



Documentation of traditional governance practices in Meghalaya for land and resources

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Abstract

Governance practices of landscapes in the tribal lands of Meghalaya in north-east India differ significantly for specific purposes. The tribal communities of the Khasi, Jaintia and Garo tribes of Meghalaya utilize lands through traditional governance systems in the vicinity of their settlements. The different agricultural landscape elements are closely associated with forest conservation practices. These lands are protected and managed by the tribal people based on institutional arrangements developed to benefit the community. This study, documents the traditional practices by the local community of Meghalaya, through a survey in four representative Khasi Villages. Their traditional knowledge has led to conservation of floral and faunal diversity at varying levels of intactness through different management regimes depending on resource use, land management for agriculture and spiritual values. The paper emphasizes aspects of the traditional forest management systems that contribute to food security, health care and the preservations of forest related knowledge.

Keywords: Documentation of traditional governance, Landscape elements, Meghalaya

Introduction

For generations humans have depended on foraging on forest resources not only for their livelihoods, but also as an integral element in their cultural, spiritual and social wellbeing (Tynsong *et al.*)^[1]. Local people in several states of northeast India have taken initiatives to use, protect and manage their resources from differently identified landscape elements. They have formulated rules and regulations based on the socio-political economic and environment of their village.

The State of Meghalaya is situated in the North-eastern region of India. The latitudes and longitudes lie between 25°5'26"10' N and 89°47' - 92°47' E respectively. The state covers 22,429 km² and 15,657 km² of total geographical area and total forest area, respectively. Three main tribal communities the Khasi, the Jaintia (called Synteng or Pnar), and the Garo (called Achiks) have lived for several generations in the villages scattered throughout Meghalaya. The interviews with 120 local people when analyzed show that the three tribal communities follow the matrilineal system where the lineage of the family is taken from the mother. The "Ka Khadduh" or the youngest daughter inherits all the property and has to take care of the aged parents and any unmarried siblings. The male line includes, the mother's brother who is involved indirectly and is involved with the control over the ancestral property. However, the decisions relating to property including its sale and disposal are initiated by male members of the family.

The three tribes have got several sub groups related to the geographical region, or are linked to a particular political "syiemship" ('Syiems' are the previous traditional rulers of the different parts of the region). Each of these groups speaks a

dialect of its own, known as the "Khasi" languages, which are Austro-Asiatic languages (Upadhaya *et al.*)^[2].

Khasi traditional institutions have been in existence long before the arrival of the Colonial rulers. These institutions used to provide the governance function, for land management, and distribution of forest resources for all their needs at a community level. The traditional institution of the Khasi society, which is indigenous to the region has had a major role in the historical management of land and resources, during the Colonial and post-Colonial periods.

Major changes in the more recent past were brought into the traditional institutions of the Khasi, which affected the powers and functions of the traditional Khasi Chiefs (Rai). Prior to the Colonial period, all Khasi States, called the Hima, functioned under the administrative control of chiefs called "Syiems, Lyngdoh, Wahadars or Sirdars" in different regions.

Currently the traditional institutions documented from four villages shows that land and resource are organized through a hierarchical process, which is commonly known as the "Hima". Management generally includes a head assisted by a council of elders and other knowledgeable people, a secretary (Nonglum Jingthoh), and a treasurer. The council consists of the male members of communities who are involved in governance at village level. There is also a larger territorial and political unit comprising several villages. The Hima is the highest authority and all issues concerning policy and regulation of land and forests are discussed and decided at this level. Each village (Shnong) has its own area under the jurisdiction of the village which is represented by a headman selected from the male adults. In many

¹ Institutional Arrangement and Topology of Community Forests of Meghalaya

² Trees Diversity in sacred Groves of the Jaintia Hills in Meghalaya

cases, a large Hima is divided into smaller units called (Raid) which may comprise of one or more villages.

This study provides an analyses of how local communities in Meghalaya have governed land and resource (i.e timber and non-timber forest products) and their utilization in Meghalaya. The study tool includes field survey and interviews with local knowledgeable experts.

Some of the relevant questions are

1. Who put forth the proposal of creating the Community Conserved Areas?
2. How is the community support to conserve the forest?
3. Is there any Afforestation programmed takes place?
4. What are the resources used from the forest?
5. Have there been any changes (of leadership/decision making process/etc) since the declaration of the community reserve forest?

Information about the Community Conserved Areas was collected by consulting elderly people, heads of the villages and the officials of the Forest Department through questionnaires. The data is linked to contiguity of village lands and local people's dependence on forest resources. The data is based on an intensive survey conducted in four communities Mawpat Community Conserved Forest known as (Law-Raid); The Nongskeh Community Conserved Forest is known as (Law-Lyngdoh); Mawpdang Community Conserved Forest known as (Law-Raid); and Mawphlang Sacred Grove known as (Law-Lyngdoh).

Based on an initial survey and observational study of the landscape elements in the four villages a detail questionnaire was

developed. The engagement of local people in their traditional way in which people perceive different elements in the landscape are documented village wise based on opened ended initiatives. Level and status of Community Conserved Forest has been assessed through a modified rapid assessment tool (Maskey *et al.*)^[3]. The older generation of knowledgeable persons, which includes village elders and the heads of the villages, locally called "Rangbah Shnong" or "Sardar", were important contributors to this information on previous and present perceptions on land use. The chief of traditional institutions locally called as "Syiem or Lyngdoh" and the head from each village, were interviewed. This data was collated to observe similarities and differences in each village on the differences in landscapes identified through a pictographic assessment. The data is store in Excel and analyze into represented graphs and figures.

