22

# Sacred Groves of Meghalaya

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## INTRODUCTION

Sacred groves of Meghalaya are public/village forest lands set aside for religious purposes under the traditional land tenure system (Gurdon, 1975). Customarily, it is an offense to cut trees from such groves except for cremation and religious purposes. Three types of forests under traditional forest classification system (and subsequently adopted by the District Councils) viz., *Law Lyngdoh, Law Kyntang and Law Niam* are considered as sacred forests. The sacred groves have been closely interwoven with the social and cultural life of the people and a number of rites, rituals and religious ceremonies have been associated with these forests. Besides, various religious beliefs and taboos, which vary from region to region, and even from one grove to the other, have been attached to the sacred groves and are being passed on from generation to generation. These religious beliefs have been instrumental in protecting these groves in their pristine form since ages.

As the extraction of forest produce from these groves is either minimal or absent the sacred groves are home to a number of plant and animal species which are not found elsewhere (Haridasan and Rao, 1985) and as such, they are very rich in biodiversity. They provide safe sites for reproduction of a variety of floral and faunal species (Darlong, 1995). They help in the maintenance of viable populations of pollinators and predators, conserve germplasm (Khiewtam, 1986) and serve as a potential source of propagules required for colonisation of wastelands and fallows. Besides, due to their dense vegetation often spread over large areas, sacred groves also provide several important ecosystem services.

Despite all their conservational, cultural and aesthetic importance, the sacred groves of Meghalaya are little studied. However, the two sacred

groves, one located at Mawphlang and the other at Cherrapunjee, have engaged the attention of a few researchers. Hazra (1975) published a taxonomic account of the sacred grove at Mawphlang. Khan et al. (1986, 1987), Barik (1992), Barik et al. (1992, 1996a, 1996b), Rao (1992) and Rao et al. (1990,1997) studied various ecological aspects of this grove, such as community characteristics, gap phase regeneration and regeneration ecology of dominant tree species. Khiewtam (1986) and Khiewtam and Ramakrishnan (1993) studied the vegetation, litter and fine root dynamics, and nutrient flow in a sacred grove at Cherrapunjee.

## SACRED GROVES: AN INDIGENOUS KNOWLEDGE SYSTEM

The sacred groves represent a long tradition of environmental conservation based on sound ecological principles being practiced by the three indigenous tribal communities of the State viz., Khasis, Jaintias and Garos since time immemorial. In view of the difficulty to make the common man understand the environmental and conservational values of these forests, the forefathers of these traditional communities, who realised the importance of such groves perhaps devised the simple ways for their conservation and perpetuation by attaching various religious beliefs with them. With the passage of time, it seems, sacred groves became a part of the cultural life of the people and most villages in Khasi hills had sacred groves situated near the summit of hills, composed of oak and rhododendron trees (Gurdon, 1975).

Considering the vast areas under the sacred groves in the State, big size of individual groves (unlike in other parts of the country where they are generally very small), their locations (mostly on the critical sites in catchment areas) and the religious sanctions attached to them, the concept of sacred grove conservation in Meghalaya seems to be an indigenous knowledge system conceived, developed and perpetuated by the indigenous tribal people of the State.

## LEGAL STATUS OF SACRED GROVES

Unlike other parts of the country, the sacred forests of Meghalaya enjoy adequate legal support as these are covered under the United Khasi-Jaintia Hills Autonomous District (Management and Control of Forests) Act, 1958 and Garo Hills Autonomous District (Management and Control of Forests) Act, 1961. Both these Acts were passed in pursuance of paragraph 11 of Sixth schedule of the Indian constitution and were extended to all the forest

lands of the State except 722.36 sq. km (constituting only ca 8% of the total forests of the State), which is directly under the control of the State forest department (Anonymous 1984).

As per the above Act(s), the sacred groves are to be managed by the *Lyngdoh* (religious head) or other person or persons to whom the religious ceremonies for the particular locality or village or villagers are entrusted and in accordance with the customary practice in vogue and the rules framed by the Executive Committee of the District Council(s) from time to time. As per section 7 of the above Act(s), no tree shall be felled in these forests without the previous sanction of the Chief Forest Officer of the District Council or any officer duly authorised by him in writing. Further, section 9 of the Act States, "No tree shall be felled or removed from *Law Lyngdoh, Law Kyntang* and *Law Niam* except for purposes connected with religious functions or ceremonies recognised and sanctioned by the *Lyngdoh* or other persons in accordance with section 4(b)".

