters. The reasons for defaulting potentially depend on several factors some of which are listed below.

- **Age of the CCA:** In newly created CCAs, some members of the CCA or people from adjoining villages may not be aware of the rules and regulations and may inadvertently default. Conversely, in older CCAs, as wildlife populations recover, this may lead to increased human-wildlife conflicts as animals raid crops, poultry and other livestock, tempting people to default on hunting and other bans
- **Livelihood options:** Creation of CCAs may lower incomes that previously came from the sale of forest products, and also have huge associated opportunity costs. A major issue is foregone benefits from the sale of timber revenues which has significant implications for the sustainability of CCAs. Since many of these CCAs comprise private or clan lands, owners frequently want these areas returned (particularly as forests improve) for their timber revenues. This is already happening in Sendenyu. Therefore, these very pertinent issues may erode support for CCAs and lead to rule violations, unless the owners are compensated for the loss of their lands.
- **Area of the CCAs in the total proportion of available forest land:** If CCAs comprise only a small portion of the total area, or consist of relatively unimportant lands (e.g. abandoned, uncultivated jhums), then the chances of ensuring compliance are high. However, if large portions are covered by CCAs or blanket bans are imposed, or adjoining areas are also regulated, then there are likely to be far more defaulters.
- **Degree of investment of local communities in the CCA:** As mentioned above, if local communities are convinced of the importance of CCAs, then rule violation will be

less. Moreover, issues of power, access to resources and ownership patterns also determine, the 'buy-in' of different sections of the community, even in the relatively egalitarian societies of Nagaland.

Irrespective of the reasons for non-compliance or rule violation, CCAs need a clearly defined and transparently enforced system of penalties or fines for offenders in order to effectively conserve the area. Such penalties could include warnings, social sanctioning, fines in cash or kind, direct confrontations with offenders or confiscation of illegally extracted products, weapons, traps and tools. Methods of enforcement vary; Pathak (2003) describes a village where if offenders do not pay the fines, they are not allowed any benefits. Moreover, if they persist in committing offences they are compelled to leave the village. Each village has its own norms for dealing with offenders and ensuring compliance.

Our survey found that the imposition of fines was the most common practice as 93% of CCAs fined violators (Table 5). The sizes of fines vary across CCAs and depend on the magnitude of crime committed. For examples, larger fines are imposed for the hunting of large mammals like sambar and barking deer (varying between Rs 10 thousand to 25 thousand)) and are lower (varying between Rs 500 to Rs 2000) for smaller mammals like squirrels, the ferret badger³ and birds. Fines collected are generally shared with the informant and/or the Village Council. The latter are used for protection activities in the CCA. CCAs frequently employ multiple sanctioning norms. Frequently, CCAs (18%) confiscate implements such as axes, sickles, guns or fishing nets used for the offence, or impound livestock that stray into prohibited areas. Table 5 gives a list of the systems put in place to punish the offenders. Only rarely, for persistent offenders are social boycotts employed (3%), and these people are denied benefits from the village or are asked to leave. There was only 1 reported instance of registering a police case against the offender; generally villagers resort to this option only in exceptional circumstances.

Table 5 Sanctioning mechanisms and number of CCAs adopting these practices

Punishments	Number of responses (Out of 407 CCAs)
Imposition of fines	381
Social boycotts	15
Registration of police case	1
Confiscation of implements, weapons, products collected/Impounding livestock	73

Note: The figures add up to more than 407, since multiple responses are possible

Our survey suggests that compliance with the rules is high across all CCAs. As many as 398 CCAs strictly comply with the rules while only 11 CCAs reported that community members

³ Although the ferret-bader is highly endangered. Thus size appears to matter more than endangered status. This is because what local people perceive to be important and locally endangered is different from global population estimates.

do not always comply with the decisions taken by the village council. Table 6 gives a district-wise list of the CCAs that comply versus those that do not. Non-compliance was only recorded in the districts of Mon, Wokha, Peren and Phek. The reasons for this, are, however, not known.

Table 6 District-wise numbers of CCAs complying with governing rules

District	Village members possessing CCAs complying with rules	Village members possessing CCAs not complying with rules
Kohima	15	0
Phek	66	1
Zunheboto	27	0
Mokochung	48	0
Kiphire	32	0
Longleng	5	0
Tuensang	41	0
Peren	101	1
Dimapur	4	0
Mon	53	6
Wokha	6	3
Total	398	11

The outcomes and benefits of community conservation

Diverse benefits are envisaged by the communities as deriving from CCAs such as livelihood security, ecological benefits such as control of soil erosion and increased availability of water, community empowerment and social recognition, among others. Our survey data indicated that the major outcomes of conservation were either prevention of further deterioration (83% of respondents) or an improvement or restoration of degraded ecosystems (66%). The next most important outcome of these CCAs was reported to be an increased awareness and support for conservation from local communities (64%). This is important since it suggests that declaring CCAs may help enhance knowledge and awareness of deteriorating conditions for forests and wildlife. Moreover, this enhanced awareness could potentially even translate into sustainable use practices beyond the boundaries of the CCAs. In terms of specific benefits resulting from these positive outcomes (restoration, improvements or prevention of further deterioration), 58% of respondent CCAs mentioned increased availability of plant-based forest products (58%), increased water availability (56%), increased abundance of one or more faunal species (44%) and increased natural regeneration in forests (25%). Table 7 gives a list of the outcomes/benefits derived from CCAs. All the CCAs reported positive

outcomes for conservation, although they admitted to facing several challenges (see next section).

Table 7 The outcomes and benefits of CCA formation

Outcomes/Benefits of CCA formation	Number of responses (Out of 407 CCAs)
Improvement or restoration of the degraded ecosystem	272
Prevention of further ecosystem degradation	338
Increased abundance of one or more faunal species (example increased sightings/calls heard)	179
Increased natural regeneration in forests	101
Increased water availability	227
Increased availability of plant-based forest products	239
Increased awareness and support for conservation from local community	261

Major Challenges to Conservation

The major challenge faced by the CCAs is providing alternative livelihood avenues (81%) especially where most of the economic activity in the villages is based upon utilization of natural resources from these CCAs (Table 8). The other main challenges of conservation include hunting pressures from community members (78%) and outsiders (5%) followed by problems of *Jhum* cultivation (59%). While in the short term these CCAs face problems of rule breaking particularly with regard to hunting or *jhum* cultivation, in the long-run threatening the very sanctity of these areas are the lost revenues from timber production. As populations grow, land prices rise and people move away from their villages, more private and clan owners of CCA land may want to manage their forests for timber, rather than for conservation. These issues will need to be addressed, particularly since village councils (58%) are already facing financial constraints and incursions of the timber mafia (59%). Other challenges include land use change in the area (26%) and climatic factors (23%). Other minor challenges CCAs face are non-cooperation from neighboring villages (18%) and conflicts that arise due to wild animals raiding crops (sambar, wild boar) or killing livestock (wild dogs). Table 8 gives a list of the major challenges faced by the CCAs.

Table 8 Major challenges faced by CCAs

Major Challenges faced by CCAs	Number of responses (Out of 407 CCAs)
Livelihood dependence	331
Jhuming or shifting cultivation	241
Hunting pressures and related cultural practices :	
• Communities	317
• Others	20
Increased human-animal conflicts	33
Organized mafia (timber, wild meat, wild animal body parts etc.)	242
Financial constraints	236
Climatic factors	96
Non-cooperation of neighboring village	72
Land use change in the area	106
Others	67

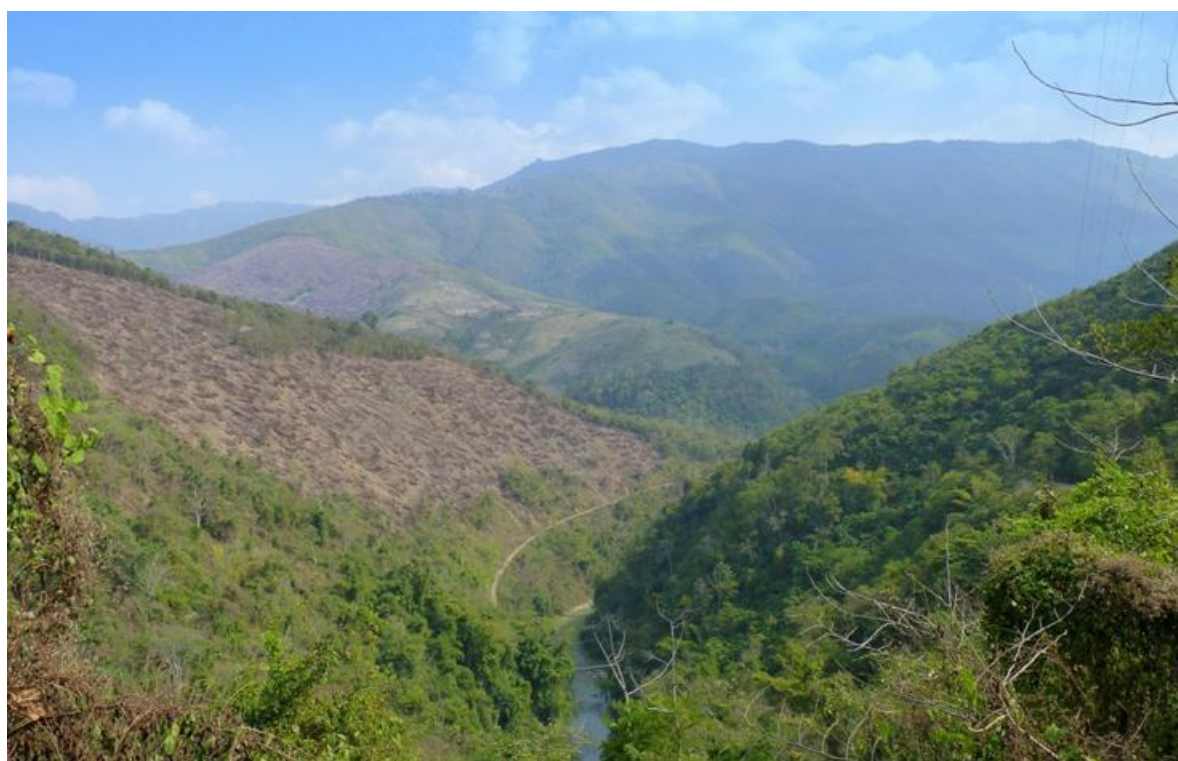
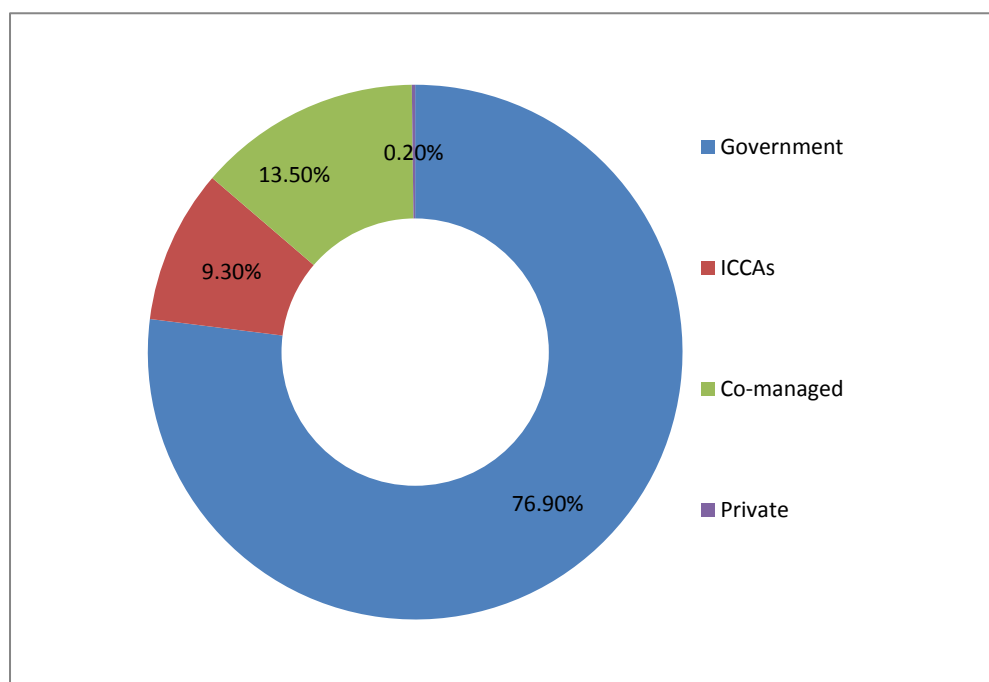


Photo 22 An example of Jhuming pressure: Lush Green Sükhai CCA on the right with jhum cultivation by Nihoshe village on the left of Tizü river

Chapter 5. The Way Forward

The dominant paradigm of wildlife conservation, both globally, and in India is the creation of protected areas, where access to forest resources is restricted or highly regulated and local communities have little say in their management or in decision making. Such approaches, while helping to prevent conversion of land to alternative land uses, frequently conflicts with the livelihood concerns of local communities and puts their needs in direct competition with the conservation needs of wildlife. Hence these communities have no incentive to invest in conservation and conflict situations arise particularly where people not only unable to realise their subsistence needs but additionally are subject to the depredations of wildlife. This situation has eroded support for the exclusionary or 'fortress' approach to conservation and buttressed support for more people-friendly and inclusive regimes for conservation including community conservation.

This disenchantment with exclusionary conservation has focused attention on community-conserved areas where communities manage their resources. Meanwhile, the Aichi targets of the Convention on Biological Diversity (CBD) envisages a global increase in area conserved to 17% for terrestrial (including inland water) areas and allows for areas that include sustainable use including community-conserved areas. Globally, the share of protected areas managed by local communities or co-managed has grown significantly since the 1990s when as much as 95.8% of the global share was government owned and managed. Today, the government's share has dropped to 76.9% while ICCAs (Indigenous Community-Conserved Areas) have almost tripled (Fig 8), accounting for as many as 700 protected areas covering over 1.1 million square kilometres (WDPA, 2011).



Source: WDPA (2011)

Figure 8 Percentage share of various governance regimes in the global protected area network (by area) in 2010

One of the major characteristic of these CCAs is that the communities are the decision makers, and have the capability to enforce regulations. Issues of tenure, however, figure prominently in the effective functioning and governance of these community-managed ecosystems. It is therefore argued that *only if* given adequate rights, benefits and safeguards over the forests, will local communities have an incentive to sustainably use and manage their resources resulting in mutually beneficial situations for both the people and the resource base. Evidence partially supports this-studies suggest that community-conserved areas ensure far more positive outcomes for biodiversity (e.g. species diversity, basal area, species richness and reduced deforestation) than do open-access area where people have little stake in conservation (Shahabuddin and Rao, 2010 and references therein). However, results are inconsistent for CCAs versus strict protected areas (Shahabuddin and Rao, 2010 and references therein). Although there are no clear differences between CCAs and PAs in terms of diversity/species richness of flora or fauna protected under the two types of management or in deforestation rates, nevertheless CCAs appear to show lowered abundances of taxa of conservation importance.