Four areas managed by local communities have been used as case studies to appreciate their conservation involvement in today's context, which is related to traditional knowledge and local customs.

Results and Discussion

Each Village has a general body known as Village Council (Dorbar), of which all adult males are members. The village in which the inhabitants' different households were included in more than one clan was identified. Each elder of the clan acts as a head that usually represents the clan in the higher administrative body. The smallest unit of the hierarchy of traditional institutions is the family (Iing). The hierarchical management system is a clear indication of a well-conceived and comprehensive administrative strategy.

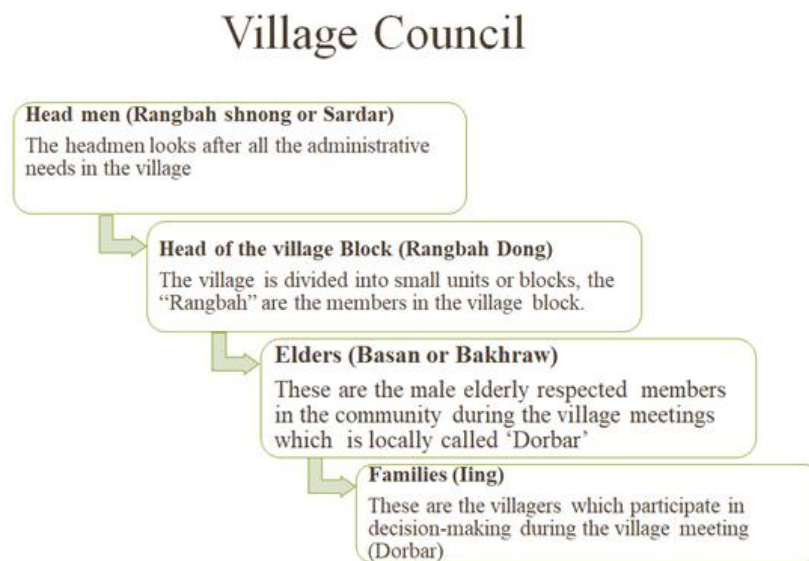


Fig 1: Structure of a Village Council

The local administrative units look after the welfare of the communities and the management of natural resources present in the area under their jurisdiction. Traditional institutions have managed and controlled their area according to local customs and traditions. Their tasks are to make rules and laws for smooth

administration and for managing the common property resources (e.g. utilization of forest resources). They oversee the effective implementation of the customary laws. Conditions are applied in respect to the access and use of resources. Normally, an individual who breaks a law has to pay a fixed penalty which

³ Social and Cultural Determinants of collective Management of Community Forest in Nepal

includes services or cash. The traditional institutions punish offenders depending on the nature and seriousness of the offense committed against rules made for resource utilization. A person who illegally fells or damages a mature tree, or burns a forest for shifting cultivation, or for making charcoal, is punished through large fines which vary from INR 500 to 2000.

Subject to the conditions laid down by the traditional institutions, the communities enjoy rights to access and use the community forests and other common property resources. Local community members can collect fuelwood; fell trees for construction of houses, collect wild fruit, vegetables, orchids, and medicinal herbs, and can quarry sand and stones from permitted sites.

Land use Agriculture

Agriculture in Khasi Hills is divided into the different classes (a) Forest land, (b) Wet paddy land called “hali or pynthor” (c) High grassland (Ka ri lum or ri phlang”, (d) Homestead land (ka dew kyper).

Forest lands are cleared by the process known as “Jhuming” (thang ram), the trees being felled early in the winter and allowed to lie till January or February when the biomass is set on fire. Logs of wood are placed at intervals of a few feet to prevent as far as possible the ashes being blown away by the wind.

The most significant feature of shifting cultivation is that all essential crops like maize, beans, pumpkin, cowpea, cucurbits, sweet potato, ginger, finger millet, cotton, and many others are grown along with rice in the same field as mixed land use. Though rice is the main crop, vegetables and other crops are harvested all-round the year contributing subsidiary income to the farmers during the working season. The fire ashes correct the soil acidity and make the soil fertile for a short period thereby improving crop growth. A large number of crop species over both space and time are effectively managed due to sequential harvesting all over the year.

The Khasi communities of Meghalaya practice two major types of agricultural i.e shifting cultivation or slash and burn

agriculture, and terrace locally called “bun” cultivation. The traditional arrangements of agricultural practices are well adjusted to the environmental state and

In the villages (Mawpat village and Mawpdang village) the role of traditional Institutions in the management of forests and other natural resources, and the “community forest” land, have been distributed among the residents of the village by the Village Council over a decade ago. These management practices have altered drastically following the rejuvenation of the traditional institution, the Village Council and appointment of a Myntri, a representative of the village in the Hima (Tripathi *et al.*)^[4]. The changes have led to a more equitable use of resources in the community because the poor people who do not have forest land for shifting cultivation or material for building their homes, can now get a part of the land or the resources from the village forest. The resource required is controlled and is laid down by the Chief (Syiem).

The practice of forest conservation differs in sacred groves, village conserved forests, clan forests, and other traditionally managed forests, which comprise about 90% of Meghalaya’s total forest area(Chandrashekara and Sankar)^[5]. The forests are protected and managed by the local people through traditional institutional arrangements developed towards equitable use of resources. The classification, protection, regeneration and extraction method practiced for management of the forests is unique to the region and follows locale-specific traditional ecologically oriented practices. They include the management of a variety of water bodies, and aquatic systems, as well as terrestrial biodiversity rich areas. Local management includes the extent of collection of a number of medicinal plants, sources of wild food, and other economically important plants and animals. The land also has fixed rules governing agriculture in the hill slopes and the paddy lands.