Provision for registration of *Law Lyngdoh, Law Kyntang* and *Law Niam* with the District Council has been provided in the United Khasi-Jaintia Hills Autonomous District (Management and Control of Forests) Rules, 1960.

## STATUS OF SACRED GROVES

Information on the location, extent and status of sacred groves in Meghalaya is too sparse. Although there is a legal provision of registering all the sacred groves with the District Council authorities, no complete and comprehensive list of sacred groves in the State is available. In 1984, the State forest department estimated the area under sacred groves to be about 1000 sq. km (Anonymous, 1984). In 1995, we documented seventy nine sacred forests of the State irrespective of their status and ownership. Seventy nine such groves were located and denoted on a geographical map of Meghalaya. The area of individual grove and the canopy cover were ascertained to know the status of the sacred groves. The area of individual sacred grove varied between 0.01 ha and 900 ha. Of the 56 sacred groves, for which canopy cover was estimated, 7 (12.5%) belonged to undisturbed category (100% canopy cover), 14 (25%) had dense canopy (canopy cover $< 100\%$ and $> 40\%$), 11 (20%) were sparse sacred groves (canopy cover $< 40\%$ and $> 10\%$) and a maximum of 24 (42.5%) belonged to open category (canopy cover $< 10\%$). Out of total area of 10,511 ha, 138 ha (1.3%) was undisturbed. About 4420 ha (42.1% of the total area) had dense canopy, 2765 ha (26.3%) had sparse canopy and 3,188 ha with open canopy.

## ECOSYSTEM SERVICES OF SACRED GROVES

### Protection of Critical Area

Most sacred groves in the State (66 out of 79) covering an estimated area of 10,251 ha are located on the catchment areas of major rivers or rivulets. At least 58 sacred groves with an area of about 9,621 ha are located at the origin of perennial streams while about 38 sacred groves which covered 6,454 ha are on the steep hill slopes. For example, Lum Shyllong-Nongkrim sacred groves are located in an area where from as many as eight streams originate and supply water to a number of human habitations downstream. The other common sites of occurrence of sacred groves are the steep hill slopes (e.g., Trepale Jowai sacred grove). Being located on these critical sites, which are most vulnerable to degradation, sacred groves protect the land and soil from erosion and help in maintaining the quality of water in the streams downhill.

### Conservation of Biodiversity

Sacred groves are repository of rich biodiversity and most often represent the climax vegetation of the area. They are home to a number of rare and endangered floral and faunal elements. At least 50 rare and endangered plant species of the State are now confined only to these sacred groves (Haridasan and Rao, 1985). A baseline floristic survey in various sacred groves of the State revealed that as many as 514 species representing 340 genera and 131 families were present in these forests. Orchidaceae is represented by the highest number of species (39) followed by *Poaceae*, *Rubiaceae* (28 species each) and *Rosaceae* (26 species). Among tree species, *Fagaceae* members are dominant over others in most of the sacred groves. Epiphytic flora is quite abundant. Various types of lianas and ferns are also found in these old growth forests. The vegetation of undisturbed sacred groves is generally very dense and well stratified. It has four major strata viz.; canopy layer, sub-canopy layer, shrub layer, and ground flora. Emergent trees constitute the top canopy layer, while tree species like *Rhododendron arboreum* and *Myrica esculenta* constitute the sub-canopy layer in most groves. Shrub layer is composed of a number of shrubs and saplings of tree species. Ground flora consists of grasses, herbs, ferns and bryophytic species along with the seedlings of the trees.

In general, species diversity in the sacred groves is much greater than the other forests. For example, Rao, et al. (1990) reported the species evenness index, Shannon index of general diversity and species richness index of a sacred grove at Mawphlang were 3.60, 1.00 and 0.96 respectively. On the other hand, in two other forests at upper Shillong and Malki, all

the diversity indices were comparatively low (Species evenness index-Upper Shillong, 2.20; Malki, 1.3. Shannon index-Upper Shillong, 0.8; Malki, 0.6, Species richness index-Upper Shillong 0.84, Malki, 0.86).

The regeneration potential in Mawphlang sacred grove was compared with that of the two other forests (Barik, et. al., 1996a). The density of shade-intolerant species like *Schima khasiana* was more in the other disturbed unprotected forests, while seedlings of shade-tolerants like *Quercus* spp. were more abundant in the sacred grove. In general, high seed predation/ disappearance and competition for various resources among the seedling populations, specially for light and space hamper the success of regeneration in the sacred forest (Barik et al. 1996b; Rao et *al.* 1997).