Table 9 Summary of trends in biological outcomes detected in the review of case studies

Variable	CCAs vs SPAs				CCAs vs open access			
	+ve	-ve	0	Altered	+ve	-ve	0	Altered
Forest cover		1	1			1	1	
Deforestation rate		2	3		1			
Species richness	2	3	1		1			
Species diversity		2	2		1			
Basal area	1	1			2		1	
Forest height	1				1			
Stem/tree density		2						
Tree regeneration			1		1		1	
Canopy cover (%)		1					1	
Plant sp. Abundance		2				1		
Animal sp. Abundance		5						

Variable	CCAs vs SPAs				CCAs vs open access			
	+ve	-ve	0	Altered	+ve	-ve	0	Altered
Species Composition				6				1
Totals	4	19	8	6	7	2	4	1

Legend: +ve = positive; -ve-negative; 0=neutral; or no difference; CCA: Community-Conserved Area, SPA, Strict Protected Area

Source: Shahabuddin and Rao (2010)

Nagaland (along with other states of the North-East of India) has an advantage as constitutional provisions allow customary management of resources. Moreover, much of forest ownership lies in the hands of individuals, clans, councils and communities. The communities of Nagaland, therefore, have the flexibility of defining the boundaries, the interventions and the management patterns of these CCAs, thereby possessing all the necessary conditions for effective governance. This flexibility has the potential to translate into broad-based community-conservation in Nagaland, as villages across the state support collective community action for conservation. This is in line, as mentioned earlier, with earlier religious taboos and customs that encouraged wise-use practices, and helped to protect wildlife from overexploitation. Our study indicates that almost one-third of the villages of the state have adopted some form of conservation through the creation of community reserves. The efficacy of these CCAs in terms of ensuring positive outcomes for flora and fauna, is, however, still largely unquantified⁴ as rigorous ecological studies are absent. Nevertheless, our survey points to positive outcomes for CCA creation both for the ecology and in terms of ecosystem services accruing to local people.

Despite the widespread coverage of Nagaland by CCAs, their creation, expansion and sustainability face enormous challenges. As population increases and per capita land availability declines, pressures on existing resources are bound to exacerbate. This is particularly true for forests that represent intensely contested domains. Conflicting objectives of economic development, dependence of local communities, carbon storage and conservation put pressure on this already over-utilized natural resource. Widespread demographic and economic imperatives may exert pressures on traditional, subsistence-based approaches of small populations faced with changing lifestyles and enhanced choices. Since wild-meat hunting is a cultural practice embedded in the Naga ethos, it becomes difficult to impose restrictions on hunting. This is particularly the case since dwindling wildlife necessitates increased hunting efforts and/or search areas to sustain earlier yields. Moreover, as cultural practices and taboos cease to be relevant, these checks and balances are eroded, making all wildlife 'fair game'. The lost timber value of these lands is another, often unsurmountable, challenge.

While these CCAs offer much potential, the reality is that there are no panaceas for sustainable governance of natural resources a (e.g. Ostrom, 2007) and the issues and problems depend on the local attributes of resource systems, resources units, governance and actors (Ostrom, 2009). Nevertheless, this plurality of social-ecological systems in Nagaland is

⁴ With the exception of the Amur falcon case where killing of the falcons has been completely stopped.

itself a strength as communities can tailor their conservation practices to the availability of land (forests, agriculture), the needs of local populations, the state of wildlife populations and the resource base, and their own needs and traditions. Consequently, adaptability can be the hallmark of CCAs in Nagaland, as these areas are managed for a combination of cultural, utilitarian and aesthetic purposes. For example, as jhum lands decrease in relevance, abandoned jhums can be converted to safe refuges for wildlife. Increasingly, this appears to be the case in Nagaland as is evident from the Sukhai village in Zunheboto district and numerous other documented examples in this study. Moreover, village communities are free to decide the size of these areas, the type of bans and quotas in practice, the timing and seasonality of restrictions. They can decide the most appropriate rules governing these areas, and are free to adapt or tweak rules and restrictions if they do not work. For example, switching from complete bans to seasonal ones or those restricted only to particular species.

Ensuring sustainable management of CCAs in Nagaland, however, depends on the degree of interest vested in these CCAs, not only by the management committees but by the local communities. These CCAs will therefore only be well-protected if they are perceived as being of relevance and importance to the larger community, rather than just a numbers game. Because most of the CCAs in Nagaland are formed on land belonging to clans (72% as reported earlier in the report) or individuals (56%) rather than on community land (only 31%), non-compliance by uninterested members of the village community has the potential to weaken the fabric of community conservation. Although formation of these CCAs through village resolutions was a prominent criterion that we used in identifying CCAs, this by itself is insufficient in ensuring active participation of the local community. Greater transparency in rule making and enforcement, higher 'buy-in' by the village communities and more understanding of why CCAs are needed, will ensure the efficacy of these CCAs, so that they do not remain as mere 'paper CCAs'.

In general, the future of Nagaland's CCAs is tied to enhanced awareness of the negative ramifications of wildlife extinctions to the cultural and biological heritage of Naga communities. In remote villages, people are often unaware of the negative repercussions of wildlife population declines to the future of their forests. Hunters extirpate animals that are involved in myriad ecological interactions shaping plant recruitment and forest structure. Animals are responsible for several processes such as pollination, seed dispersal, seed predation, herbivory and the trampling of seedlings, juveniles, adult plants, several of which are critical to the maintenance of forest structure and diversity (Corlett 2007). Loss of one or more species of animals can lead to extinction cascades resulting in empty forests (Redford 1992) devoid of animal components. The local school and college curriculums need to include awareness of such issues, and these concerns need to be debated and discussed in regular sermons of the priests. One way is to tap into the sense of pride that tribal communities possess in their lands and their cultural identities, and to involve them in partnerships to protect wildlife. Unfortunately young members of society often view hunting as a recreational activity. Since young people frequently leave their village for education or work, they are less tied to the land or their villages, and not interested in issues of sustainability.

There is much hope, however. The rules governing Nagaland's CCAs indicate that hunting is a priority concern. Bans on hunting, for example predominate, with 227 CCAs restricting this practice. While these hunting bans are currently operational only in these CCAs and vary in their efficacy, these CCAs do provide safe refuges for animals. These initiatives in conjunction with sustained motivation and awareness can lead to successful conservation outcomes as evidenced by efforts of the forest department, activists and NGOs in persuading local communities to halt the mass slaughter of Amur falcons in a short span of time. Linking

of CCAs will also help to provide corridors for wildlife movement and prevent the adverse effects of fragmentation.

Local communities while declaring CCAs, however, make huge sacrifices and are often forced to forego or switch to alternative, sometimes expensive protein sources or even alternative livelihoods. Loss of timber revenues is a huge threat to their continued existence. Patrolling and enforcement also causes hardships in terms of lost income. Expensive equipment is often required for monitoring. Increasing wildlife populations frequently cause human-animal conflicts by raiding crops or preying on livestock. Therefore, CCAs impose opportunity costs, and financial implications on their creators and enforcers. Sustaining interest in CCAs in the long-run is therefore difficult once initial enthusiasm wanes or conflicts arise.

Limited studies on the efficacy of CCAs over time suggest a negative trend in biological indicators such as species diversity and forest cover in several countries including Mexico, Ecuador, Amazonia and India (Shahabuddin and Rao, 2010 and references therein). Consequently, in order for these CCAs to sustain, the Nagaland government needs to view them as an alternative strategy to the creation of protected areas. A fillip to conservation can be provided through legal recognition and financial outlays to support a CCA network in the State. If this is done, Nagaland will be the first State of India and possibly globally to have set up a state-recognised CCA network for conservation. Efforts will be needed to buttress this unique initiative with technical support, research and monitoring, enhanced documentation and the development of increased avenues for tourism, including community-based wildlife ecotourism. Unfortunately, the CCA network of Nagaland remains relatively unrecognized, undocumented and unsung, despite its many merits and the opportunities it presents for well-managed people's conservation initiatives.

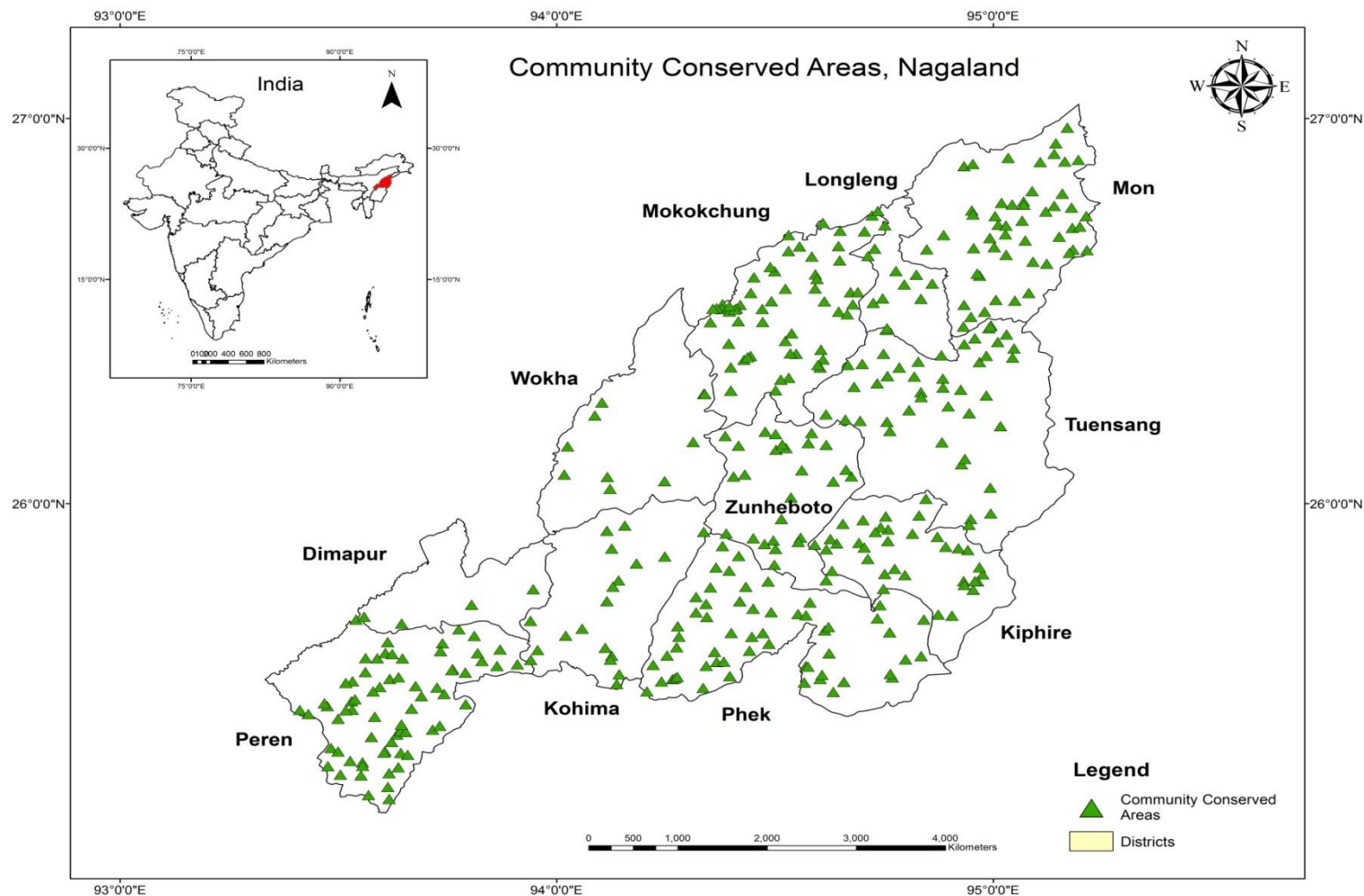
In summary, Nagaland is the only state of India to have almost a third of its area under CCAs. Long term sustainability, enhanced governance and effective conservation outcomes for wild fauna and flora, however, require sustained effort, motivation, awareness and capacity building. To ensure the future of Nagaland's CCAs and thereby its biodiversity, a multi-pronged approach including financial support, legal recognition and long-term ecological monitoring is required. Furthermore, local communities must be trained to monitor their resources, and to develop wildlife tourism which will help generate support for conservation. The network of CCAs in Nagaland provides a wonderful example of a fledgling people's movement for conservation that deserves to be strengthened and supported. The future of Nagaland's biodiversity and its people ultimately depends upon it.

References

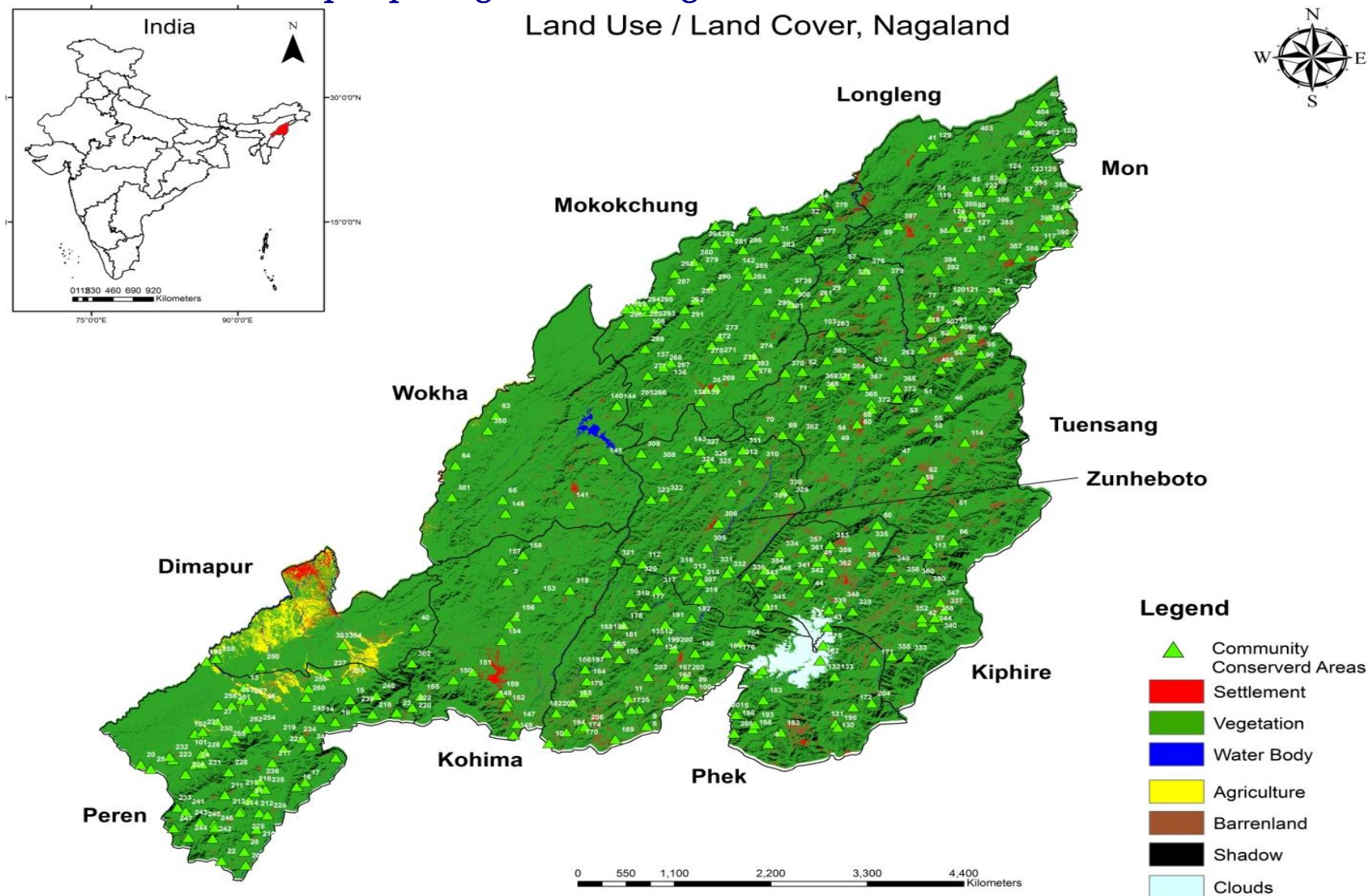
1. Annual Administrative Report (2013-14). Department of Forests, Ecology, Environment & Wildlife, Nagaland.
2. Bhupathy, S., Nakro, V. and Azeez, P.A. 2012. Strengthening community conservation efforts in Nagaland: A programme to impart technical support on biodiversity conservation and livelihood options. Final Report submitted to Sir Dorabji Tata Trust Mumbai.
3. Corlett, R.T. 2007. The impact of hunting on the mammalian fauna of tropical Asian forests. *Biotropica* 39 : (3): 292-303.
4. Das, I. (2002). A Photographic Guide to Snakes and Other Reptiles of India. New Holland Publishers (UK) Ltd., London, 144pp.
5. Field Trip Reports sourced from <https://www.nagalandconservation.in/biodiversity-surveys/>
6. Forest Survey of India. 2013. State of Forest Report. Dehradun: Forest survey of India.
7. Grewal, B., Sen, S., S. Ramki., Haralu, B., 2012. A Companion to the Birds of Nagaland.
8. Grimmett, R., Inskipp, C. and Inskipp, T. 1999. Pocket guide to the birds of the Indian subcontinent. New Delhi: Oxford University Press.
9. http://censusindia.gov.in/2011-prov-results/paper2/data_files/nagaland/13-number_admin_unit_58-59.pdf
10. Kalpavriksh. 2005. Community Conservation in Nagaland: Adopted at the Workshop on Community and Biodiversity in Nagaland. Kohima, 24-27th October, 2005. Organised by Forest Department, NEPED, and Kalpavriksh, with sponsorship of Forest Department, IFACN, British High Commission, NEPED, and ICIMOD.
11. MoEF (2014) India's Fifth National Report to the Convention on Biological Diversity. Ministry of Environment & Forests, Government of India.
12. Ostrom, E. 2007. A Diagnostic Approach for Going Beyond Panaceas. *Proceedings of the National Academy of Sciences* 104(39):15181–15187.
13. Ostrom, E. 2009. A General Framework for Analyzing Sustainability of Social-Ecological Systems. *Science* 325:419–422.
14. Pathak, N (Editor) 2009. *Community-Conserved Areas in India –A Directory*, Kalpavriksh, Pune.
15. Pathak, N & Hazarika, N. (2012). India: Community Conservation at a crossroads In: Dudley, N and S. Stolton (eds.); *Protected Landscapes and Wild Biodiversity*, Volume 3 in the Values of Protected Landscapes and Seascapes Series, Gland, Switzerland: IUCN. 104pp.
16. Redford, K.H. 1992. The empty forest. *Bioscience* 42(6): 412-422.
17. Shahabuddin, G. and Rao, M. (2010). Do community-conserved areas effectively conserve biological diversity? Global insights and the Indian context. *Biological Conservation* 143 (2010) 2926–2936.