The Customary pattern of management of forest is determined through the nature of ownership over the forest resources. The following main category of forests is shown in below graphs

Socio-economics of the villagers and the connectedness to Community Conserved Areas

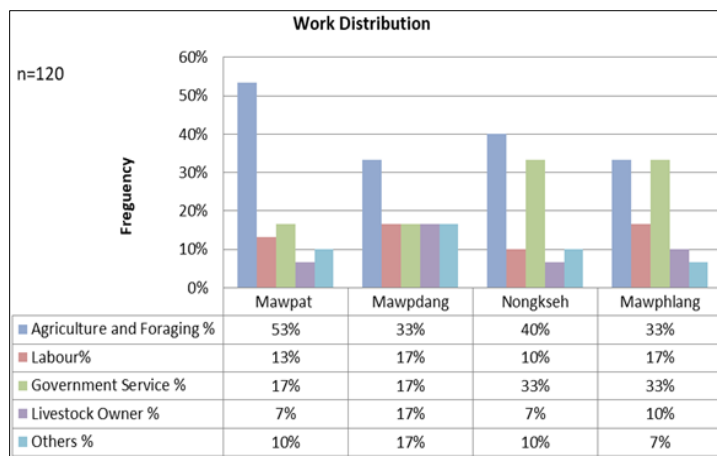


Fig 2: Occupation wise distribution of the responders

⁴ Effects of Anthropogenic Disturbance on Plant Diversity and Community Structure of a Sacred Grove in Meghalaya

⁵ Ecology and Management of Sacred Groves in Kerala

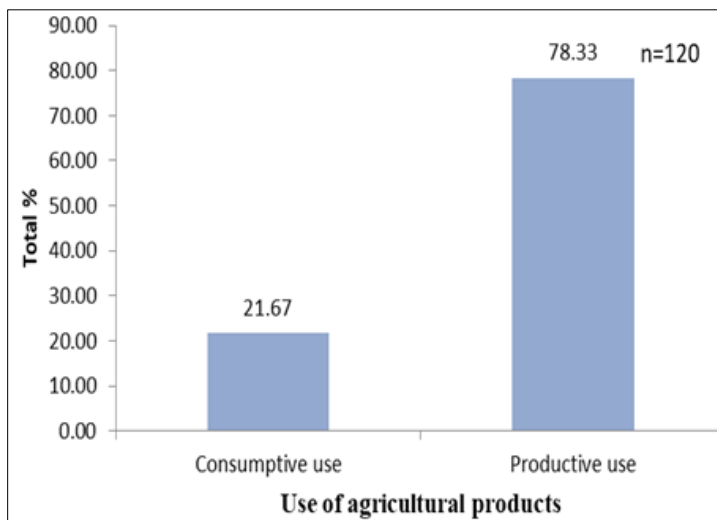


Fig 3: Resource use and main source of income

Resource use is closely connected to occupations in the rural communities of these villages. Data has been randomly collected from the person who includes elderly people of the community and heads of the villages. Observational surveys and open questionnaires were the tools used for the study. From Mawpat villages 53% of the local people work in agriculture and foraging (Fig 1). The elders say that most of the villagers have their own agricultural land and they cultivate vegetables, fruits and cash crops for their own consumption. The rest of the crops are sold in the local market. Respondents who do not have their own private land are permitted to access natural resources from the forests in the Community Conserved Areas (Khlaw Raid is the term used locally). This is prevalent in Mawpat and Mawpdang villages. According to their local community agreement the poor families, or those affected by natural disasters like an earthquake, are permitted to collect timber from the Community Conserved Forest to rebuild their homes.



Fig 5: Collection of Fuel woods



Fig 4: Agricultural practice in Mawpdang village

The farmers practice Jhum (thang ram) and paddy cultivation. They also forage for wild plant species. The farmers tend cattle as an additional income and use the dung for their agriculture. The bulls are used to plough the fields. Respondents said that in the past, they used to hunt animals. However the wildlife population has been seriously depleted and they are now aware that this is an offence.

The labourers work in the fields of the land owners and do other types of work in the village. Most of the individuals in Government positions work as teachers, officers and frontline employees.



Fig 6: Agriculture practice inside the community conserved



Fig 7: Wild edible plants sell in the local market

Predominantly to sell in the local markets. While these crops are local productive resources they are substantially used as consumptive resources, for their own household use. Meghalaya has two major types of agricultural practices. Shifting cultivation or slash and burn agriculture, and terrace cultivation. Shifting cultivation is practiced in and around forests. Terrace farming is practiced in valley slopes, foothills, and inside plantation forests.

These traditional systems of cultivation practices are adapted to the environmental conditions and are a reflection of the traditional knowledge of indigenous communities. Growing cereals and other agricultural crops has enabled them to maintain an ecological balance.