The population structure of tree species in Mawphlang sacred grove was compared with that in a disturbed forest at Upper Shillong by plotting the proportions of seedlings, saplings, small trees and big trees expressed as percentages of the total tree density (Khan et al., 1987). The structure was an upright pyramid in case of the disturbed forest and it was an inverted pyramid in the sacred grove.

## SOCIO-CULTURAL ASPECTS

Conservation of sacred groves in the State is closely inter-related with the socio-cultural life of the people. The traditional religions prescribed specific rites and rituals to be organised and performed inside/near the sacred forests. The religious heads (*Lyngdohs*) were made responsible for the performance of such rites and rituals. Rites and rituals varied widely from one sacred grove to another depending upon the socio-cultural set up, religion of the local population, and location of the grove. These rituals are performed with all its rigid procedures in those groves where people still follow the traditional religion(s) and believe in the traditional customs.

The fact that sacred groves of Meghalaya are in existence over a long period of time is evident from the presence of numerous tall monoliths erected in memory of departed elders of the local tribals. Even today, in some areas of the State, the practice of establishing a small grove near the graveyard/ cremation/burial ground is still in vogue and people believe that the souls of their departed relatives would rest in peace in these groves. In the case of most sacred groves local inhabitants believe that *Sylvan* deity would be offended if any product is extracted from these forests. They believe that the gods and spirits who live in the forest look after the welfare of the people and protect them from natural calamities, sickness and invasion of enemies.

The sacred groves are hitherto managed by a committee of nominated members belonging to local community which is chaired by the priest of the community. The priest is also responsible for performance of religious ceremonies and rituals.

## RITUALS ASSOCIATED WITH SACRED GROVES

The rituals performed in the sacred grove at Pahempdem village in Ri-Bhoi district of the State have been described here to give some idea about the rituals associated with the sacred groves. The grove belongs to the 'Lyngdoh Syntiew' clan and is managed by the clan council. The belief that the *'U Ryngkew u Basa'*, a deity, lives in the grove, still prevails especially among the non-Christians of this village. They believe that this guardian spirit or *'U Ryngkew u Basa'* which lives in this grove from time immemorial, guards the villages and the people from any harm.

Religious ceremonies are regularly held every year by the 'Lyngdoh Syntiew' clan, who is vested with the right to organise and perform the rites and rituals in order to pay homage and to give thanks to these guardian spirits. Accordingly, every year in the month of April a religious ritual known as *'Ka leh-niam Pyrda'* is performed at a particular spot inside the grove by the 'Lyngdoh Niam' together with about seven or nine male members (in odd numbers) selected from different clans of the village.

The ceremony is performed by sacrificing white cock, dry fish, prawns, and ginger and rice beer (which is specially prepared by a mixture of rice and ginger). After the completion of the ceremony, a feast is organised where the offerings to the spirits are made.

Another ritual associated with the sacred grove is the *'Shad Rah Rynthei'*, which is usually held once in five years in the *ling Niam* (religious house) of the Lyngdoh. This ritual is held for three consecutive days in the month of December. On the first day of this religious ritual, the ceremony starts just before sun-set near a pond known as *'Ka Pung Kyntang'*. Sand is collected from this pond and carefully wrapped in three different pouches using a white cloth, with the beating of drums accompanied by music. The sand pouches are properly kept in a shed carefully made for the purpose. In the early hours of the next day, a village elder together with the people assemble at the spot where sand pouches were kept, and offer prayer to the Gods and Deities for the well being of the whole village. The sand pouches are then taken by the female members of the village to the *'ling Sad'* or religious house of the Lyngdoh. On reaching this place the pouches containing sand are opened carefully one after the other for prediction of the future of the village and the people. It is believed that if the sand in the first pouch

turns into 'rice grains', then they will get a good harvest from their fields and the village in general will prosper in the coming years. In the second pouch, if the sand turns into 'ants', then they will get poor harvest out of their cultivation and the people will be inflicted with various diseases and will suffer from illness. If the third pouch containing sand does not show any sign of change, but remains as it was, then the general welfare of villagers and their crops will remain as usual.