18. Whitaker, R. & Captain, A., (2004). Snakes of India - The Field Guide. Draco Books, Chennai, xiv+481pp.
19. World Database on Protected Areas (WDPA) 2011. <http://www.protectedplanet.net/>

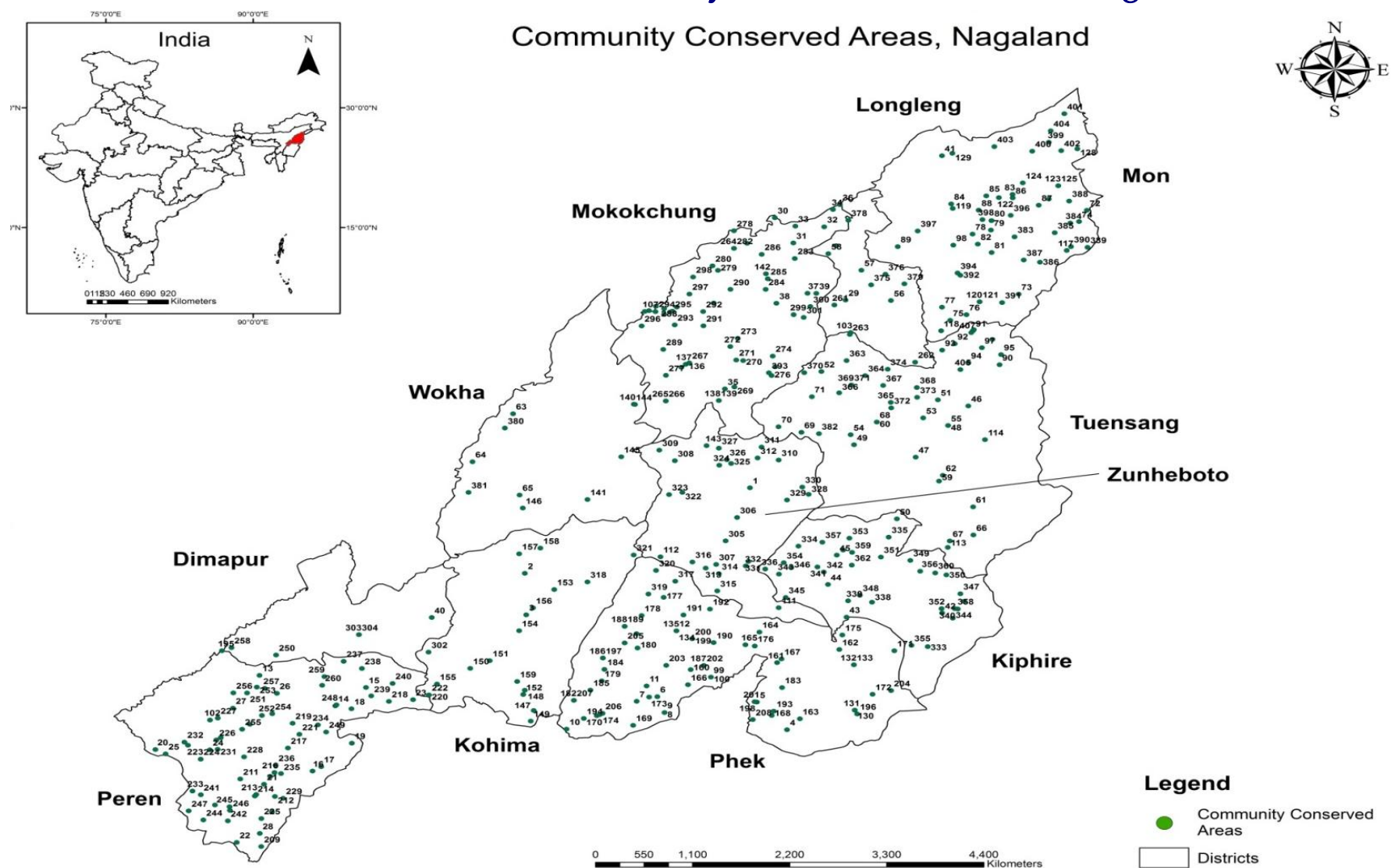
Annexure 1: District-wise location of Community Conserved Areas from Nagaland



Annexure 2: LULC Map depicting CCAs in Nagaland



Annexure 3: District-wise details of Community Conserved Areas from Nagaland



Details of the points mentioned in the map

LABEL	Village	CCA	X	Y
1	Mungya	Mentsuo tongti	94.561944	26.086944
2	Tsiemekhuma Bawe & Basa	Niathu Mount	94.126611	25.883967
3	Peers Club	Niathu Mount	94.129250	25.785200
4	Akhen	Tiizhimiisii	94.633694	25.512150
5	Matikhrii	Miirhreihu	94.575472	25.577694
6	Chizami	Ewu	94.382806	25.590639
7	Mesulumi	Kamire	94.342889	25.579556
8	Sumi	Noko Kunu	94.396667	25.552983
9	Thetsumi	Senupfhu	94.396667	25.552983
10	Khezhakeno village	Ngade Forest	94.207222	25.513500
11	Sakraba	Sakraba NASA Forest	94.362000	25.616139
12	Phugi	Lopeco	94.419851	25.747174
13	Lilen	Kegung	93.613361	25.641111
14	Peelkie	Peungwalwazang	93.760000	25.568750
15	Ngwalwa village	Ngwalwa village CCA	93.819267	25.612528
16	Kenduang	Kipeuram	93.716000	25.413972
17	Mpai	Mahunatu	93.732500	25.424367
18	Nduaglwa	Hegumru	93.791167	25.561817
19	New Puilwa	Kipeuzaun	93.792083	25.480222
20	Khelma	Maniam	93.412056	25.465111
21	Njauna	Njauna	93.622051	25.382310
22	NTU	NTU Ramsa	93.569278	25.244194
23	Old Poilwa	Hepungyi	93.910278	25.583444
24	Old Soget	Sogang	93.517361	25.464333
25	Sailhem	Salhau	93.431722	25.454722

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LABEL	Village	CCA	X	Y
26	Saijang	Jangdi	93.646889	25.598556
27	Pelhang	Balhang	93.561972	25.563306
28	NJU	NJU Ramsa	93.613917	25.265556
29	Yaongyimchen	Ban	94.747000	26.533167
30	Mongtikang	Sham	94.610028	26.728889
31	Molongyimsen	Apukong & Lensen	94.645906	26.668769
32	Kantsung	Rangkang Min	94.705556	26.707250
33	Wamaken	Tzumalemang	94.649717	26.708908
34	Anaki	Gurongtsu	94.722611	26.748567
35	Anakiyimsen	Sunglanu Lu	94.513463	26.322036
36	Anaki 'C'	Sung Lu	94.735889	26.760083
37	Changtongya Old	Alilu	94.673306	26.549389
38	Kelingmen	Artongpang Lu	94.613111	26.525639
39	Changtongya New	Benmang Lu	94.690250	26.549167
40	Tsiepama neise clan	Kedi-Uba of Tsiepama	93.946444	25.778722
41	Satami	Chimpito	94.933333	26.876333
42	Salumi	Langkhae Sang-Shong Kimtsu	94.933694	25.789333
43	New - Longmatra	Longmatra Reseve	94.748833	25.779667
44	Natsami	Natsami	94.712867	25.857250
45	Keor	Longmurong	94.730000	25.927000
46	Yimpang	Layed	94.984361	26.281472
47	Yahkor	Chikiuyoung	94.882667	26.159833
48	Tsg (L)	Nakba	94.945167	26.234917
49	Sotokur	Motakyong	94.763400	26.189317
50	Rurrur	Sangpholoki	94.846250	26.013139

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LABEL	Village	CCA	X	Y
51	Nyinyem	Mushu auchem	94.925528	26.296167
52	Noksen	Mashiku	94.700028	26.363278
53	Konya	Ponongem	94.897028	26.253056
54	Helepong	Helipong CCA	94.756806	26.213083
55	Chingmie	Pakhong	94.945167	26.234917
56	Yongam	Heiphang	94.834667	26.532111
57	Tangha	Nela Phang	94.777500	26.604139
58	Kangching	Shuyen	94.713556	26.643417
59	yokao	yokao	94.927722	26.102944
60	Wui	Wui CCA	94.807291	26.243210
61	Joa Leu	Joa Leu	94.993556	26.041667
62	Pathso	Phuow	94.935083	26.116639
63	Pangsha Old	Dempong	94.103806	26.263056
64	Nokhu	Nokhu Reserve	94.025306	26.149000
65	Choklangan	Chemongan	94.116361	26.069972
66	Chephur	Jang Zang	94.994278	25.974861
67	Chellitso	Chellitso Reserve	94.948528	25.960667
68	Tsadang	Tsungnyisi	94.807291	26.243210
69	Sangsomong	Lurha	94.661556	26.218800
70	Mangaki	Shutakshu	94.617250	26.232139
71	Chimonger	Longya	94.681667	26.303500
72	Pukha	Tohnyu	95.213556	26.746500
73	Chenloishu	Tebuh	95.081556	26.547167
74	Longzang	Lennyu lemlo	95.198389	26.719722
75	Angjangyang	Yokjang	94.949222	26.485167

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LABEL	Village	CCA	X	Y
76	Angphong	Okham	94.980667	26.498528
77	Longching	pekuk	94.933306	26.516139
78	Chi	Longnyuphao	94.992407	26.689970
79	Goching	Goching	95.028083	26.699556
80	Leangha	Chinglangpang	95.029206	26.722076
81	Totok Chingkho	Poiha	95.029556	26.646306
82	Totok Chingyu	Jangling	95.002611	26.666056
83	Tumei	Manpai	95.069778	26.784306
84	Pongkong	Ahtung Area	94.951222	26.761694
85	Hongphoi	Raphaiphao	95.019056	26.780889
86	Lampong sheanghah	Longnyah	95.070167	26.776222
87	Longphoh	Selephao	95.120583	26.758611
88	Leangnyu	Thampangho	95.004250	26.746722
89	Wanching	Shopnung	94.847931	26.660223
90	Yongkhao	Hosha	95.044611	26.379361
91	Yonghong	Chamsa	94.993278	26.460389
92	Yakshu	Bukong Tepu	94.957972	26.429528
93	Ukha	Kamengshu	94.933750	26.414194
94	Tamkoang	Mahsha	94.984207	26.384352
95	Pessao	Opeh	95.047861	26.403556
96	Monakshu	Ongshen	95.030889	26.439722
97	Changlangshu	Wati Poyung	95.010472	26.419944
98	Changlang	Changak	94.955278	26.663667
99	Lozaphuhu	Chepi	94.486414	25.637088
100	Lozaphuhu	Tuhakuhuba	94.486414	25.637088

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LABEL	Village	CCA	X	Y
101	New Beisampui	Beisanlo	93.538399	25.493106
102	Songou	Songou	93.517575	25.535207
103	Pongching	Balam	94.756674	26.455957
104	Longphayimsen	Longphayimsen CCA	94.380074	26.518496
105	Watiyim village	Watiyim CCA	94.379257	26.505487
106	Moayimti	Moayimti CCA	94.366772	26.507918
107	Medemyim village	Moayimti CCA	94.358388	26.506223
108	Aokum village	Aokum CCA	94.395928	26.499390
109	Aosungkum	Longyong Lu	94.407715	26.504675
110	Aosenden	Lisemyong LU	94.395928	26.512804
111	Thakiye	Angushu Saqhi	94.617462	25.802078
112	Khukishe	Kotohu	94.388855	25.923023
113	Pang	Zoa Dam	94.944626	25.945362
114	Noklak Village	Sekie	95.016708	26.201401
115	S/Tangten	Getjong	95.029206	26.722076
116	S/Chingnyu	Rahjong	95.029206	26.722076
117	Nyahnyu	Longsa	95.174599	26.651167
118	Jakphang	Nyokoh	94.931857	26.460072
119	Longkei	Linglam	94.954109	26.751032
120	Totok Chingha	Tinghongpan	95.006111	26.529030
121	Totok Chingla	Totok Chingla	95.006111	26.529030
122	Phuktong	Nyama Lamthuk	95.043503	26.776737
123	Zangkham	Zangkham	95.158356	26.804850
124	Zakkho	Hoakho	95.089523	26.811651
125	Z.Tingsa	Longkhoa	95.158356	26.804850