Respondents involved in agriculture

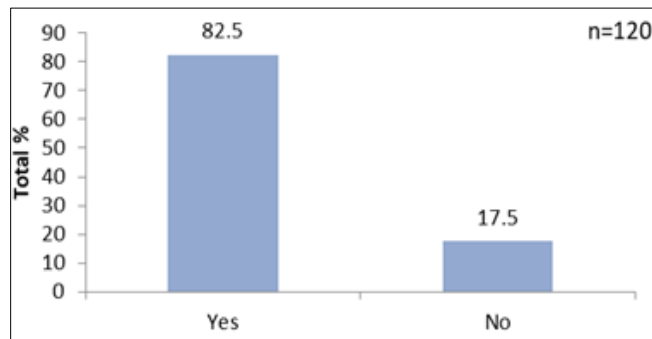


Fig 3: Agricultural practice in the villages

The Khasi are industrious cultivators. Their system of turning the sods, allowing them to dry, then burning the field, and spreading the ashes over the soil before planting the crop uses organic fertilizers. Among the respondents, 82% of the villagers are from the agricultural sector, in which most of the local people grow their crops in paddy fields and “Jhum” cultivation. Jhumming is predominantly observed in Mawpdang village, where they clear large parts of the forests and set fire to the field to increase soil fertility. The villagers in Mawpdang village can access and clear any forested land for agriculture after getting permission from the Village Council or the Headman (Rangbah Shnong). Orchids, mushrooms, other wild edible plants, medicinal plants, and fuel wood is collected from the forest.

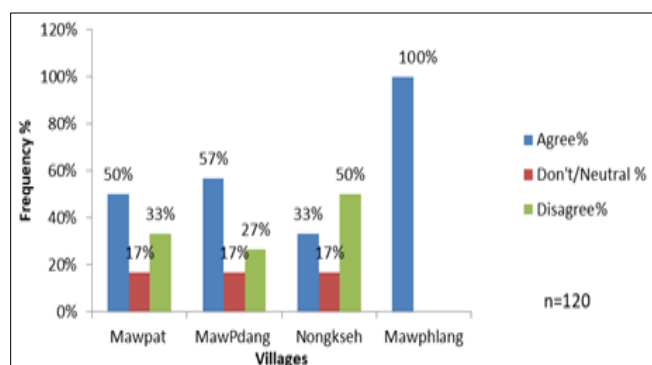


Fig 5: Improvement of the forest compared to years ago

Table 1: Forests classified by ownership and governance

	Local Name	Owner ship	Main Purpose	Method of Protection
1.	Khirid forest (forest that has been bought from another person)	These forests belong to an individual, or clan which are inherited, and recognized as private land.	The person or clan who owns this forest can use all the resources from the forest. They can also sell the land when they are in need.	The forests are recognized by the community as private land. The owner can use the natural resources, or use it as agricultural land, which can be passed on down to the next generation. Minimal protection.
2.	Law Ri Sumar (Protected forest habitat)	These forests are owned by an individual or family.	The forest is mainly used for agricultural purposes and collection of natural resources. Forest integrity depends on	The forests are recognized by the community as private land. The owner uses the forests for agricultural practices or shifting cultivation by leaving the forest unused for several years, are

			how they are utilized through local regulations.	given cyclic regeneration periods through each cycle of several years.
3.	Law Kyntang, or Law Lyngdoh, or Law Niam (Sacred forest)	These forests are owned by the community or village for (spiritual) purposes. They are managed and controlled by the head of the community, known as "Lyngdoh".	These forests are set aside for religious ceremonial purposes, and are considered sacred.	They have their own tradition of protection where the community believes that the forest should be conserved because the deity lives in the forest. They believe that anyone taking resources from the forests insults the presiding deity also punishes the offender. These how the highest level of protection.
4.	Law Adong or Law Shnong (Regulated forest or Village forest)	These forests are conserved common property of the village. The forests are under the management and control by the head of the village.	The main purpose for this forest category is for conserving water and also to preserve the natural resources for the villagers. This appears to be based on a sustainable concept.	The villages have specific rules and regulations to access the natural resources from the forest. Anyone who violates the forest has to pay a fine, or is given a punishment. Partial protection status.
5.	Law Kur (Clan forest)	These forests and the land are owned by one or more clans. The Khasi society includes a web of social relationships from the matrilineal clans called the 'Kur'. These forests are managed and controlled by the head of the clan.	The people belonging to the same clan can use the forests for agricultural practice and foraging for other natural resources, or they can even divide the lands among themselves.	The head of the clan who is chosen by the people must belong to the same clan. His duty includes control and management of the forest. Partial protection status.
6.	Law Raid (Community forest)	These forests belong to the community for religious purposes and thus have a cultural significance for the community as a whole. The forests belong to more than one village. Each 'Kur' has a basic social unit, an independent religious institution, a primary political institution, and the community called the 'Raid'.	The main purpose of these forests is that every member which belongs to the community has the right to use the forest's products or can even clear a small patch of land for agricultural practice.	The traditional institutional management provides rules and regulations. If anyone violates the laws, they have to pay a fine or they are given a punishment. High conservation status.

The customary patterns of management through the traditional institutions i.e the "Hima Myllem, Hima Khyrim, Hima Lyngdoh" greatly influence resource use and the integrity of forests in Meghalaya. The conservation of sacred groves in Mawphlang "The Law Kyntang, Law Lyngdoh and Law Niam" applies to ancient belief and traditions of local communities. These act as 'hot specks' of natural biodiversity as they have been preserved through local sentiments for many generations. These 'old growth' forests are benchmarks of 'naturalness' and are of great biological and cultural value.

During the study of the four Community Conserved Areas i.e in Mawpat, Mawpdang, Nongkseh, and Mawphlang villages, two were community conserved forests which are locally called as the "Khlaw Raid" (Mawpat and Mawpdang Village); the other two are sacred forests (Law-Lyngdoh, Law-Kyntang, Law-Niam). This shows that there are differences in local nuances for forest management in different villages which are described and named differently in terms of how they are administered. This is a unique categorization as it is based not only on ecological terms, or spiritual nature, but primarily on their management strategy. This has similarities to the modern system of forestry which has created National parks, Wildlife Sanctuary, Community Reserved, Reserved Forest, Protected Forest and village Forests. The Khasi classification as underlined here is based on local management systems which are followed over many generations.