On the third and final day, the ritualistic ceremonies culminate with a dance and merriment by the villagers in front of the *Iing Niam*. Unmarried male and female members of the community take part in the dance. A pig is sacrificed and afterwards the same is cooked for a feast which is joined by all the villagers. The ceremonies are complete by evening with a vote of thanks from the 'Lyngdoh Niam' where he mainly stresses on the moral rules and obligations of every villager for the upliftment of the tradition, culture and religion.

## EROSION OF TRADITIONAL BELIEFS—THE RECENT TREND

Due to several socio-cultural-economic reasons, the traditional beliefs which were hitherto central to sacred grove conservation are now considered as mere superstitions. The traditional value of the groves is gradually being lost with the advent of modernity and education, improved access to once inaccessible sacred groves due to development of road communication, change from traditional religions to Christianity, and increasing aspiration of the people for a better way of life. Over the years, influence of administrative and the judicial authorities of the traditional institutions responsible for the management of groves has considerably diminished due to the establishment of administration and judiciary institutions by the government. All this has brought about an attitudinal change of the traditional societies in many areas of the State resulting in large scale destruction of sacred groves. In most of the areas, people responsible for the observance of rituals seem to have forgotten the rites and procedures for performing rituals. Economic constraints caused by smaller land holdings has resulted in the encroachment of sacred grove areas for agriculture. As a result, a plot of shifting cultivation could be found, in certain cases, even inside the sacred groves which were once totally prohibited for all uses other than the religious purposes.

In a recent study conducted by the authors (Tiwari et al. 1995), it was observed that in the undisturbed sacred groves traditional rituals are still performed in accordance with the customary beliefs. In moderately disturbed groves too where the canopy cover is good, the traditional rituals are

performed but not so rigidly as in the undisturbed groves. In the sparse and degraded groves the traditional rituals are not performed.

At present, the rituals are known to very few people, most of whom belong to older generation (age >50). Most persons especially those belonging to younger generation (135 out of 150 interviewed) admitted that the religious belief that was central to sacred grove preservation is now considered as superstition. Only 14% of the people interviewed, seemed to know the significance of sacred grove conservation.

## CONSERVATION STRATEGY FOR SACRED GROVES

The religious beliefs and rituals that were responsible for the conservation of sacred groves are now fast dwindling/ languishing and, therefore, these treasure houses of biodiversity can no longer be protected only through the religious belief. Urgent external intervention is essential if these forest patches providing valuable ecosystem services to the local communities were to be saved.

One such external intervention could be in the form of economic incentives to the people who are protecting/managing the groves and also to the people living around the groves. Creation of mass awareness about the intangible benefits and ecosystem services (Cairns and Pratt, 1995) provided by these forest patches and their biodiversity value would be an essential component of any sacred grove conservation plan. It is also required to develop ways and means for limited extraction of produce in order to sustain the interest of the people in preservation of the groves. Protection from fire, cattle grazing and unauthorised product extraction is paramount to any conservation programme and this can be achieved only through people's active participation.

Site-specific conservation/restoration strategies need to be evolved considering the status of the grove and socio-economic conditions of people responsible for its management. For instance, the sacred groves which are largely undisturbed and have dense canopy cover may need level I intervention under multiple tiers/levels intervention programmes suggested by Geller (1992), in which the interventions are least intrusive and involve maximum number of people. The activities under such intervention programme would include behavioural prompting through awareness programmes and some nominal incentives to the people in the form of community development programmes. On the other hand, the disturbed sacred groves may need higher level and more effective intervention processes (Level II under Geller's scheme), which would require increased costs in terms of materials and personnel for their restoration. The activities

under this may include any one or combination of the following options: i) immediate rehabilitation of the degraded groves through artificial/natural/aided natural regeneration programmes, ii) regenerating the adjoining village forests and ensuring their effective management for meeting the bonafide firewood, fodder and non-wood requirements of the villagers so that the pressure on sacred groves on these accounts is kept at minimum; iii) converting them into nature reserves and managing them with people's participation on the principles of joint forest management; iv) constituting them as outdoor recreation areas and environmental research and education centres with a provision to share the revenue accrued with the local populace.

Sacred groves, which are important from wildlife point of view and have potential to act as wildlife corridors may be identified and restored/managed by the Wildlife Wing of the State/National Government(s). Besides, an institutional linkage involving the local village level traditional institutions, State, national and international organisations needs to be established for launching a joint coordinated sacred grove conservation programme.

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