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LABEL	Village	CCA	X	Y
126	Yannu	Yanthong	95.029206	26.722076
127	Oting	Thamyijunyi	95.029206	26.722076
128	Nokyan Village	Mankhoa	95.195183	26.892767
129	Longam	Longhoi	94.953354	26.882031
130	Old thewati	Sharali Kukile	94.764580	25.558541
131	Old thewati	Tsatutsi	94.764580	25.558541
132	Mokie	Whori	94.762959	25.666355
133	Mokie	Wuthoru	94.762959	25.666355
134	Khotsokono	Guitiru	94.419851	25.747174
135	Khotsokono	Hekhatiru	94.419851	25.747174
136	Aliba	Tsumongkong	94.437882	26.380593
137	Aliba	Rara	94.437882	26.380593
138	Ungma	Oke Menden	94.501869	26.294414
139	Ungma	Sirneb Pok	94.501869	26.294414
140	N.longidang	Khalimonkung Eran	94.337278	26.285750
141	Longsa	Pvuchenchyu Enung	94.247583	26.059194
142	N.Longchum	Shampoktong	94.592778	26.595556
143	Aree Old	Hantsanju	94.478000	26.187056
144	Okotso	Okotso	94.339694	26.285011
145	Nangying	Sethankvu	94.312917	26.160611
146	Shaki	Hanchjanthenbiodiversity conservation Shaki	94.122556	26.038917
147	Viswema	Viswema	94.143711	25.557647
148	Kigwema	Kigwema Biodiversity Trust	94.126611	25.605925
149	Khuzama	Khuzama	94.137964	25.532661
150	Khonoma	Khonoma Nature	94.020939	25.657778

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LABEL	Village	CCA	X	Y
		Conservation and Tragopan Sancuary (KNCTS)		
151	Jotsoma	Jotsoma reserve Forest	94.058611	25.676111
152	Jakhama	Jakhama	94.123408	25.595711
153	Tuophema	Niathu Mount	94.183278	25.845361
154	Thizama	Terheizie	94.115417	25.747361
155	Dzuleke	Dzuleke	93.956703	25.620556
156	Chiechama Metha clan	Secha Mount	94.142333	25.801667
157	Sendenyu	Sendenyu Biodiversity Conservation	94.115611	25.930139
158	Phenshunnyu Khunyu Ramusinyu	PKR Biodiversity Conservation	94.156639	25.943639
159	Phesama	Phesama	94.111814	25.626617
160	Middle Khomi	Khalutu	94.447222	25.654833
161	Khumiasii	Sawie	94.614444	25.671528
162	Hutsii	Tajiihu	94.734806	25.702639
163	Reguri	Tupukhasii	94.658389	25.538000
164	Kizari	Misizung	94.580389	25.744056
165	Kotisu	Chepi Ratsuru	94.553222	25.713972
166	Losami	Dzukiri	94.442111	25.618917
167	Meluri	Kiiriiwusii	94.623000	25.680306
168	Kanjang	Chaljang	94.604028	25.545889
169	Zelome	Padu	94.335944	25.522611
170	Kami	Pfuchude	94.265750	25.545500
171	Sutsu	Jesulaun	94.841250	25.699833
172	Latsam	Yowlampe	94.799139	25.596306
173	Enhulumi	Ewulu Great Hill Barbet	94.366972	25.589778

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LABEL	Village	CCA	X	Y
		Sanuery		
174	Lekromi	Julu	94.271389	25.547806
175	Phor	Shatiiya	94.740583	25.737167
176	Tuzatsu	Kiwidzukuraru	94.571167	25.710861
177	Dzulhami	Nuhosu Veku	94.395194	25.826750
178	Khutsami	Phuyo	94.352444	25.783358
179	Rihuba	Eyoza	94.275250	25.628000
180	Thiivopisii	Thiivopisiimi, Dziidiiri Conservation (TDC)	94.344417	25.706389
181	Yoruba	Muthisukha	94.342500	25.740167
182	Kikruma	Phuzutu	94.221333	25.581944
183	Lephor	Khrokhropfii	94.624111	25.612250
184	Khulazu Basa	Therosiigii Community Forests	94.280444	25.655500
185	Phusachodu	Sovekrola	94.253444	25.606250
186	Chesezu Nasa	Thisaprii	94.277389	25.682444
187	Phek	Khaboru	94.472778	25.664806
188	Ruzazho	Yoitephiio	94.319528	25.757861
189	Ruzazho	Kutsukurho	94.319528	25.757861
190	Sohomi	Khonosa / Pathara	94.491583	25.719028
191	Mitsale	Nato	94.433447	25.784750
192	Chepoketa	Chepi	94.484611	25.798778
193	Inbung	Longkhi	94.607944	25.556139
194	Lasumi village	Wozho	94.240556	25.538917
195	Beisumuikam	Kam	93.540500	25.699806
196	New thewati	Lavutsang	94.769361	25.549694

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LABEL	Village	CCA	X	Y
197	Chesezu Nasa	Thizaboi	94.277389	25.682444
198	Lozaphuhu	Chepi	94.571013	25.578687
199	Kutsapo	Laka	94.450361	25.728056
200	Kutsapo	Shihah	94.450361	25.728056
201	Lozaphuhu	Tuhakuhuba	94.490111	25.566194
202	Phek	Muradzukra	94.472778	25.664806
203	Upper Khomi	Chepi (Zanibu)	94.399944	25.665083
204	Phokhungri	Tilutsam	94.834889	25.605111
205	Chozuba village	Miisiiriibo	94.319528	25.718444
206	Khulazu Bawe	Tizu Community Forests	94.276833	25.550889
207	Kikruma	Thikapu	94.221333	25.581944
208	New Beisampui	Beisanlo	94.567514	25.536059
209	New Ngauna	New Ngauna	93.616722	25.234389
210	Nzua village	Luangthungbak	93.637528	25.316528
211	Old Nkio Village	Kamening Puineu	93.576111	25.394972
212	Tening Namsan	Cheranghangkiu	93.643167	25.353500
213	Tening Old Village	Chepuangpilog	93.606944	25.358222
214	Tening village	Muilong	93.604417	25.354639
215	Nchangram village	Kezuanning	93.634167	25.401111
216	Azailong Village	Hegozam	93.642389	25.410333
217	Old Tesen	Tebidui ewak	93.668222	25.468583
218	Benreu	Benreu	93.863639	25.579278
219	New Peren	N-goulwatu	93.677306	25.527278
220	New Poilwa (Poilwa nemai)	New Poilwa (Poilwa nemai)	93.941056	25.594833
221	Old Peren	Herapintu	93.690500	25.501139

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LABEL	Village	CCA	X	Y
222	Old Puilwa	Mahuna Range	93.941056	25.594833
223	New Soget	Zang	93.474961	25.475056
224	Nkio 'B'	Nkiokam	93.499583	25.442111
225	New Njau	New Njau	93.616750	25.301056
226	Gopibungi	Gopibungi	93.530000	25.487722
227	Bongkholong	Khaley	93.532611	25.539778
228	Upper Sinjol Village	Nreigimbak	93.583556	25.447611
229	Tepun Village	Chepuangjam	93.659083	25.348944
230	Beisampuiram	Ngaulo Tu	93.594861	25.524972
231	New Sinjol	Kamlao	93.532250	25.465722
232	Nsenlo	Nsiuzam	93.468031	25.482600
233	Phaikholun	Phaipan	93.483667	25.366306
234	Heiranglwa	Ngwraki Range	93.726222	25.523500
235	Mbaupungwa	Mbengrei	93.654861	25.407750
236	Nkialwa	Nraikau	93.644528	25.427528
237	Heningkunglwa	Heningkunglwa Village CCA	93.776167	25.674667
238	Gaili	Gaily Village CCA	93.811389	25.657556
239	Pedi Village	Pedi Village CCA	93.829472	25.592583
240	Punglwa	Punglwa Village CCA	93.870778	25.622083
241	Bamsiakeloa	Nsong Bei Npuilwa	93.499806	25.357500
242	Lalong Village	Kelorimbou	93.552167	25.295361
243	Nchan	Bangelatuang	93.527194	25.333111
244	N-Gam Village	Hebaituang	93.504778	25.297556
245	Nsong Namchi Village	Hebamloa	93.555306	25.329111
246	Nsong Village	Njambanu Lwa	93.556056	25.320278

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LABEL	Village	CCA	X	Y
247	Old Ngoulong Village	Sikituang	93.476278	25.319194
248	Old Jalukie Sector 'A'	Old jalukie Biodiversity Conservation	93.762000	25.571306
249	Lamhai	Nbeina paulwa	93.742278	25.506750
250	Jalukielo	Jalukielo	93.645361	25.689500
251	Vongkitham	Sungtu	93.589306	25.599389
252	Songlhu	Ngaulo	93.618056	25.546000
253	Paijal	Kibung	93.608194	25.613222
254	Old Chalkot	Ngaleng koal	93.638000	25.550028
255	Old Beisampui	Ngaulo Tu	93.579778	25.513222
256	Chamcha	Tuinei	93.562694	25.599611
257	New Chalkot	Fame Cool	93.623472	25.610361
258	Julukie Zangdi	Julukie Zangdi	93.559222	25.707111
259	Dunki Village	Herapireu	93.738778	25.638194
260	Deukwaram	Deukwaram	93.734556	25.617694
261	Yachem Village	Yachem Community Reserve	94.725278	26.521389
262	Sakshi	Zhingnyushang	94.881389	26.385556
263	Pongching	Balam	94.754997	26.451332
264	Akumen	Woka lu	94.531111	26.656111
265	Mangmetong	Kiyalu	94.399097	26.293428
266	mangmetong	Angainlak	94.399097	26.293428
267	Chungtia	Ongru Rabi	94.444619	26.383861
268	Kinunger	Wzasukong	94.429203	26.373556
269	Mokokchung Village	Mongzu ki	94.531814	26.326797
270	Sungratsu	Lora Lu	94.548789	26.389411
271	Mopongchuket	Nashimer	94.535508	26.390703

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LABEL	Village	CCA	X	Y
272	Longpa	Suptsu Lu	94.523989	26.422669
273	Longjang	Wazasukong	94.538442	26.442253
274	Mongsenyimti	Tsuma Lemang Lu	94.605919	26.400111
275	Longkong	Longkong Lu	94.610597	26.374533
276	Longmisa	Lendima Lu	94.603889	26.353889
277	Satsu	Longmimang	94.399342	26.354272
278	Yajang 'c'	Tzurmen Lu	94.531111	26.697778
279	Nokpu	Liangmen	94.500000	26.603889
280	Saring	Tali Valley	94.489444	26.614444
281	Yajang 'A'	Naidangkong	94.556389	26.668111
282	Yajang 'A'	Woka Lu	94.531111	26.656111
283	Merangkong	Rongnu & Sungkongchiyong	94.648611	26.632000
284	Asamgma	Meyitsbu Lu	94.592361	26.558667
285	Yimchenkimong	Liyangjen	94.596417	26.583778
286	Molongkimong	Amgotsukong & tzumarrama LU	94.584694	26.641889
287	Dibuia	Tongdentsu	94.492022	26.526056
288	Longjemdang	Aimeki	94.420553	26.516611
289	Changki	Jangpetkong	94.394267	26.415967
290	Waromong	Natusu	94.524311	26.558528
291	Khar	Imokong	94.472047	26.472047
292	Mongchen	Lamel	94.471431	26.505728
293	Athupumi	Khakahiko	94.416306	26.474150
294	Japu	Japu	94.411911	26.506661
295	Chungtayimsen	Tsushiyongpang CCA	94.411911	26.506661
296	Satzukba village	Satzukba CCA	94.352347	26.471672

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LABEL	Village	CCA	X	Y
297	Lakhuni	Kura Yangi	94.444917	26.547528
298	Changdang village	Wazaku LU	94.452028	26.588000
299	Chuchuyimlang	Ngummeta	94.646444	26.498500
300	Akhoya	Longjak Lu	94.678861	26.517833
301	Unger	Ajitongpang Lu	94.665972	26.491972
302	Thekrejuma	Khokhithi Thekrejuma Biodiversity Conservation	93.940161	25.696344
303	Medziphema Kuotsu Clan	Teshokhuzhu	93.805561	25.737911
304	Ruzaphema	Chashachu	93.805561	25.737911
305	Yemishe	Kotohu	94.515000	25.960833
306	Shotomi	Akuha Kipiyi Ghoki	94.536944	26.016389
307	Ghukiye	CKK (Chepoki Kilki Kuqhakulu)	94.496583	25.904944
308	Phishumi	Tapu Kuda	94.416750	26.151222
309	Litta Old & New	Akuha Kiji	94.386528	26.176500
310	Yehimi	Sherumito	94.617556	26.152972
311	Tichipami	Muruto	94.584333	26.183972
312	Surumi	Nanga Green Zone	94.576833	26.157861
313	Thsuruhu	Thsuruhu Ghoki	94.476278	25.896056
314	Kiyeshe Sukhai	Katsuto	94.501833	25.882861
315	Kivikhu	Aqhu Khiji	94.498750	25.842111
316	Kilo Old	Kiloto	94.450639	25.910611
317	Mudutsugho	Aphuto	94.417500	25.865000
318	Lazami	Aphuqa	94.247778	25.863333
319	Hebolomi	Eloku Clan	94.365556	25.834722
320	Chishilimi	Tsuyi	94.380278	25.890639

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LABEL	Village	CCA	X	Y
321	Awohumi	Awohu	94.337000	25.927444
322	Rotomi Old & New	Loto	94.431139	26.076000
323	Philimi	Yeghubo	94.405528	26.070917
324	Naghuto Old	Mepughoki Hu	94.502556	26.140778
325	Aotsakili	Ayina Kukulo	94.525528	26.144889
326	Aizuto	Aizuto Lokobo	94.517222	26.153833
327	Limthsami	Nanga Green Zone	94.501861	26.181139
328	Ngozubo	Khuiche	94.675556	26.071389
329	Melahumi	Bobohu	94.633750	26.058111
330	Lizuto	Khulxe	94.663139	26.088778
331	Khewoto	Sahuli	94.558889	25.911944
332	Khekiye	Luchelholuto Or Tukhaki	94.553694	25.901222
333	Mimi	Lonakken Youdfukan	94.905833	25.709722
334	Yangzitong	Lumuchu	94.655833	25.948333
335	Anatonger	Chikipong Forest	94.830278	25.969722
336	Yingphire	Keyo	94.591389	25.893889
337	Wongtsuwong	Shokkhangmew, Yinban, Kimtsuk	94.976111	25.817222
338	Ththeze	Tutheze reserve	94.798056	25.815278
339	Tutheyu	Tutheyu Reserve	94.751667	25.818333
340	Tsungtang	Muwasang	94.964167	25.799167
341	Tsongphong	Tejenko	94.692500	25.898889
342	Thsingar	Thsinga murong	94.704722	25.886944
343	Thangthur	Jingkhru	94.618056	25.881944
344	Thanamir	Wurukenuh - Lhokimong	94.954167	25.777222
345	Singsi (Shishimi)	Singsi Murong	94.631111	25.826389