This is evidenced by observing the old growth intact vegetation in their sacred groves.

Village Forest (Raid)

The village forests are managed by a council comprising the head of the group of villages (Syiem Raid, or Sardar) and the Headmen of all the individual villages within the territory (Raid). No village can claim individual ownership of the Raid village forest. All the people within the Raid can freely enter, collect and use the resources from these forests, without any specific restrictions. However the forest is expected to mainly benefit the poor, who do not own any forest land of their own. The Community Conserved Forest "Raid" can be allocated to families for shifting cultivation and other livelihood related activities. The village or its residents who are linked to the Community Conserved Areas can approach the "Raid" for land and forest resources. The landless are provided access to forest land by the "Raid". A sanction is given to them to meet their needs. In this study, the (Mawpat and Mawpdang) villages are under the traditional institutional management which is known as the "Hima Myllem" and "Hima Khyrim" respectively.

The chief who is locally called the "Syiem" is the head of all the local institutions. The chief belongs to the specific clan which has the title "Syiem". He is elected by the people who belong to the same clan. He has the power to make rules and controls the

governance related institutions in the region.

Under the Chief are the members who are locally called as “Lyngdoh”. These members are selected by the people from the clan “Lyngdoh”. The “Lyngdoh” also worships the deity and rituals which retains an integral part of local culture.

There are members locally known as the “Myntri” who work for each of the land and resource management sectors and other management institutions. There are approximately 45 members. Each of these selected members or “Myntri”, have different functions. They look after different departments which have been assigned to them by the chief “Syiem”. This includes village finances, marketing, transportation, land development, public health, and an engineering department. Under the “Myntri” are the members who are locally called “Syiem Raid” and the “Basan”

The Khasi are industrious cultivators, their system of turning the sods, allowing them to dry, then burning them, and collect the ashes over the soil in advance system which act as natural manuring. The Khasi use a large hoe (mokhiw heh) tool for agriculture, an axe for felling trees (u side), a large da for felling trees (ka wait lynngam), two kinds of bill-hooks (ka wait prat and ka wait khmut), a sickle (ka rashi), a plough is used in parts of the Jaintia Hills (ka lyngkor), and also a harrow (ka iuh moi).

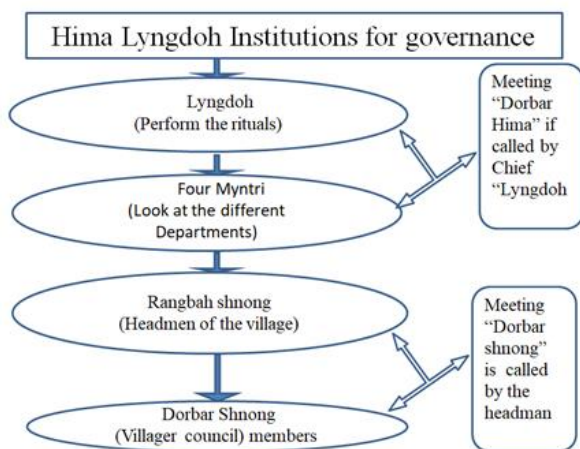


Fig 2: Traditional Institution of the Hima Lyngdoh

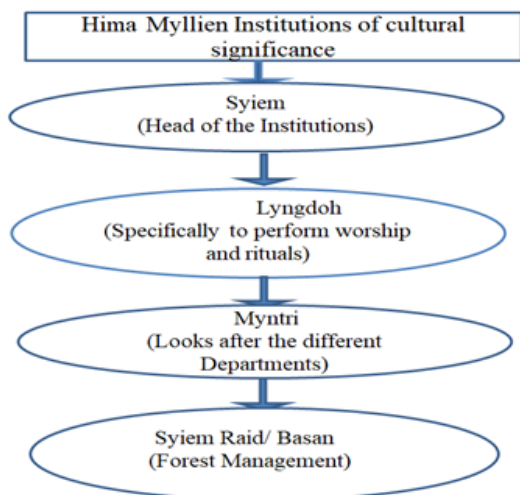


Fig 3: Traditional Institution of the Hima Myllien

The special status of Sacred Groves (Law-Kyntang)

Sacred groves are forest lands which are set aside for religious purposes under the traditional land tenure system. The Sacred Forests are classified under the traditional system viz, “Law Lyngdoh, Law Kyntang and Law Niam”. The Sacred Groves are closely interwoven with the social and cultural fabric of the people. A number of rites, rituals and religious ceremonies are associated with these forests. The chief and his elders perform certain rituals to invoked the deities “u Ryngkew, u Basa”, to protect the villagers from different calamities. The spirits are believed to bless them with good health and wealth and protect them from diseases. The religious beliefs and taboos of the people have been linked to the sacred groves for generations and are being passed down by word of mouth. These religious beliefs have been instrumental in protecting the forest at a sustainable level of utilization. The sacred groves of Meghalaya have a parallel legal support system covered under the Khasi Hills Autonomous District Management, which are managed by the Lyngdoh (religious head), or persons who perform the religious ceremonies for the particular locality or village, in accordance to the customary practices. The rules are framed by the Executive Committee of the District Council.

Site 1. Mawpat Community Conserved Areas

Mawpat is a village located in Shillong (Meghalaya). It is 7 kilometers west of the District Headquarters of Shillong and 5 km from the State Capital which is the state’s main administrative hub. The grove has an old growth of dense forest. Mawpat village is a hilly area, and is considered to be the third tallest hill in Shillong.

It consists of a large patch of forest known as the “Law Syiem” or “Law Raid”, which is protected in the Hima Myllien District. This is one of the most important sites for conserving natural forest. It is believed that the villagers shifted from one part of the area called ‘Nongrim’ to ‘Mawpatkor’ area because of the natural calamities that happened to their community many years ago. The villagers believe that calamities happened because the villagers disobeyed the rules of providing offerings to the deity that should have been done. Instead of sacrificing a pure reddish bull, they offered an impure bull. Thus they had to build a new settlement which was developed in the lower part of the hills.

Site 2. Mawpdang Community Conserved Area

Mawpdang village is situated in Mawryngkneng Taluka of East Khasi Hills District in Meghalaya Mawpdang. It has a total population of 1,614 people. It is believed that a chief “Syiem” who was the head of the traditional institutional management, was the first individual to settle in this village from this clan. From that time onwards they claim that the land in the village belongs to the clan “Syiem”. Several people migrated from other village’s i.e from Thynroid, Mawkhanu. The “Syiem” gave them shelter and a place to stay in the village. The people within the village can freely access, collect and use the resources from these forests without any restrictions. The forest land can be allocated to families for shifting cultivation and other livelihood-related activities in the village.

Mawpdang village is under the traditional institution called the “Hima Khyrim” Syiemship. The Chief is known as “Syiem” who is the head of the local governance institutions. He looks after the administration of the land along with the “Lyngdoh, Myntri, Basan, Sardar”. The “Ki Myntri” members have different duties

which are assigned by the chief “Syiem” to look after the various departments Viz, Forest, Market, Transport etc. The people from different clans elect one person from each clan to represent them in the traditional village governance institution.

Site 3. Nongkseh Sacred grove (Law-Kyntang)

Nongkseh village is situated in East Khasi Hills Shillong District. It was under the Nongkseh Panchayat Myllem. The Panchayat includes the Chief, Basan, Myntri, and the Lyngdoh who looks after the different villages. People in Nongkseh village are living a very peaceful life. This village has a proud history because of the presence of the sacred forest, which the local people call “Law-Lyngdoh”. The forest is considered sacred since ancient times. The forest has an area of 3.63 Ha and a perimeter of 760.8 m.

The founding elders of the Raid Sawkur Nongkseh are said to have initiated the Sacred Grove or Law Lyngdoh, where the deities “Ki Ryngkew or Ki Basa” s are supported to dwell. These Deities are believed to protect the clans from external aggression and also from wild and ferocious animals.

Site 4. Mawphlang Sacred groves (Law-Kyntang)

The Mawphlang sacred grove known as “Law-Kyntang” is situated at 25°34'N latitude and 91°56'E longitude and is at a distance of 27 km South West from Shillong. Mawphlang experiences a heavy monsoonal type of climate with an average annual rainfall of 2500mm. The dense patch of old growth forest contains giant trees surrounded by undulating grassy hillocks. This creates a rather sharp contrasting landscape.

The Traditional Management of the Mawphlang village consists of twelve clans which are locally called the “Khadar Kur” which include the Blah, Lyngdoh, Sohliya, Kharshiing, Wankhar, Kharlanguih, Kharbani, Kharsohkhari, Kharmaram, Kurkalong, Kharmawphlang clans which are within the institution of the “Hima Lyngdoh”. The head of the traditional institution is the chief called “Lyngdoh”. The chief is elected by the “Khadar Kur” of the “Hima Lyngdoh”. He has to participate in an election and must be above the age of 18 years. The chief controls and manages the institutions and also performs the worship for the deity and does the customary rituals. Below the chief are the four members locally called as the “Myntri”. They belong to the clan (Kur) Blah, Kharshiing, Sohliya, Kharhunai. They have different functions which have been assigned by the chief. They look after different department’s viz. finance, market, development etc. The headmen “Rangbah shnong” looks after the villagers, and the “Dorbar Shnong” works under an executive committee.

Discussion

The hill people of Meghalaya use a vastly different pattern of landscape elements from that of the people of the plains. Each tribal community of the North-East includes a number of clans, which come together for political and local administrative purposes, but continue to maintain their separate identities (Bharucha, *Living Briges*)^[6]. In the four reviewed villages the respondents from the Mawpdang community conserved area (Raid) are under the traditional institutions of the “Hima Khyrim”. The respondents reported that the villagers can access

the forest for any essential natural resources. They also practice shifting agriculture on the land without making any payments. They are permitted to graze their cattle in the Community Conserved Area. They collect wild edible plants and fruits from the forest. Some of the resources they collect are sold by them in the local markets.

In the Mawpat Community Conserved Area (Raid) the respondents reported that the forest is under the control and management of the “Hima Myllem” institution where the chief (Syiem) is the head of the institutions and organizes forest resource governance along with other members (Lyngdohs, Myntries, Basan and Rangbah Shnong). The respondents reported that they have conserved the forest because of their beliefs and taboos which are an integral part of their ancient traditions and culture. Villagers are permitted to collect the natural resources at a certain well defined limit, without destroying the forest. In ancient times the ancestors have placed a monolith, in the village which shows outsiders the way to enter the settlement. The eastern part of the village was surrounded by the community conserved forest which they call the “Khlaw Raid”. It was believed by the people that the village deity called u Ryngkew, u Basa dwells in the forest to protect the villagers. This practice of worship has been stopped since the latter half of the 1960s as the clan that performed this function; is now not present in this area.

The village or its individual residents can approach the Raid for land and forest resources. The Raid provides them permissions to meet their livelihood needs. The old dead trees and the fallen trees are usually auctioned.