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LABEL	Village	CCA	X	Y
346	Seyoghung	Rhuyo	94.641944	25.897500
347	Sangtsong	Sangtsong Forest	94.968889	25.835278
348	Sangphur	Sangphur Reserve	94.774444	25.831667
349	Sangkhumti	Sangkhumti Forest	94.872222	25.914444
350	Phokphur	Ayuwong-Mukotekyu	94.941944	25.880000
351	Phelunger	Thureke Langyang	94.815278	25.922500
352	Penkim	Ayowong	94.932500	25.799722
353	Old Risetsh	Uzashuyong	94.754167	25.967222
354	New Monger	Jingkhu	94.627222	25.908889
355	Kongjiri	Khochorong	94.874444	25.712500
356	Metonger	Mitong reserve	94.891389	25.888889
357	Kisetong	Longya	94.701944	25.957778
358	Fakim	Kikukimtsu-Mushukanta	94.958056	25.799722
359	Changchor	Yangphi	94.759444	25.933611
360	Chipkipong	Chikipong Forest	94.920278	25.884722
361	Amahator	Amahator Reserve	94.742222	25.939167
362	Langkok	Langkok	94.758889	25.903333
363	Yangpi	Shepen	94.748806	26.389389
364	Yali	Shemjila	94.785000	26.353611
365	Tsg (L)	Sojet	94.834444	26.289917
366	Sangtak	Nyikipung	94.734583	26.312833
367	Nakshou	Lemtok	94.819500	26.330194
368	Mausha	Saksha	94.884778	26.325333
369	Longtang	Chongkujong	94.758056	26.331389
370	Litim	Sangpi	94.667111	26.360556

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LABEL	Village	CCA	X	Y
371	Khudei	Cheinyak	94.758167	26.331472
372	Kejok	Mochang	94.835278	26.276944
373	Hakchang	Liokumtak	94.885278	26.301944
374	Bhumabk	Auchem	94.828250	26.368778
375	Yongshei	Kangnyu	94.796333	26.569250
376	Yongnyah	Phamnyu Yogchong	94.824028	26.594389
377	Tamlu	Shutishing	94.728694	26.662417
378	Shamnynching	Shemyung	94.752217	26.722833
379	Netnyu	Khangkha	94.860528	26.571722
380	Wansoi	Beuyong Khao	94.087806	26.229028
381	Sanglao	Longpong nga	94.017556	26.076056
382	Angangba	Singkongkyu	94.695306	26.215500
383	Yuching	Bumyak	95.073806	26.683361
384	Wetting	Wotsa	95.181444	26.716139
385	Tangnyu	Longshang	95.151472	26.693222
386	S.Wamsa	Gamlo Forest	95.122944	26.623111
387	S/Makok	Pamjong	95.091389	26.628417
388	Nyasa	Lak Hamjak	95.179389	26.768583
389	Longwa	Kaiviou	95.214806	26.658611
390	Longwa Wasa	Lyagak Komnyu	95.182778	26.660139
391	Chingkao Chingnyu	Nonnyu	95.049722	26.527306
392	Aiwa Changle	Chiang	94.969111	26.592000
393	Sowa	Chiang	94.598500	26.360250
394	Mohong	Bangyang	94.963389	26.597389
395	Shangnyu	Tabam	95.140056	26.773389

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LABEL	Village	CCA	X	Y
396	Mon	Yalam	95.066278	26.734583
397	Wakching	Aophong	94.886500	26.697417
398	Wangla	Aman Hong	95.011667	26.724472
399	Tela	Hahpankuh	95.139833	26.908194
400	Sangsa	Sangsa	95.107917	26.886972
401	Nokzang	Weitong	95.170000	26.975972
402	Longting	napangling	95.164083	26.888333
403	Lapa	Nyaling	95.034556	26.897917
404	Jaboka Village	Chiknyu	95.143639	26.935417
405	Shamnyu	Youngthuh	94.968889	26.368000
406	Changnyu	Nokying Khao	94.995028	26.462833
407	Kenchenshu	Telao	94.989917	26.455889

Annexure 4: District wise detailed List of Community-Conserved Areas in Nagaland

1) Kohima

Sr. No.	Village/ Villages	CCA	Year when Established	Tribe	Dialect spoken
1	Tuophema	Niathu Mount	1980	Angami	Tenyidie
2	Tsiemekhuma Bawe & Basa	Niathu Mount	1994	Angami	Tenyidie
3	Thizama	Terheizie	2012	Angami	Tenyidie
4	Peers Club	Niathu Mount	2012	Angami	Tenyidie
5	Chiechama Metha clan	Secha Mount	1980	Angami	Tenyidie
6	Viswema	Viswema	-	Angami	Tenyidie
7	Kigwema	Kigwema Biodiversity Trust	1990	Angami	Tenyidie
8	Khuzama	Khuzama	-	Angami	Tenyidie
9	Khonoma	Khonoma Nature Conservation & Tragopan Sanctuary (KNCTS)	1993	Angami	Tenyidie
10	Jotsoma	Jotsoma reserve Forest	-	Angami	Tenyidie
11	Jakhama	Jakhama	2005	Angami	Tenyidie
12	Dzuleke	Dzuleke	2000	Angami	Tenyidie
13	Phesama	-	-	Angami	Tenyidie
14	Sendenyu	Sendenyu Biodiversity Conservation	2003	Rengma	Rengma
15	Phenshunny Khunyu Ramusinyu	PKR Biodiversity Conservation	1993	Rengma	Rengma

2) Phek

Sr. No.	Village/ Villages	CCA	Year when Established	Tribe	Dialect spoken
1	Zelome	Padu	2001	Chakhesang	Poula
2	Zhavame	Rulu	2001	Chakhesang	Poula
3	Chizami	Ewu	-	Chakhesang	Khezha
4	Mesulumi	Kamire	2008	Chakhesang	Khezha
5	Sumi	Noko Kunu	2008	Chakhesang	Sumi
6	Enhulumi	Ewulu Great Hill Barbet Sanuery	2010	Chakhesang	Khezha
7	Thetsumi	Senupfhu	2008	Chakhesang	Khuzhale Khezha
8	Sakraba	Sakraba NASA Forest	1981	Chakhesang	Chokri
9	Khulazu Basa	Therosiigii Community Forests	2008	Chakhesang	Chokri (Chakhesang)
10	Chesezu Nasa	Thisaprii	2008	Chakhesang	Chokri (Chakhesang)
11	Chesezu Nasa	Thizaboii	2008	Chakhesang	Chokri (Chakhesang)
12	Khulazu Bawe	Tizu Community Forests	2004	Chakhesang	Chokri (Chakhesang)
13	Dzulhami	Nuhosu Veku	1980	Chakhesang	Chokri (Chakhesang)
14	Khutsami	Phuyo	-	Chakhesang	Chokri (Chakhesang)
15	Thiivopisii	Thiivopisiimi, Dziidiiri Conservation (TDC)	2009	Chakhesang	Chokri (Chakhesang)
16	Yoruba	Muthisukha	1980	Chakhesang	Chokri (Chakhesang)
17	Ruzazho	Yoitephiio	2000	Chakhesang	Chokri (Chakhesang)
18	Ruzazho	Kutsukurho	2000	Chakhesang	Chokri (Chakhesang)
19	Chozuba village	Miisiiriibo	-	Chakhesang	Chokri (Chakhesang)
20	Phugi	Lopeco		Chakhesang	Chokri (Chakhesang)
21	Rihuba	Eyoza	1998	Chakhesang	Chokri (Chakhesang)

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Sr. No.	Village/ Villages	CCA	Year when Established	Tribe	Dialect spoken
22	Kikruma	Phuzutu	1999	Chakhesang	Chokri
23	Kikruma	Thikapu	1999	Chakhesang	Chokri
24	Kami	Pfuchude	2006	Chakhesang	Khezha
25	Khezhakeno village	Ngade Forest	2007	Chakhesang	Khezha
26	Lekromi	Julu	2001	Chakhesang	Khezha
27	Phusachodu	Sovekrola	2006	Chakhesang	Chokri
28	Lasumi village	Wozho	2006	Chakhesang	Khezha
29	Khumiasii	Sawie	2013	Pochury	Pochury
30	Akhen	Tiizhimiisii	2013	Pochury	Pochury, Kuki
31	Reguri	Tupukhasii	2010	Pochury	Yisi, Pochury
32	Matikhrii	Miirhreihu	2010	Pochury	Pochury
33	Meluri	Kiiriiwusii	2001	Pochury	Pochury
34	Kanjang	Chaljang	2011	Pochury	Pochury
35	Lepthori	Khrokhropfii	1987	Pochury	Pochury
36	Middle Khomi	Khalutu	2008	Chakhesang	Chokri (Chakhesang)
37	Kizari	Misizung	1996	Chakhesang	Chokri (Chakhesang)
38	Kotisu	Chepi Ratsuru	1998	Chakhesang	Chokri (Chakhesang)
39	Losami	Dzukiri	1990	Chakhesang	Khezha (Chakhesang)
40	Tuzatsu	Kiwidzukuraru	2009	Chakhesang	Chokri (Chakhesang)
41	Khotsokono	Guitiru	1996	Chakhesang	Chokri (Chakhesang)
42	Khotsokono	Hekhatiru	1996	Chakhesang	Chokri (Chakhesang)
43	Phek	Khaboru	1988	Chakhesang	Chokri (Chakhesang)
44	Sohomi	Khonosa / Pathara	1998	Chakhesang	Chokri (Chakhesang)
45	Mutsale	Nato	1998	Chakhesang	Chokri (Chakhesang)

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Sr. No.	Village/ Villages	CCA	Year when Established	Tribe	Dialect spoken
46	Chepoketa	Chepi	2000	Chakhesang	Chokri (Chakhesang)
47	Lozaphuhu	Chepi	2001	Chakhesang	Chokri (Chakhesang)
48	Kutsapo	Laka	2004	Chakhesang	Chokri (Chakhesang)
49	Kutsapo	Shihah	2004	Chakhesang	Chokri (Chakhesang)
50	Lozaphuhu	Tuhakuhuba	2001	Chakhesang	Chokri (Chakhesang)
51	Phek	Muradzukra	1988	Chakhesang	Chokri (Chakhesang)
52	Upper Khomi	Chepi (Zanibu)	2006	Chakhesang	Chokri (Chakhesang)
53	Old thewati	Sharali Kukile	1947	Pochury	Sanphuri (Pochury)
54	Old thewati	Tsatutsi	1947	Pochury	Sanphuri (Pochury)
55	Mokie	Whori	2010	Pochury	Phor (Pochury)
56	Mokie	Wuthoru	2010	Pochury	Phor (Pochury)
57	Hutsii	Tajiihu	2010	Pochury	Yisi
58	Sutsu	Jesulaun	2008	Pochury	Laruri
59	Latsam	Yowlampe	1972	Pochury	Laruri (Pochury)
60	Phor	Shatiiya	2009	Pochury	Yisi & Pochury
61	New thewati	Lavutsang	2010	Pochury	Sanphuri (Pochury)
62	Phokhungri	Tilutsam	2001	Pochury	Laruri (Pochury)
63	Laruri	Lülvüti	-	Pochury	Laruri (Pochury)
64	Laruri	Hang	-	Pochury	Laruri (Pochury)
65	Hutsii	Tajiihu	-	Pochury	Laruri (Pochury)
66	Washelo	Mekwelong Sanzi	-	Pochury	Laruri (Pochury)

3) Zunheboto

Sr. No.	Village/ Villages	CCA	Year when Established	Tribe	Dialect spoken
1	Yemishe	Kotohu	-	Sumi	Sumi
2	Satami	Chimpito	-	Sumi	Sumi
3	Ngozubo	Khuiche	-	Sumi	Sumi
4	Melahumi	Bobohu	-	Sumi	Sumi
5	Lizuto	Khulxe	-	Sumi	Sumi
6	Khukishe	Kotohu	-	Sumi	Sumi
7	Khewoto	Sahuli	-	Sumi	Sumi
8	Khekiye	Luchelholuto Or Tukhaki	-	Sumi	Sumi
9	Phishumi	Tapu Kuda	-	Sumi	Sumi
10	Litta Old & New	Akuha Kiji	-	Sumi	Sumi
11	Aizuto	Aizuto Lokobo	-	Sumi	Sumi
12	Limthsami	Nanga Green Zone	-	Sumi	Sumi
13	Rotomi Old & New	Loto	-	Sumi	Sumi
14	Philimi	Yeghubo	-	Sumi	Sumi
15	Naghuto Old	Mepughoki Hu	-	Sumi	Sumi
16	Aotsakili	Ayina Kukulo	-	Sumi	Sumi
17	Mudutsugho	Aphuto	-	Sumi	Sumi
18	Lazami	Aphuqa	-	Sumi	Sumi
19	Hebolomi	Eloku Clan	-	Sumi	Sumi
20	Chishilimi	Tsuyi	-	Sumi	Sumi
21	Awohumi	Awohu	-	Sumi	Sumi
22	Thsuruhu	Thsuruhu Ghoki	-	Sumi	Sumi
23	Thakiye	Angushu Saqhi	-	Sumi	Sumi

Sr. No.	Village/ Villages	CCA	Year when Established	Tribe	Dialect spoken
24	Kiyeshe Sukhai	Katsuto	-	Sumi	Sumi
25	Kivikhu	Aqhu Khiji	-	Sumi	Sumi
26	Kilo Old	Kiloto	-	Sumi	Sumi
27	Yehimi	Sherumito	-	Sumi	Sumi
28	Tichipami	Muruto	-	Sumi	Sumi
29	Surumi	Nanga Green Zone	-	Sumi	Sumi
30	Shotomi	Akuha Kipiyi Ghoki	-	Sumi	Sumi
31	Ghukiye	CKK (Chepoki Kilki Kuqhakulu)	-	Sumi	Sumi

4) Mokokchung

Sr. No.	Village/ Villages	CCA	Year when Established	Tribe	Dialect spoken
1	Mangmetong	Kiyalu	-	Ao	Ao
2	Mangmetong	Angainlak	-	Ao	Ao
3	Chungtia	Ongru Rabi	-	Ao	Ao
4	Kinunger	Wazasukong	-	Ao	Ao
5	Ungma	Oke Menden	-	Ao	Ao
6	Ungma	Sirneb Pok	-	Ao	Ao
7	Longmisa	Lendima Lu	-	Ao	Ao
8	Satsu	Longmimang	-	Ao	Ao
9	Sungratsu	Lora Lu	-	Ao	Ao
10	Mopungchuket	Nashimer	-	Ao	Ao
11	Longpa	Suptsu Lu	-	Ao	Ao
12	Longjang	Wazasukong	-	Ao	Ao
13	Mongsenyimti	Tsuma Lemang Lu	-	Ao	Ao

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Sr. No.	Village/ Villages	CCA	Year when Established	Tribe	Dialect spoken
14	Longkong	Longkong Lu	-	Ao	Ao
15	Aliba	Tsumongkong	-	Ao	Ao
16	Aliba	Rara	-	Ao	Ao
17	Mokokchung	Mongzü Ki	-	Ao	Ao
18	Yajang 'C'	Tzurmen Lu	-	Ao	Ao
19	Saring	Tali Valley	-	Ao	Ao
20	Yajang 'a'	Naidangkong	-	Ao	Ao
21	Chungtia Yimsen	Tsushiyongpang	-	Ao	Ao
22	Longpha Yimsen	Longphayimsen	-	Ao	Ao
23	Watiyim	Watiyim	-	Ao	Ao
24	Moayimti	Moayimti	-	Ao	Ao
25	Medemyim	Medemyim	-	Ao	Ao
26	Satzukba	Satzukba	-	Ao	Ao
27	Aokum	Aokum	-	Ao	Ao
28	Akumen	Woka Lu	-	Ao	Ao
29	Merangkong	Rongnu & Sungkongchiyong	-	Ao	Ao
30	Asangma	Meyitsbu Lu	-	Ao	Ao
31	Wamaken	Tzumalemang	-	Ao	Ao
32	Anakiyimsen	Sunglanu Lu	-	Ao	Ao
33	Anaki "c"	Sung Lu	-	Ao	Ao
34	Kangtsung	Rangkang Min	-	Ao	Ao
35	Anaki	Gurongtsu	-	Ao	Ao
36	Changtongya Old	Alilu	-	Ao	Ao
37	Akhoya	Longjak Lu	-	Ao	Ao