From the study, it shows that Mawphlang Sacred Forest has the highest level of protection of its forest cover and supports a high level of biological diversity. According to respondents the forest cover has increased in the last 10 Years. The forest is well preserved due to the influence of rites and rituals that are carried out by the local community. Thus, it is still in pristine condition. Collection and removal of any material from the sacred grove is prohibited and is strictly ensured by the local management regime of the sacred grove. This is similar to several other tribal lands where local people look after sacred groves. (Vipat and Bharucha)^[7].

Traditions in various tribal groups demonstrate that the conservation and sanctification of the Sacred Grove is closely linked to the harmony between humans and nature. The unique way of conserving sacred groves has been linked to local culture and religion. It provides an identity for each community. During the survey respondents reported that Khasi people were greatly attached to nature. However, all the fruits, nuts, herbs, eatables, honey bees, and water can be used from the grove. However resources cannot be taken outside the grove, or taken home for a profit-making business. There is a local saying that “There can be no Sacred Grove without “Hima or Raid” and there is no Identity/sovereignty of any Raid or Hima without a Sacred Grove (Tiwari)^[8].

Mawphlang Sacred grove is one of the most famous sacred groves because its sanctity is still alive within the local community. The Forest is strictly preserved through active rites and rituals by the local community.

⁶ Living Briges

⁷ The Consequences of Traditional Management

⁸ Forest Management Practice of Tribal People of Meghalaya

This grove is said to have been sanctified when the "Khmah Nongsai" (an ancestress) of the Lyngdoh Mawphlang Clan was invited to send her son to be the Chief and rule over Hima Mawphlang. She preferred to reject it, unless it was with the consent of the almighty God (U Blei). So, in order to know, whether this was the will of God, she made a promise with the Clan's members, to give her some time to test this by planting tree saplings and waiting for three years. These saplings were DiengSohma (*Rhussemialata*), Diengsning (*Castonopsis Indica*) and Diengdoh (*Ex-bucklandia populnea*). They were planted at Phiephandi. Since the growth of the saplings was good this was interpreted as the will of God, after which Ka Khmah Nongsai and the other clans arranged for the crowning ceremony of the First Chief. This was done ceremoniously and solemnized at Phiephandi. A Stone seating with five seats was made. The Chief sat in the middle and on both sides sat the Myntri. The ancestress additionally performed rituals inside Phiephandi. The old alter is still intact. It is believed that a few years after the Anglo-Khasi War ended in 1839, endeavours were made by some people to cut down the trees that had grown in the sacred grove. The Lyngdoh, his Myntri and the elders of the Hima prevented this and even sent volunteers at night to prevent people from felling trees in the grove. It is also believed that, once the people of Mawphlang wanted to cut down all the trees from the grove, but a person named 'U Kun Lyngdoh' of Mawphlang stood alone to protect the grove by saying defiantly "Who dares to take away the habiliments of my mother, if one tree is felled, one head will be chopped off".

Due to sporadic endeavours to destroy the Sacred Grove, the Chief, and his elders still perform certain rituals to invoke the deities "U Ryngkew U Basa", to penalize those who dare to breach the sanctity of the Sacred Grove, by cutting trees, plucking flowers; or creating a nuisance, in or even around, the grove. All the fruits, nuts, herbs, eatables, honey bees can be consumed locally, but cannot be used as a productive resource for sale. It is said that in the past anyone who violated the rules was threatened and penalized by twisting their heads backwards. It is still believed that many have died, and more will die if pardon from the Chief is not taken. Mistakes or intentionally doing something against the will of the deity (depicted as a Leopard or Snake) is considered a crime. Many incidents of violations have been reported around ten years ago which were penalized. Today, no one even dares to perturb the grove. Consequently, it has pride of place as one of our Nation's, unique sacred sites and consequently for protection of flora and fauna. This intactness of a forest patch is infrequently found in our contemporary world but it still exists in this unique grove due to its sanctity.

Equity in resource use

The forests are protected and controlled by the local people through institutional arrangements developed to benefit the community as a whole. The classification, protection, regeneration and extraction procedures of resources practiced lead to a form of sustainable management of these forests. This is an indication of good local governance. The current existing sacred traditional sentiment and ecological knowledge supports

these concepts that inadvertently lead to sustainability as a result of its sanctity (Tynsong *et al.*)^[9].

The results of the survey shows that the Mawpat and Nongkeh villages have a relatively lower commitment towards conservation of forest resources because the "Lyngdoh" who used to perform the worship during the rituals, is not present in the region as the clan is not living in this village. Thus the practice of worship has been stopped and there is no transfer of this indigenous knowledge to the present generation. While this sentiment relates to the utilization of livelihood support systems, there are cultural values enshrined within the local knowledge that are related to aesthetics, and deeply emotional and unifying aspects of life (Bharucha, *Changing Landscapes*)^[10].

From the study, we found that the sacred groves (Law-Lyngdoh) of Nongkeh village have been converted to a Community Conserved Forest because the local people have been converted to Christianity. This has led to a loss of their traditional beliefs. The different types of forest and the method of protection and the extraction procedures practiced for management of the forests are examples of traditional ecological knowledge (Malhotra *et al.*)^[11]. We have found that the different categories of forest which are managed by the various traditional institutional management practices are part of ancient traditions.

Law Kyntang, Law Lyngdoh, Law Niam (Sacred Groves):

These forests are set apart for religious purposes and are believed to be inhabited by deities such as "Ryngkew, Basa, Labasa" which are some of the deities to whom these groves are dedicated.