Sr. No.	Village/ Villages	CCA	Year when Established	Tribe	Dialect spoken
38	Unger	Ajitongpang Lu	-	Ao	Ao
39	Kelingmen	Artongpang Lu	-	Ao	Ao
40	Changtongya New	Benmang Lu	-	Sema	Sema
41	Nokpu	Liangmen	-	Ao	Ao
42	Yimchenkimong	Liyangjen	-	Ao	Ao
43	Molongkimong	Angotsukong & Tzumarrama Lu	-	Ao	Ao
44	Molongyimsen	Apukong & Lensen	-	Ao	Ao
45	Dibuia	Tongdentsu	-	Ao	Ao
46	Longjemdang	Aimeki	-	Ao	Ao
47	Changki	Jangpetkong	-	Ao	Ao
48	Waromong	Natusü	-	Ao	Ao
49	Mongchen	Lamel	-	Ao	Ao
50	Khar	Imokong	-	Ao	Ao
51	Athupumi	Khakahiko	-	Ao	Ao
52	Japu	Japu	-	Ao	Ao
53	Chuchuyimlang	Ngümmeta Lu	-	Ao	Ao

5) Kiphire

Sr. No.	Village/ Villages	CCA	Year when Established	Tribe	Dialect spoken
1	Anatonger	Chikipong Forest	1999	Yimchunger	Yimchunger and Chirr
2	Tsongphong	Tejenko	1985	Sangtam	Sangtam, Sumi
3	Phelunger	Thureke Langyang	1995	Tikhir	Tikhir
4	Old Riseths	Uzashuyong	2005	Sangtam	Sangtam

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Sr. No.	Village/ Villages	CCA	Year when Established	Tribe	Dialect spoken
5	New Longmatra	Longmatra Reseve	1999	Yimchunger	Yimchunger and Chirr
6	Kisetong	Longya	1989	Sangtam	Sangtam
7	Keor	Longmurong	1985	Sangtam	Sangtam, Thonger
8	Changchor	Yangphi	1999	Yimchunger	Yimchunger , Chirr
9	Amahator	Amahator Reserve	1993	Sangtam	Sangtam, Yingphthonger
10	Langkok		2000	Sangtam	Sangtam
11	Yangzitong	Lumuchu	2001	Sangtam	Sangtam
12	Yingphire	Keyo	1999	Yimchunger	Yimchunger, Chirr
13	Thangthur	Jingkhu	1980	Sangtam	Sangtam , Anar
14	Singsi (Shishimi)	Singsi Murong	2002	Sangtam	Sangtam
15	New Monger	Jingkhu	1997	Yimchunger	Yimchunger and Chirr
16	Natsami			Sangtam	Sangtam
17	Ththeze	Tutheze reserve	1990	Tikhir	Tikhir
18	Thsingar	Thsinga murong	2000	Yimchunger	Yimchunger and Chirr
19	Seyoghung	Rhuyo	1995	Yimchunger Tikher	Yimchunger
20	Mimi	Lonakken Youdfukan	1989	Sangtam	Sangtam
21	Wongtsuwong	Shokkhangmew, Yinban, Kimtsuk	-	Yimchunger	Yimchunger
22	Tsungtang	Muwasang	2000	Sangtam	Sangtam
23	Thanamir	Wurukenuh - Lhokimong	1999	Sangtam	Sangtam
24	Sangtsong	Sangtsong Forest	2000	Sangtam	Sangtam
25	Sangkhumti	Sangkhumti Forest	2005	Sangtam	Sangtam

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Sr. No.	Village/ Villages	CCA	Year when Established	Tribe	Dialect spoken
26	Salumi	Langkhae Sang-Shong Kimtsu	1980	Yimchunger	Yimchunger and Chirr
27	Phokphur	Ayuwong-Mukotekyu	2001	-	TikhirSangnguliu, Yiuliu, Thongliu, Lamliu, Thuviliu
28	Penkim	Ayowong	1999	Sangtam	Sangtam , Anar
29	Kongjiri	Khochorong	1999	Sangtam	Sangtam
30	Metonger	Mitong reserve	2001	Yimchunger	Yimchunger and Chirr
31	Fakim	Kikukimtsu-Mushukanta	1983	Sangtam	Sangtam
32	Chipkipong	Chikipong Forest	2006	Tikhir	Tikhir
33	Tutheyu	Tutheyu Reserve	2000	Sangtam	Sangtam
34	Sangphur	Sangphur Reserve	2003	-	Sangtam , Mongzar

6) Longleng

Sr. No.	Village/ Villages	CCA	Year when Established	Tribe	Dialect spoken
1	Yaongyimchen	Balam	1995	Phom	Phom
2	Yachem Village	Yachem Community Reserve	2001	Phom	Yachem Dialect
3	Sakshi	Zhingnyushang	2012	Phom	Phom
4	Pongching	Balam & Noyak	2001	Phom	Phom

7) Tuensang

Sr. No.	Village/ Villages	CCA	Year when Established	Tribe	Dialect spoken
1	Yimpang	Layed	2000	Chang	Chang
2	Yangpi	Shepen	1991	Chang	Chang
3	Yali	Shemjila	1985	Chang	Chang
4	Yahkor	Chikiuyoung	2001	Yimchunger	Yimchunger
5	Tsg (L)	Sojet	2005	Chang	Chang
6	Tsg (K)	Nakba	2005	Chang	Chang
7	Sotokur	Motakyong	2000	Yimchunger	Yimchunger
8	Sangtak	Nyikipung	1998	-	-
9	Rurrur	Sangpholoki	2000	Yimchunger	Yimchunger
10	Nyinyem	Mushu auchem	2000	Chang	Chang
11	Noksen	Mashiku	1988	Chang	Chang
12	Nakshou	Lemtok	2000	Chang	Chang
13	Mausha	Saksha	1991	Chang	Chang
14	Longtang	Chongkujong	1992	Chang	Chang
15	Litim	Sangpi	2000	-	-
16	Konya	Ponongem	1998	Chang	Chang
17	Khudei	Cheinyak	2010	Chang	Chang
18	Kejok	Mochang	2000	Chang	Chang
19	Helepong	Helipong CCA	2004	Chang	Chang
20	Hakchang	Liokumtak	1991	Chang	Chang
21	Chingmie	Pakhong	2004	Chang	Chang
22	Bhumabk	Auchem	2000	Chang	Chang
23	Yongshei	Kangnyu	1998	Phom	Phom
24	Yongnyah	Phamnyu Yogchong	2000	Phom	Phom

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Sr. No.	Village/ Villages	CCA	Year when Established	Tribe	Dialect spoken
25	Yongam	Heiphang	1982	Phom	Phom
26	Tangha	Nela Phang	1980	Phom	Phom
27	Tamlu	Shutishing	1990	Phom	Phom
28	Shamnynching	Shemyung	1980	Phom	Phom
29	Netnyu	Khangkha	2004	Phom	Phom
30	Kangching	Shuyen	1995	Phom	Phom
31	Yokao	Yokao	1995	Khamniungan	Khamniungan
32	Wui	Wui CCA	2005	Khamniungan	Khamniungan
33	Wansoi	Beuyong Khao	1996	Khamniungan	Khamniungan
34	Sanglao	Longpong nga	1993	Khamniungan	Khamniungan
35	Joa Leu	Joa Leu	2001	Khamniungan	Khamniungan
36	Pathso	Phuow	2000	Khamniungan	Khamniungan
37	Pangsha Old	Dempong	1998	Khamniungan	Khamniungan
38	Pang	Zoa Dam	1990	Khamniungan	Khamniungan
39	Noklak Village	Sekie	1990	Khamniungan	Khamniungan
40	Nokhu	Nokhu Reserve	1991	Khamniungan	Khamniungan
41	Choklangan	Chemongan	1997	Khamniungan	Khamniungan
42	Chephur	Jang Zang	2005	Khamniungan	Khamniungan
43	Chellitso	Chellitso Reserve	2009	Khamniungan	Khamniungan
44	Tsadang	Tsungnyisi	2005	Sangtam	Sangtam
45	Sangsomong	Lurha	2005	Sangtam	Sangtam
46	Mangakhi	Shutakshu	2000	Sangtam	Sangtam
47	Chimonger	Longya	2001	Sangtam	Sangtam
48	Angangba	Singkongkyu	2008	Sangtam	Sangtam

8) Peren

Sr. No.	Village/ Villages	CCA	Year when Established	Tribe	Dialect spoken
1	Inbung	Longkhi	-	Kuki	Kuki
2	Beisumuikam	Kam	-	Zeliangi	Zeliang
3	New Beisampui	Beisanlo	-	Zeliang	Zeliang
4	Lilen	Kegung	-	Kuki	Kuki
5	Nzua village	Luangthungbak	-	Zeliang	Liangmai
6	Old Nkio Village	Kamening Puineu	-	Zeliang	Zeme & Liangmai
7	Tening Namsan	Cheranghangkiu	-	Zeliang	Liangmai
8	Tening Old Village	Chepuangpilog	-	Zeliang	Liangmai
9	Tening village	Muilong	-	Zeliang	Liangmai
10	Nchangram village	Kezuanning	-	Zeliang	Liangmai
11	Azailong Village	Hegozam	-	Zeliang	Zeme & Liangmai
12	Pelelkie	Peungwalwazang	2014		
13	Old Tesen	Tebidui ewak		Zeliang	Zeliang
14	Ngwalwa village	Ngwalwa village CCA	-	Zeliang	Zeliang Dialect
15	Benreu	Benreu	2007	Zeliang	Zeme
16	Kenduang	Kipeuram	2014	Zeliang	Zeme
17	Mpai	Mahunatu	2014	Zeliang	Zeme
18	Nduaglwa	Hegumru	2014	-	-
19	New Peren	N-goulwatu	2012	Zeliang	Zeme
20	New Poilwa (Poilwa nemai)	New Poilwa (Poilwa nemai)	2014	-	-
21	New Puilwa	Kipeuzaun	2014	Zeliang	Zeme
22	Old Peren	Herapintu	2011	Zeliang	Zeliang

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Sr. No.	Village/ Villages	CCA	Year when Established	Tribe	Dialect spoken
23	Old Puilwa	Mahuna Range	2014	Zeliang	Zeliang
24	New Soget	Zang	-	Kuki	Kuki
25	Nkio 'B'	Nkiokam	-	Zeliang	Zeliang
26	Khelma	Maniam	-	Kuki	Kuki
27	Ikiesingram	Pekam	-	Zeliang	Zeliang
28	New Njau	New Njau	-	Zeliang	Zeliang
29	Gopibungi	Gopibungi	-	Kuki	Kuki
30	Bongkholong	Khaley	-	Kuki	Kuki
31	Upper Sinjol Village	Nreigimbak	-	Zeliang	Zeme
32	Njauna	Njauna	-	Zeliang	
33	NTU	NTU Ramsa	-	Zeliang	
34	Nre Ngalung	Nre Ngalung	-	Zeliang	Zeliang
35	Tepun Village	Chepuangjam	-	Zeliang	Liangmai
36	Beisampuiram	Ngaulo Tu	-	Zeliang	Zeliang
37	Old Poilwa	Hepungyi	2013	Zeliang	Zeme
38	New Nkio	Nkiekam	-	Zeliang	Zeliang
39	New Sinjol	Kamlao	-	Kuki	Kuki
40	Old Soget	Sogang	-	Kuki	Kuki
41	Nsenlo	Nsiuzam	-	Zeliang	Zeliang
42	Phaikholon	Phaipan	-	Kuki	Kuki
43	Sailhem	Salhau	-	Kuki	Kuki
44	Songou	Songou	-	Kuki	Kuki
45	Heiranglwa	Ngwraki Range	-	Zeliang	Zeme
46	Mbaupungwa	Mbengrei	-	Zeliang	Zeliang

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Sr. No.	Village/ Villages	CCA	Year when Established	Tribe	Dialect spoken
47	Nkialwa	Nraikau	-	Zeliang	Zeme
48	Heningkunglwa	Heningkunglwa Village CCA	-	Zeliang	Zeliang Dialect
49	Gaili	Gaily Village CCA	-	Zeliang	Zeliang Dialect
50	Pedi Village	Pedi Village CCA	-	Zeliang	Zeliang Tribe
51	Punglwa	Punglwa Village CCA	-	Zeliang	Zeliang Dialect
52	Bamsiakeloa	Nsong Bei Npuilwa	-	Zeliang	Zeme
53	Lalong Village	Kelorimbou	-	Zeliang	Zeme
54	Nchan	Bangelatuang	-	Zeliang	Zeme
55	N-Gam Village	Hebaituang	-	Zehong	Zeme
56	Nsong Namchi Village	Hebamloa	-	-	-
57	Nsong Village	Njambanu Lwa	-	Zeliang	Zeme
58	Old Ngouloung Village	Sikituang	-	Zeliang	Zeme
59	Old Jalukie Sector 'A'	Old jalukie Biodiversity Conservation	1986	Zeliang	Zeliang
60	Lamhai	Nbeina paulwa	2008	Zeliang	-
61	Jalukielo	Jalukielo	2005	Zeliang, Mao, Chakhesang, Angami, Paumai	Nagamese
62	Vongkitham	Sungtu	-	Kuki	Kuki
63	Songlhu	Ngaulo	-	Kuki	Kuki
64	Saijang	Jangdi	-	Kuki	Kuki
65	Paijal	Kibung	-	Kuki	Kuki
66	Pelhang	Balhang	-	Kuki	Kuki
67	Old Chalkot	Ngaleng koal	-	Kuki	Kuki

Sr. No.	Village/ Villages	CCA	Year when Established	Tribe	Dialect spoken
68	Old Beisampui	Ngaulo Tu	-	Zeliang	Zeliang
69	Chamcha	Tuinei	2009	Kuki	Kuki
70	New Chalkot	Fame Cool		Kuki	Kuki
71	Julukie Zangdi	Jalukie Zangdi	2002	Chakhesang, Zeliang, Angami, Mao	Chakhesang
72	Dunki Village	Herapireu	2008	Zeliang	Zeliang
73	Deukwaram	Deukwaram	2009	Zeliang, Naga	Zeliang
74	NJU	NJU Ramsa	-	Zeliang	Zeliang

9) Dimapur

Sr. No.	Village/ Villages	CCA	Year when Established	Tribe	Dialect spoken
1	Tsiepama neise clan	Kedi-Uba of Tsiepama	2011	Angami	Tenyidie
2	Thekrejuma	Khokhithi Thekrejuma Biodiversity Conservation	2012	Angami	Tenyidie
3	Medziphema Kuotsu Clan	Teshokhuzhu	2012	Angami	Tenyidie
4	Ruzaphema	Chashachu	1980	Angami	Tenyidie

10) Mon

Sr. No.	Village/ Villages	CCA	Year when Established	Tribe	Dialect spoken
1	Yuching	Bumyak	2014	Konyak	Konyak & Yuching
2	Wetting	Wotsa	2014	Konyak	Konyak wetting
3	Tangnyu	Longshang	2014	Konyak	Konyak & Tangnyu
4	S.Wamsa	Gamlo Forest	2011	Konyak	Konyak & Wamsa
5	S/Tangten	Getjong	2010	Konyak	Konyak & Tangnyu
6	S/Makok	Pamjong	2013	Konyak	Konyak & Makok
7	S/Chingnyu	Rahjong	2014	Konyak	Konyak & S/Chingnyu
8	Pukha	Tohnyu	2014	Konyak	Konyak & Pukha
9	Nyasa	Lak Hamjak	2013	Konyak	Konyak & Nyasa
10	Nyahnyu	Longsa	2013	Konyak	Konyak & Nyahnyu
11	Longwa	Kaiviou	2014	Konyak	Konyak & Longwa
12	Longwa Wasa	Lyagak Komnyu	2012	Konyak	Konyak & Longwa
13	Chingkao Chingnyu	Nonnyu	2011	Konyak	Chingkao
14	Chenloishu	Tebuh	2014	Konyak	Chen
15	Longzang	Lennyu lemlo	2014	Konyak	Konyak & Longzang
16	Angjangyang	Yokjang	2013	Konyak	Konyak
17	Angphong	Okham	2013	Konyak	Konyak
18	Aiwa Changle	Chiang	2013	Konyak	Konyak
19	Sowa	Chiang	2013	Konyak	Konyak
20	Mohong	Bangyang	2013	Konyak	Konyak
21	Longching	pekuk	2013	Konyak	Konyak

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Sr. No.	Village/ Villages	CCA	Year when Established	Tribe	Dialect spoken
22	Jakphang	Nyokoh	2013	Konyak	Konyak
23	Chi	Longnyuphao	2010	Konyak	Konyak
24	Goching			Konyak	Konyak
25	Leangha	Chinglangpang	2013		
26	Longkei	Linglam	2014	Konyak	Konyak
27	Shangnyu	Tabam	2013		
28	Totok Chingha	Tinghongpan	2013	Konyak	Konyak
29	Totok Chingkho	Poiha	2014	Konyak	Konyak
30	Totok Chingla			Konyak	Konyak
31	Totok Chingyu	Jangling	2013	Konyak	Konyak
32	Tumei	Manpai	2014	Konyak	Konyak
33	Pongkong	Ahtung Area	2013	Konyak	Konyak
34	Phuktong	Nyama Lamthuk	2010	Konyak	Konyak
35	Mon	Yalam	2006	Konyak	Konyak
36	Hongphoi	Raphaiphao	2005	Konyak	Konyak
37	Lamong sheanghah	Longnyah	2014	Konyak	Konyak
38	Longphoh	Selephao	2012	Konyak	Konyak
39	Leangnyu	Thampangho	2009	Konyak	Konyak
40	Wanching	Shopnung	2009	Konyak	Konyak
41	Wakching	Aophong	2009	Konyak	Konyak
42	Zangkham		2014	Konyak	Konyak
43	Zakkho	Hoakho		Konyak	Konyak
44	Z.Tingsa	Longkhoa	2005	Konyak	Konyak
45	Yanpan		2011	Konyak	Konyak

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Sr. No.	Village/ Villages	CCA	Year when Established	Tribe	Dialect spoken
46	Yannu	Yanthong	2012	Konyak	Konyak
47	Wangla	Aman Hong		Konyak	Konyak
48	Tela	Hahpankuh	2013	Konyak	Konyak
49	Sangsa		2011	Konyak	Konyak
50	Oting	Thamyijunyi		Konyak	Konyak
51	Nokyan Village	Mankhoa	2014	Konyak	Konyak
52	Nokzang	Weitong	2013	Konyak	Konyak
53	Longting	napangling	2011	Konyak	Konyak
54	Longam	Longhoi	2012	Konyak	Konyak
55	Lokhon	Shimsha	2013	Konyak	Konyak
56	Lapa	Nyaling	2012	Konyak	Konyak
57	Jaboka Village	Chiknyu	2013	Konyak	Konyak
58	Yongkhao	Hosha	2013	Konyak	Konyak
59	Yonghong	Chamsa	2012	Konyak	Konyak
60	Yaphang	Hongmong	2014	Konyak	Konyak
61	Yakshu	Bukong Tepu	2012	Konyak	Konyak
62	Ukha	Kamengshu	2013	Konyak	Konyak
63	Tamkoang	Mahsha	2012	Konyak	Konyak
64	Shamnyu	Youngthuh	2012	Konyak	Konyak
65	Pessao	Opeh	2010	Konyak	Konyak
66	Changnyu	Nokying Khao	2013	Konyak	Konyak
67	Monakshu	Ongshen	2010	Konyak	Konyak
68	Changlangshu	Wati Poyung	2012	Konyak	Konyak
69	Changlang	Changak	2013	Konyak	Konyak

11) Wokha

Sr. No.	Village/ Villages	CCA	Year when Established	Tribe	Dialect spoken
1	N.longidang	Khalimonkung Eran	2013	Lotha	Lotha
2	Longsa	Pvuchenchyu Enung	2013	Lotha	Lotha
3	N.Longchum	Shampoktong	2013	Lotha	Lotha
4	Mungya	Mentsuo tongti	2013	Lotha	Lotha
5	Aree Old	Hantsanju	2013	Lotha	Lotha
6	Okotso	Okotso	2010	Lotha	Lotha
7	Nangying	Sethankvu	2013	Lotha	Lotha
8	Shaki	Hanchjanthen biodiversity conservation Shaki	2012	Lotha	Lotha
9	Kenchenshu	Telao	2012	Konyak	Konyak

Annexure 5: District wise information on Community-Conserved Areas in Nagaland

District-wise number of Community-Conserved Areas in Nagaland

District	Resolution passed by village council	Informal understanding	Any Other	Total
Kohima	13	0	2	15
Phek	39	27	0	66
Zunheboto	31	0	0	31
Mokochung	52	1	0	53
Kiphire	33	1	0	34
Longleng	4	0	0	4
Tuensang	40	6	2	48
Peren	31	43	0	74
Dimapur	3	0	1	4
Mon	56	13	0	69
Wokha	9	0	0	9
Total	311	91	5	407

District wise list of CCAs that are a part and not a part of CCA network

District	Village part of CCA network	Village not a part of CCA network	Total
Kohima	0	15	15
Phek	24	42	66
Zunheboto	3	28	31
Mokochung	0	53	53
Kiphire	0	34	34
Longleng	0	4	4

Documentation of Community-Conserved Areas of Nagaland

District	Village part of CCA network	Village not a part of CCA network	Total
Tuensang	0	48	48
Peren	4	70	74
Dimapur	0	4	4
Mon	0	69	69
Wokha	0	9	9
Total	31	376	407

District wise information on legal status of land in CCAs

District	Private Land	Clan	Village Council (Community Land)	Others	Total CCAs
Kohima	8	15	0	1	15
Phek	24	66	0	0	66
Zunheboto	20	31	0	0	31
Mokochung	0	0	53	0	53
Kiphire	34	3	8	0	34
Longleng	4	4	0	0	4
Tuensang	33	33	48	1	48
Peren	32	74	0	0	74
Dimapur	1	3	4	0	4
Mon	69	57	6	0	69
Wokha	1	6	9	0	9
Total	226	292	128	2	407

District wise information on CCAs involved in maintain PBR

District	PBR			Total CCAs
	CCAs maintaining PBR	CCAs not maintaining PBR	No Information	
Kohima	0	15	0	15
Phek	10	44	12	66
Zunheboto	0	31	0	31
Mokochung	0	0	53	53
Kiphire	0	34	0	34
Longleng	0	4	0	4
Tuensang	0	48	0	48
Peren	5	51	18	74
Dimapur	1	2	1	4
Mon	2	63	4	69
Wokha	0	6	3	9
Total	18	298	91	407

Annexure 6: Sample MoU signed between Nagaland Forest Department and Tsiemekhuma village, Kohima

GOVERNMENT OF NAGALAND
DEPARTMENT OF FORESTS, ECOLOGY, ENVIRONMENT AND WILDLIFE

Memorandum of Understanding (MoU)

This Memorandum of Understanding is made on this, 20th day of May 2013 between the Village Council/Khel* of Tsiemekhuma Village (hereinafter called 'THE FIRST PARTY') and the Department of Forests, Ecology, Environment and Wildlife, Government of Nagaland (hereinafter called 'THE SECOND PARTY') represented by the signatories to this MoU.

Whereas THE FIRST PARTY understands the need to jointly work with the Government towards conserving biodiversity, maintaining and/or improving the quality of existing forests and/or increase the total area under coverage of conserved forests. It is expected that through this endeavour, the villagers will benefit from the economic returns from preserving the forest and its biodiversity, and direct transfers from the Government.

Whereas THE SECOND PARTY has preserving the existing forests, improving their quality, increasing tree cover, conserving biodiversity amongst its objectives, which aims to achieve through community participation.

THE FIRST PARTY and THE SECOND PARTY do hereby solemnly affirm and state the following: -

1. That THE FIRST PARTY is the absolute owner and is in undisputed possession of 150 ha. of contiguous, moderately dense/dense/very dense forest / ecologically unique areas¹, which has been traditionally reserved by the village. Further, the Village Council/Khel* has identified 150 ha. of contiguous area, which is presently degraded/under jhum cultivation for adding to the existing traditional reserved forest.²
2. Initially it will be sufficient to describe the identified forest area by roads, rivers, ridges, or other well-known or readily intelligible boundaries, with boundaries defined in all four directions as follows:
 - a.North*: PWD Botsa to Senderyn
 - b.South*: P.W.D Road to Senderyn
 - c.East*: Tsiemekhuma Base
 - d.West*: Tsiemekhuma Base
3. That THE FIRST PARTY shall continue to retain absolute title, right and interest in the forest/land and the Department will have no claim or title whatsoever over the land/forest in the future.

1.Dense forest is defined as having 40-70% canopy cover and Very Dense Forest as above 70% canopy cover.

2.The total area earmarked should not be less than 100ha.per village unless contiguous villages are willing to participate and keep aside this area together for the purposes contained in this MoU.

*Strike whichever is not applicable

~~Responsibilities of the Village/Community~~

4. THE FIRST PARTY has voluntarily agreed to conserve the private/community land, for protecting fauna, flora and traditional or cultural conservation values and practices in the identified forest. In pursuance towards this objective, the village council has deliberated the matter in a general meeting and agrees to conserve the identified forest **permanently** and improve the quality of this identified forest, check and control hunting of wildlife within the forest, take biodiversity conservation measures as per the general guidelines prepared by THE SECOND PARTY, and suitably modified as per local requirements in consultation with the FIRST PARTY.[Further, on having understood the rights and responsibilities thereof, THE FIRST PARTY and the village council, wherever it is different from THE FIRST PARTY, has also resolved to voluntarily declare the said forest and its flora and fauna as a Community Reserve under section 36C of the wildlife (Protection) Act,1972 (as amended in 2002).]³
The resolution passed by the village council is attached at **Annexure A**

5. THE FIRST PARTY will assist the department in jointly surveying and demarcation of the forest area to be preserved/conserved and preparation of a scientific Management Plan for management of the forest. Technical guidelines for such survey viz. ground-truthing, forest vegetation type, stock mapping, etc. will be laid down by the forest department beforehand. The map made as a result of such survey, jointly signed by the Village/Khel and the Department representative, will form part of this MoU and exactly define the rough boundaries, identified initially in paragraph 2 above, of the forest area to be conserved.

6. THE FIRST PARTY will be solely responsible in protecting and preserving the forest in the area surveyed and demarcated under the MoU. They will also strictly enforce/implement the Management Plan for the forest prepared jointly with the Department, which may include keeping the demarcated free from all human activities that damage the ecosystem, like clearing of jungle, felling of trees, hunting of wildlife, etc.

7. In case THE FIRST PARTY does not have an existing Joint Forest Management Committee (JFMC), they will form a Management Committee with such nomenclature as the Village Council may decide, to manage the forest till such time a Joint Forest Management Committee (JFMC) is formed. The Committee will function under the overall supervision of the Village Council.

8. Against the funds transferred to the Village/Khel for maintaining and improving the quality of the identified forests, they will carry out activities out of the following list:

- a. Energy saving activities aimed at reducing fuelwood consumption and thus dependency on the forests.
- b. Construction of low cost check dams, brush wood dams, staggered and contoured trenching, gully blocking, etc. for water conservation, preventing surface runoff, making drinking water provision, irrigation, etc. available.
- c. Conservation activities like habitat management, forest protection, accelerated natural regeneration, eco development, supplementary plantation in deficient areas, etc.
- d. Income generating activities like goat/cattle/mithun, etc. through SHGs or otherwise.

**Strike whichever is not applicable*

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- e. Upto 30 percent of the funds can be used by THE FIRST PARTY for infrastructure development, for example construction of public toilets, footpaths, waiting sheds, watch towers, creating and maintaining a forest protection force by appointment of village forest guards as per local requirements.
- f. Alternatively, these 30 percent funds may also be used for investment in a fixed deposit/investment fund managed by a Public Sector Bank, with the objective of using the dividend/returns for forest protection/conservation and infrastructure development activities as laid down in this MoU. Such investments will be taken up after taking prior approval of the Government. The fund can also be used as seed money for taking up other developmental projects from other governmental and non-governmental developmental agencies.
- g. Any other activity mutually agreed upon by the two parties, and notified by the department.

9. THE FIRST PARTY may mobilize resources from their own sources to augment the funds received from Government for carrying out the activities under this MoU.

10. THE FIRST PARTY will extend full cooperation to the department for community mobilization towards building village capacity for achieving the objectives of this MoU, regulation and enforcement of relevant forest acts within the identified area, and for evaluation of schemes/works undertaken as part of this MoU.

Responsibilities of the Department

11. THE SECOND PARTY shall mobilize and transfer an annual amount, linked to the area under preservation, spread over a period of 5 years to the villagers as assistance for preservation/conservation of the forest and development of the village. The assistance can be in the form of cash grants, kind or identified technical interventions. Cash, if any, will be transferred to the FIRST PARTY in the form of a cheque to the VDB or the JFMC account, whichever is resolved by the Village Council. This fund will be jointly operated by the Secretary of the JFMC/Management Committee and representative of the Second Party.

12. THE SECOND PARTY will, in consultation with the village community prepare a scientific Management Plan for the identified forest, including for working schemes in the remainder of forests in the village.

13. THE SECOND PARTY will extend awareness generation programs and other technical interventions to build capacities of the village to manage their forests scientifically, strive to introduce livelihood linked schemes, particularly in the case of communities which are earmarking additional areas, out of their current jhum farms, for long term conservation.

14. THE SECOND PARTY will, in consultation with the villagers devise monitorable indicators to evaluate the management plans every year. Baseline, and quantifiable annual targets will be evolved from the initial survey, which will form part of the management plan.

15. That the averments made above are true to our knowledge and we believe the same to be true and nothing material has been concealed thereof.

**Strike whichever is not applicable*

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DEPENDENTS

Village Council/Khel:

- | | |
|--------------------------|-----------------------------|
| 1. <u>KEVISO VCC</u> | 4. <u>PULHOU LIE HGB</u> |
| 2. <u>VIDILHOU VCC</u> | 5. <u>LHOU LIE TUC G.B.</u> |
| 3. <u>SALHOU LIE HGB</u> | 6. <u>NELHOU LIE G.B.</u> |

Forest Department:

- | | |
|--|---|
| 1. <u>[Signature]</u>
[Stamp: Divisional Forest Officer, Kohima Division, Nagaland] | 2. <u>[Signature]</u>
Divisional Forest Officer
Kohima Division, Kohima |
|--|---|

Witness (District Administration)

- | | |
|--|--|
| 1. <u>[Signature]</u>
Deputy Commissioner
Kohima, Nagaland | 2. <u>[Signature]</u>
Additional Deputy Commissioner
Chief, Kohima |
|--|--|

*Strike whichever is not applicable

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Annexure 7: Sample MoU signed between Nagaland Forest Department & Phek village

Memorandum of Understanding (MoU)

This Memorandum of Understanding is made on this, 2nd day of September 2013 between the Village Council/Khel* of PHEK Village (hereinafter called 'THE FIRST PARTY') and the Department of Forests, Ecology, Environment and Wildlife, Government of Nagaland (hereinafter called 'THE SECOND PARTY') represented by the signatories to this MoU.