Law Raid (Community Forest)

Each "Kur" has a basic social unit, an independent religious institution, a primary political institution, and an independent economy within an elected community called the "Raid". Two Community Conserved Areas i.e Mawpat and Mawpdang village were studied where it was found that these forests are under the management and control of the head of the Raid, but every member of the surrounding area has the right to use the forest products.

Land-Agriculture

Agriculture in Khasi Hills is divided into the different classes (a) Forest land, (b) Wet paddy land called "hali or pynthor" (c) High grassland (Ka ri lum or ri phlang), (d) Homestead land (ka dew kyper).

Forest lands are cleared by the process known as "Jhuming", the trees being felled early in the winter and allowed to lie till January or February when the biomass is set on fire. Logs of wood are placed at intervals of a few feet to prevent as far as possible the ashes being blown away by the wind. No manure beyond the wood ashes is used on this class of land. There is no irrigation and no other system of watering is used. The seeds are sown generally after the first rainfall. Wet paddy land (hali or pynthor) is the land where the kind of paddy which requires a great deal of water is grown. The bottom of the valleys is divided up into compartments by means of skilfully contrived irrigation channels. The soil is made into a thick paste by means of the plough or hoe. The herd of cattle also is driven over the paddy-fields until the mud has

⁹ Institutional Arrangement and Topology of Community Forests of Meghalaya

¹⁰ Changing Landscape

¹¹ Cultural and Ecological Dimensions of Indian Institute of Science

acquired the right consistency. The seeds are then sown by broadcasting in the wet mud.

When the crop ripens, the ears are cut with a sickle (ka rashi), so as to leave almost the entire stalk in different parts of the fields. A peculiarity about the Khasi in the low hills is that they reckon it sang or taboo to use the sickle. They reap their grain by pulling the ear through the hand. The grains are then collected and placed in large bamboo receptacles (ki thiar)

Resources used by the four villages

Some of the resources used by the four villages are trees like *Artocarpus chaplasha* (Diengsohrem), *Auraocaria cuninghaii* (Dieng kseh), *Bauhinia purpurea* (Dieng long megong), *Bombax ceiba* (Dieng kyrphad), *Callicarpa arborea* (Dieng lakhit). Wild vegetables such as *Polygonum dichrotomum* (Jasat) the local people crushed the leave and applied for any kind of skin diseases, *Ocimum basilicum* (Slamiaw) the crushed leaves are applied in cases of skin diseases, *Opuntia dillenii* (Kyashiah) the juice extracted from the stem of the plant is used in cases of cough, and to kill round worms inside the stomach. The crushed stem is applied over skin diseases, *Musa paradisiaca* (Ladew kakait) the roots of the plant are grinded and applied in cases of wounds and cuts, *Lactuca virosa* (Jalmut) the leaves are boiled and the boiled water is drink for treatment of stomach pain, *Mentha spicata* (Pudina) leaves are eaten raw for blood purification. The decoction of the plant is a good bath additive for itching skin conditions, *Houttuynia cordata* (Jamyrdoh) the plant is eaten raw as salad and it help for blood purification. Leaves are crushed an applied to treat sores and boils.

Conclusions

The observation on the conservation of forest by the traditional institutional arrangement has led to effective outcomes. This study indicates the importance of retaining the efficacy of the traditional management system and functions of the local institutions of the Community Conserved Forests in East Khasi Hills, District of Meghalaya.

The four Community Conserved Forest patterns have their own ways and functions for conserving and sustainably using the resources. In one of the Sacred Groves (Mawphlang), it is observed that the implementation and functions of the traditional management which has conserved the forest since ancient times is still actively carried out through rituals. The results from this study show that in each of the villages the Community Conserved Forestry practices are based on their own traditional knowledge systems and are managed through local traditional institutions. Each of the Community Conserved Forest has its own folklore and stories related to the origins and incidents that relate to the history of the forest.

The ecological and environmental issues in the four villages are deforestation and fragmentation of forests, soil degradation, biodiversity loss and pollution and silting of water bodies. Uncontrolled, unscientific, and frequent illegal mining and logging, and the practice of jhum cultivation are responsible for these. Uncontrolled and illegal activities are the outcomes of an absence of clear resource use policies, including the land use approach, and lack of clarity in ownership rights of resources, the paucity of technical and other brace for improvement in jhum cultivation, and an almost total absence of inputs issues from research on a small area and eco-friendly high yielding varieties

of rain-fed crops have developed in soil erosion, degradation, and low productivity. Polluting and silting of water bodies has been caused by uncontrolled and unscientific mining, forest clearing, and unsustainable practice of jhum.

This study focuses mainly on the Traditional Knowledge practices of management by the local people which represents most of the villages in Meghalaya. The settlements have their own 'village forest' and have different ways of conserving the resource. Monitoring the traditional practices and forest cover in as many villages as possible is an urgent need in the current context where a change in belief is occurring. This region has unique ways of managing the forest, which is still being implemented. It is also a region which is part of the unique biodiversity hotspots in the world. This study hopes to inspire other Community Conserved Forest related research work in the near future to understand how to preserve the unique traditional knowledge of biodiversity conservation among local people. It is interesting to observe that local initiatives have now been replicated in Community Reserves under the Wildlife Act. These Reserves have similar objectives to those of Meghalaya's Community Conserved Areas and sacred groves which were initiated many generations ago. Similarly the Sustainable Development Goals and Aichi Targets created in the last few decades as 'Other Effective (Area Based) Conservation Measures' is now an accepted mode of biodiversity conservation, which has been a part of Meghalaya's ancient traditional practices over several generations.

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