Whereas THE FIRST PARTY understands the need to jointly work with the Government towards conserving biodiversity, maintaining and/or improving the quality of existing forests and/or increase the total area under coverage of conserved forests. It is expected that through this endeavour, the villagers will benefit from the economic returns from preserving the forest and its biodiversity, and direct transfers from the Government.

Whereas THE SECOND PARTY has been implementing programs and policies aimed at preserving the existing forests, improving their quality, increasing tree cover, and conserving biodiversity, which it seeks to achieve through community participation.

THE FIRST PARTY and THE SECOND PARTY do hereby solemnly affirm and state the following: -

1. That THE FIRST PARTY is the absolute owner and is in undisputed possession of 500 ha. of contiguous, **moderately dense/very dense forest / ecologically unique areas¹**, which has been traditionally reserved by the village. Further, THE FIRST PARTY has also identified 300 ha. of contiguous area, which is presently degraded/under jhum cultivation for adding to the existing traditional reserved forest².
2. Initially, it shall be sufficient to describe the identified forest area by roads, rivers, ridges, or other well-known or readily intelligible boundaries, with boundaries defined in all four directions as follows:
 - a. North*: LOZAPHUHU RESERVED FOREST
 - b. South*: PHEK VILLAGE
 - c. East*: PHEK BASA VILLAGE
 - d. West*: LOZAPHUHU VILLAGE

¹ Dense Forest is defined as having 40-70% canopy cover and Very Dense Forest as above 70% canopy cover.

² The total area earmarked should not be less than 100 ha. per village unless contiguous villages are willing to participate and keep aside this area together for the purposes contained in this MoU.

*Strike whichever is not applicable; * To be filled up compulsorily

3. That THE FIRST PARTY shall continue to retain absolute title, right and interest in the forest/land and the Department will have no claim or title whatsoever over the land/forest in the future.

Responsibilities of the Village/Community

4. THE FIRST PARTY has voluntarily agreed to conserve the private/community land, for protecting fauna, flora and traditional or cultural conservation values and practices in the identified forest. In pursuance towards this objective, the Village Council has deliberated the matter in a general meeting and agrees to conserve the identified forest **permanently** and improve the quality of this identified forest, check and control hunting of wildlife within the forest, take biodiversity conservation measures as per the general guidelines prepared by THE SECOND PARTY, and suitably modified as per local requirements in consultation with the FIRST PARTY. *[Further, on having understood the rights and responsibilities thereof, THE FIRST PARTY and the Village Council, wherever it is different from THE FIRST PARTY, has also resolved to voluntarily declare the said forest and its flora and fauna as a Community Reserve under section 36C of the Wildlife (Protection) Act, 1972 (as amended in 2002).]*³ The resolution passed by the Village Council is attached at **Annexure A**.
5. THE FIRST PARTY will assist the department in jointly surveying and demarcation of the forest area to be preserved/conserved and preparation of a scientific Management Plan for management of the forest. Technical guidelines for such survey viz. ground-truthing, forest vegetation type, stock mapping, etc. will be laid down by the forest department beforehand. The map made as a result of such survey, jointly signed by the Village/Khel and the Department representative, will form part of this MoU and exactly define the rough boundaries, identified initially in paragraph 2 above, of the forest area to be conserved. -
6. THE FIRST PARTY will be solely responsible in protecting and preserving the forest in the area surveyed and demarcated under the MoU. They will also strictly enforce/implement the Management Plan for the forest prepared jointly with the Department, which may include keeping the demarcated area free from all human activities that damage the ecosystem, like clearing of jungle, felling of trees, hunting of wildlife, etc.
7. In case THE FIRST PARTY does not have an existing Joint Forest Management Committee (JFMC), they will form a Management Committee with such nomenclature as the Village Council may decide, to manage the forest till such time a JFMC is formed. The Committee will function under the overall supervision of the Village Council.
8. Against the funds transferred to the Village/Khel for maintaining and improving the quality of the identified forests, they will carry out activities out of the following list:

³ This portion will be struck out in case the Village Council/THE FIRST PARTY does not want to resolve such.

- a. Energy saving activities aimed at reducing fuelwood consumption and thus dependency on the forests.
 - b. Construction of low cost check dams, brush wood dams, staggered and contoured trenching, gully blocking, etc. for water conservation, preventing surface runoff, making drinking water provision, irrigation, etc. available.
 - c. Conservation activities like habitat management, forest protection, accelerated natural regeneration, eco development, supplementary plantation in deficient areas, etc.
 - d. Income generating activities like goat/cattle/mithun, etc. through SHGs or otherwise.
 - e. Upto 30 percent of the funds can be used by THE FIRST PARTY for infrastructure development, for example construction of public toilets, footpaths, waiting sheds, watch towers, creating and maintaining a forest protection force by appointment of village forest guards, etc. as per local requirements.
 - f. Alternately, these 30 percent funds may also be used for investment in a fixed deposit/ investment fund managed by a public sector bank, with the objective of using the dividend/returns for forest protection/conservation and infrastructure development activities as laid down in this MoU. Such investments will be taken up after taking prior approval of the Government. The fund can also be used as seed money for taking up other developmental projects from other governmental and non-governmental developmental agencies.
 - g. Any other activity mutually agreed upon by the two parties, and notified by the department.
9. The First Party may mobilize resources from their own sources to augment the funds received from Government for carrying out the activities under this MoU.
10. THE FIRST PARTY will extend full cooperation to the department for community mobilization towards building village capacity for achieving the objectives of this MoU, regulation and enforcement of relevant forest acts within the identified area, and for evaluation of schemes/works undertaken as part of this MoU.

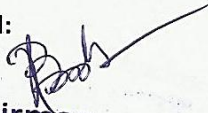
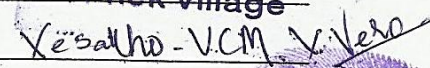
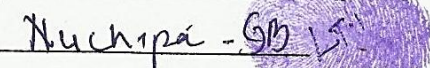
Responsibilities of the Department

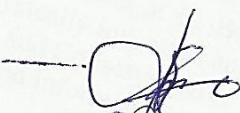
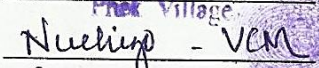
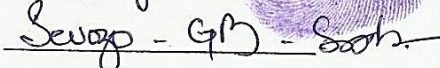
11. THE SECOND PARTY shall mobilize and transfer an annual amount, linked to the area under preservation, spread over a period of 5 years to the villagers as assistance for preservation/conservation of the forest and development of the village. The assistance can be in the form of cash grants, kind or identified technical interventions. Cash, if any, will be transferred to the FIRST PARTY in the form of a cheque to the VDB or the JFMC account, whichever is resolved by the **Village Council**. This fund will be jointly operated by the Secretary of the JFMC/Management Committee and representative of the Second Party
12. THE SECOND PARTY will, in consultation with the village community prepare a scientific Management Plan for the identified forest, including for working schemes in the remainder of forests in the village.

13. THE SECOND PARTY will extend awareness generation programs and other technical interventions to build capacities of the village to manage their forests scientifically, strive to introduce livelihood linked schemes, particularly in the case of communities which are earmarking additional areas, out of their current jhum farms, for long term conservation.
14. THE SECOND PARTY will, in consultation with the villagers devise monitorable indicators to evaluate the management plans every year. Baseline, and quantifiable annual targets will be evolved from the initial survey, which will form part of the management plan.
15. That the averments made above are true to our knowledge and we believe the same to be true and nothing material has been concealed thereof.

DEPONENTS

Village Council/Khel:


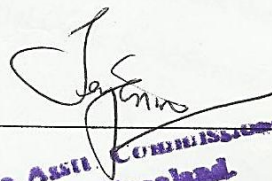
1. 
Chairman
Village Council
Phek Village
2. 
Xesatho - VCM - X. Vero
3. 
Nuchipa - GB - L. S.

4. 
Secretary
Village Development Board
Phek Village
5. 
Nueling - VCM - L. S.
6. 
Sewag - GB - Sooh.

Forest Department:

1. _____
2. 
Range Forest Officer
Phek Range Phek
Nagaland

Witness (District Administration)

1. 
Deputy Commissioner
Phek : Nagaland
2. 
Extra Asst Commissioner
Phek : Nagaland

Annexure 8: Questionnaire Format of Documentation of Community Conservation Areas in Nagaland

A. IDENTIFICATION OF THE CCA

1. Name of the Village		2. Name of the Block & District	
2. Name of the CCA (s)		3. Approximate area of CCA (s)	
4. Year of establishment of CCA(s)	Initiated: Notified: MoU with FD, if any:	5. GPS Coordinates of the village	
6. Is the village part of any CCA network?	Yes: No:	7. If Yes, please specify the name of other villages:	
8. Number of Households in the Village		9. Total Population of the Village	
10. Name of the Tribe(s) in the village		11. Dialect(s) spoken in the village	
12. Names of the Clan(s) in the Village		13. Name of Khels in the Village	

14. Was the CCA declared by

Sl.No	CCA Declaration	Please Tick
a)	Resolutions passed in Village Council	
b)	Informal Understanding	
c)	Any other (Please specify)	

15. Is there a JFM to manage CCA? If yes, what activities are undertaken through JFM?

16. Does the CCA get financial aid from forest department? In case of other agencies/department/ NGO, please specify?

17. Legal status of land under CCA and area

Sl.No	Land Tenure	Please Tick	Approximate Area
a)	Private		
b)	Clan or Communal		
d)	Others		

A. CONSERVATION PRACTICES

18. Who Initiated the Conservation?

Sl.No	Origin	Please Tick	
a)	Self-Initiated		
b)	Externally Initiated-Forest Dept.		
c)	Externally Initiated-Other		

Sl.No	Origin	Please Tick	
	Dept., please specify		
d)	Externally Initiated-NGOs		Name:
e)	Any other?		Name:

19. What motivated the community to initiate conservation?

Sl. No	Motivations	Please Tick	Reasons if any/Name(s) of species
a)	Loss of livelihood/economic opportunities		
b)	Decrease or loss of key species of wildlife due to habitat loss or degradation		
c)	Excessive hunting of wildlife species		
d)	Decrease or loss of key species of flora		
e)	Forest degradation		
f)	Water scarcity		
g)	Loss of other ecosystem services, specify		
h)	Religious Sentiments (forest and mountain God/Goddess, Adobe of God/Goddesses)		
i)	Cultural Associations (ancestral tradition, evil spirit)		
j)	Self-empowerment (our forest, other communities also conserve)		
k)	In response to external threat (unless conserved, people from other communities exploit)		
l)	Any other?		

20. What are the conservation practices adopted by the community in CCA?

Sl. No	Practices	Please tick	Since when	Details of Restrictions
a)	Patrolling and Social Fencing	Village Council: Youth Group:		
b)	Restrictions on collection of different products	Seasonal: Complete: Volume:		
c)	Restrictions on grazing	Seasonal: Complete: No. of Animals:		
d)	Ban on felling of trees	Seasonal: Complete: Size:		
e)	Ban on hunting	Seasonal: Whole Year:		
f)	Restriction on hunting	Seasonal: Whole Year:		

Sl. No	Practices	Please tick	Since when	Details of Restrictions
		Species: Volume:		
g)	Ban of sale in wild animals/ forest products in local markets	Seasonal: Whole year: Species:		
h)	Restrictions on fishing	Seasonal: Volume: Species:		
i)	Any other?			

21. Please specify some of the rules governing CCA?

22. Do all the households in the community comply with the rules? (Give percentage)

23. Approximately, how many offenders are punished every year?

24. How do you punish the offenders?

Sl. No.	Punishments	Please tick	Details
a)	Impose fines		
b)	Social boycott		
c)	Register police case		
d)	Any other?		

25. What are the outcomes of the conservation effort by the community?

Sl. No.	Outcomes	Please tick	Details
a)	Improvement or restoration of the degraded ecosystem		
b)	Prevented the ecosystem from undergoing further degradation		
c)	Increased abundance of one or more faunal species (example increased sightings/calls heard)		Name of species Sightings (S) /Calls (C)
d)	Increased natural regeneration in forests		
e)	Increased water availability		
f)	Increased availability of plant-based forest products		
g)	Increased awareness and support for conservation from local community		

26. What conflict resolution mechanisms are in place-please specify:

Intra-community /village conflicts	Inter-community /village conflicts

27. What are the major challenges of conservation

Sl. No	Major Challenges	Please tick	Details
a)	Livelihood dependence	Community members: Others:	
b)	Jhuming or shifting cultivation		
c)	Hunting pressures and related cultural practices	Community members: Others:	
d)	Increased human-animal conflicts		
e)	Organized mafia (timber, wild meat, wild animal body parts etc.)		
f)	Financial constraints		
g)	Climatic factors		
h)	Non-Cooperation of neighboring village		
i)	Land use change in the area		
j)	Others		

28. How does the church support the CCA or conservation initiatives in the village?

B. STATE OF BIODIVERSITY

29. Habitat types of CCA

Sl.No	Vegetation Type	Please Tick	Area
a)	Tree Cover		
b)	Others		

30. Forest Status in the CCA/s

Sl.No	Vegetation Type	Please Tick	Area	Years of fallow (if applicable)
a)	Primary Forest (never under jhum)			
b)	Secondary Forest (> 25 years without jhum)			
c)	Jhumed land (give years of fallow)			
c)	Plantations			
d)	Others			
d)	No information available			

31. GPS Coordinates of the CCA if any:

32. What are the major species found in the CCA?

Sl.No	Mammals	Local Name	If Hunted pls tick

Total numbers if known:

Sl.No	Birds	Local Name	If Hunted pls tick

Total numbers if known:

Sl.No	Snakes, Lizards and frogs (Reptiles and Amphibians)	Local Name	If Hunted pls tick

Total numbers if known:

Sl.No	Insects	Local Name	If Hunted pls tick

Total numbers if known:

Sl.No	Flora	Local Name	Tree (T), Shrub (S), Herb (H) or Grass (G)	Use if known (pls list). E.g Timber (T), Fuelwood (Fw), Fodder (Fo), NTFP

Total numbers if known:

33. Does the CCA maintain a 'Peoples Biodiversity register'?

C. LAND USE AND LAND TENURE

34. Land Use (Approximate Area)

Area of the Village	Jhum (current)	Jhum (fallow)	Pani-kheti	Home garden	Forests	Others	Total Area
In area if known (ha or acre)							
In percentage							

35. If Jhum is practiced, please fill in the format below

Year (time) of conversion of primary forest into Jhum (if known)	Jhum Cycle (in years)	
	Minimum	Maximum

36. Land Tenure System in the Village/Community

Sl.No	Land Tenure	Please Tick	Area
a)	Private		
b)	Clan or Communal		
c)	Government		
d)	Others		

D. OTHER INFORMATION

37. Any other Observations:

38. Survey Details

a) Name of the Official		b) Designation	
c) Contact Number		d) Date of the Survey	

39. Supplementing Documents collected

Sl. No.	Documents	Tick if collected
a)	Copy of CCA declaration	
b)	CCA/Village Map	
c)		